December 28, 2020

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

TEL: (916) 786-3302
FAX:

Workorder No.: N043305

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 04, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Nancy Sibucao
Laboratory Director

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

SAMPLE RECEIVING/GENERAL COMMENTS:

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

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

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

Samples were analyzed within method holding time.

Subcontracted Analyses:

SM 4500-NO3F was subcontracted to BC Labs- Bakersfield,CA.

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (11 ug/L) and hexavalent chromium (8.6 ug/L) for sample N043305-004 (MW-49-135-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

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

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for some samples due to matrix. Samples have high TDS concentration.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043305-004C-MS1and N043305-004C-MSD1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043305-004C-MS1, N043305-004C-MSD1, N043305-005C-MS2 and N043305-005C-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for Iron ; however, the associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (11 ug/L) and hexavalent chromium (8.6 ug/L) for sample N043305-004 (MW-49-135-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 11 and 10 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N043263-001D-MS, N043263-001D-MSD, N043348-013CMS, N043348-013CMSD, N043348-016CMS and N043348-016CMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8260B:

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for MTBE. Analyte recovery on both met acceptance criteria.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043305
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043305-001A | MW-67-185-Q420 | Groundwater | 12/2/2020 10:16:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-002A | MW-67-225-Q420 | Groundwater | 12/2/2020 12:14:00 PM | 12/4/2020 | 12/28/2020 |
| N043305-003A | MW-67-260-Q420 | Groundwater | 12/2/2020 11:10:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-004A | MW-49-135-Q420 | Groundwater | 12/4/2020 10:47:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-004B | MW-49-135-Q420 | Groundwater | 12/4/2020 10:47:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-004C | MW-49-135-Q420 | Groundwater | 12/4/2020 10:47:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-004D | MW-49-135-Q420 | Groundwater | 12/4/2020 10:47:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-004E | MW-49-135-Q420 | Groundwater | 12/4/2020 10:47:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-005A | MW-49-275-Q420 | Groundwater | 12/4/2020 9:42:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-005B | MW-49-275-Q420 | Groundwater | 12/4/2020 9:42:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-005C | MW-49-275-Q420 | Groundwater | 12/4/2020 9:42:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-005D | MW-49-275-Q420 | Groundwater | 12/4/2020 9:42:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-006A | MW-49-365-Q420 | Groundwater | 12/4/2020 8:58:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-006B | MW-49-365-Q420 | Groundwater | 12/4/2020 8:58:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-006C | MW-49-365-Q420 | Groundwater | 12/4/2020 8:58:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-006D | MW-49-365-Q420 | Groundwater | 12/4/2020 8:58:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-007A | MW-29-Q420 | Groundwater | 12/4/2020 11:24:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-007B | MW-29-Q420 | Groundwater | 12/4/2020 11:24:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-007C | MW-29-Q420 | Groundwater | 12/4/2020 11:24:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-007D | MW-29-Q420 | Groundwater | 12/4/2020 11:24:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-008A | MW-29-EB-Q420 | Groundwater | 12/4/2020 10:55:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-009A | EB-710-Q420 | Groundwater | 12/4/2020 12:00:00 PM | 12/4/2020 | 12/28/2020 |
| N043305-010A | MW-57-070-Q420 | Groundwater | 12/4/2020 8:51:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-010B | MW-57-070-Q420 | Groundwater | 12/4/2020 8:51:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-010C | MW-57-070-Q420 | Groundwater | 12/4/2020 8:51:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-010D | MW-57-070-Q420 | Groundwater | 12/4/2020 8:51:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-011A | MW-57-185-Q420 | Groundwater | 12/4/2020 9:40:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-011B | MW-57-185-Q420 | Groundwater | 12/4/2020 9:40:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-011C | MW-57-185-Q420 | Groundwater | 12/4/2020 9:40:00 AM | 12/4/2020 | 12/28/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043305
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043305-011D | MW-57-185-Q420 | Groundwater | 12/4/2020 9:40:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-012A | MW-61-110-Q420 | Groundwater | 12/4/2020 10:37:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-012B | MW-61-110-Q420 | Groundwater | 12/4/2020 10:37:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-012C | MW-61-110-Q420 | Groundwater | 12/4/2020 10:37:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-012D | MW-61-110-Q420 | Groundwater | 12/4/2020 10:37:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-013A | MW-20-070-Q420 | Groundwater | 12/4/2020 10:53:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-013B | MW-20-070-Q420 | Groundwater | 12/4/2020 10:53:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-013C | MW-20-070-Q420 | Groundwater | 12/4/2020 10:53:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-013D | MW-20-070-Q420 | Groundwater | 12/4/2020 10:53:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-013E | MW-20-070-Q420 | Groundwater | 12/4/2020 10:53:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-014A | MW-20-100-Q420 | Groundwater | 12/4/2020 11:41:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-014B | MW-20-100-Q420 | Groundwater | 12/4/2020 11:41:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-014C | MW-20-100-Q420 | Groundwater | 12/4/2020 11:41:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-014D | MW-20-100-Q420 | Groundwater | 12/4/2020 11:41:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-014E | MW-20-100-Q420 | Groundwater | 12/4/2020 11:41:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-015A | MW-20-130-Q420 | Groundwater | 12/4/2020 10:02:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-015B | MW-20-130-Q420 | Groundwater | 12/4/2020 10:02:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-015C | MW-20-130-Q420 | Groundwater | 12/4/2020 10:02:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-015D | MW-20-130-Q420 | Groundwater | 12/4/2020 10:02:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-015E | MW-20-130-Q420 | Groundwater | 12/4/2020 10:02:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-016A | MW-906-Q420 | Groundwater | 12/4/2020 10:12:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-016B | MW-906-Q420 | Groundwater | 12/4/2020 10:12:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-016C | MW-906-Q420 | Groundwater | 12/4/2020 10:12:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-016D | MW-906-Q420 | Groundwater | 12/4/2020 10:12:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-016E | MW-906-Q420 | Groundwater | 12/4/2020 10:12:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-017A | MW-62-065-Q420 | Groundwater | 12/4/2020 9:01:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-017B | MW-62-065-Q420 | Groundwater | 12/4/2020 9:01:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-017C | MW-62-065-Q420 | Groundwater | 12/4/2020 9:01:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-017D | MW-62-065-Q420 | Groundwater | 12/4/2020 9:01:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-018A | EB-708-Q420 | Groundwater | 12/4/2020 12:00:00 PM | 12/4/2020 | 12/28/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043305
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043305-019A | EB-709-Q420 | Groundwater | 12/4/2020 11:00:00 AM | 12/4/2020 | 12/28/2020 |
| N043305-020A | Trip Blank_20201204 | Water | 12/4/2020 7:00:00 AM | 12/4/2020 | 12/28/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-135-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:47:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 13000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-275-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 22000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-365-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 31000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-29-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1800 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-185-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:40:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 16000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-61-110-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 15000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-013

**Client Sample ID:** MW-20-070-Q420
**Collection Date:** 12/4/2020 10:53:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-100-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-130-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7700 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-906-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 8900 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-065-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:01:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204F** | QC Batch: **R149129** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 5900 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 08:05 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

| Sample ID | **N043305-004BDUP** | SampType: | **DUP** | TestCode: | **120.1_WPGE** | Units: | **umhos/cm** | Prep Date: | | RunNo: | **149129** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R149129** | TestNo: | **EPA 120.1** | | | Analysis Date: | **12/4/2020** | SeqNo: | **4024382** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 12790.000 | 0.10 | | | | | | 12780 | 0.0782 | 2 | |

| Sample ID | **N043305-016BDUP** | SampType: | **DUP** | TestCode: | **120.1_WPGE** | Units: | **umhos/cm** | Prep Date: | | RunNo: | **149129** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R149129** | TestNo: | **EPA 120.1** | | | Analysis Date: | **12/4/2020** | SeqNo: | **4024393** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 8910.000 | 0.10 | | | | | | 8890 | 0.225 | 2 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-135-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:47:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 8000 | 100 | 100 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-275-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 14000 | 200 | 200 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-365-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 21000 | 500 | 500 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-29-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1200 | 13 | 13 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1300 | 13 | 13 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-185-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:40:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | | PrepDate: | **12/8/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-61-110-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1400 | 17 | 17 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-100-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1200 | 17 | 17 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-130-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208F** | QC Batch: **83364** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 5200 | 50 | 50 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-906-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 5800 | 50 | 50 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-065-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:01:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3800 | 50 | 50 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID **LCS-83364** | SampType: **LCS** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/8/2020** | RunNo: **149284** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83364** | TestNo: **SM2540C** | | Analysis Date: **12/8/2020** | SeqNo: **4033708** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 982.000 | 10 | 1000 | 0 | 98.2 | 80 | 120 | | | | |

| Sample ID **MB-83364** | SampType: **MBLK** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/8/2020** | RunNo: **149284** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83364** | TestNo: **SM2540C** | | Analysis Date: **12/8/2020** | SeqNo: **4033709** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID **N043305-006BDUP** | SampType: **DUP** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/8/2020** | RunNo: **149284** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83364** | TestNo: **SM2540C** | | Analysis Date: **12/8/2020** | SeqNo: **4033713** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 22150.000 | 500 | | | | | | 21450 | 3.21 | 5 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID | LCS-83365 | SampType: | LCS | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/8/2020 | RunNo: | 149285 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83365 | TestNo: | SM2540C | | | Analysis Date: | 12/8/2020 | SeqNo: | 4033721 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 977.000 | 10 | 1000 | 0 | 97.7 | 80 | 120 | | | | |

| Sample ID | MB-83365 | SampType: | MBLK | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/8/2020 | RunNo: | 149285 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83365 | TestNo: | SM2540C | | | Analysis Date: | 12/8/2020 | SeqNo: | 4033722 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID | N043263-006BDUP | SampType: | DUP | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/8/2020 | RunNo: | 149285 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83365 | TestNo: | SM2540C | | | Analysis Date: | 12/8/2020 | SeqNo: | 4033726 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 10400.000 | 100 | | | | | | 10490 | 0.862 | 5 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-135-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:47:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 8.6 | 0.17 | 1.0 | | µg/L | 5 | 12/8/2020 12:27 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 11 | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 05:56 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-275-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/8/2020 12:46 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 06:14 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-365-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/8/2020 01:05 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 06:49 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-29-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/8/2020 10:34 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 07:06 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-29-EB-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/8/2020 02:02 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-710-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 12:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/8/2020 02:21 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 630 | 1.7 | 10 | | µg/L | 50 | 12/8/2020 08:21 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 660 | 0.65 | 5.0 | | µg/L | 5 | 12/11/2020 07:29 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-185-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:40:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 4.4 | 0.17 | 1.0 | | µg/L | 5 | 12/8/2020 01:43 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 5.0 | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 08:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-61-110-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 430 | 1.7 | 10 | | µg/L | 50 | 12/8/2020 08:31 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 440 | 0.65 | 5.0 | | µg/L | 5 | 12/11/2020 08:33 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 1600 | 6.6 | 40 | | µg/L | 200 | 12/8/2020 08:40 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 1700 | 3.2 | 25 | | µg/L | 25 | 12/11/2020 08:56 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-100-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 610 | 3.3 | 20 | | µg/L | 100 | 12/8/2020 08:50 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 660 | 0.65 | 5.0 | | µg/L | 5 | 12/11/2020 09:25 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-130-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 4000 | 33 | 200 | | µg/L | 1000 | 12/8/2020 08:59 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 4400 | 6.5 | 50 | | µg/L | 50 | 12/11/2020 09:49 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-906-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 4100 | 33 | 200 | | µg/L | 1000 | 12/8/2020 09:09 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 4500 | 3.2 | 25 | | µg/L | 25 | 12/11/2020 10:06 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-065-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:01:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201211A** | QC Batch: **R149356** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 620 | 3.3 | 20 | | µg/L | 100 | 12/11/2020 07:24 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 570 | 0.65 | 5.0 | | µg/L | 5 | 12/12/2020 05:40 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-708-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 12:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/8/2020 02:40 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-709-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/8/2020 02:59 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | MB-R149254 | SampType: | MBLK | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032252 |

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

| Sample ID | LCS-R149254 | SampType: | LCS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032253 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.286 | 0.20 | 5.000 | 0 | 106 | 90 | 110 | | | | |

| Sample ID | N043305-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032263 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.062 | 0.20 | 1.000 | 0 | 106 | 90 | 110 | | | | |

| Sample ID | N043305-010AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032264 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 898.705 | 10 | 250.0 | 631.3 | 107 | 90 | 110 | | | | |

| Sample ID | N043305-012AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032265 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 691.310 | 10 | 250.0 | 433.3 | 103 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043305-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032268**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2615.760 | 40 | 1000 | 1597 | 102 | 90 | 110 | | | | |

Sample ID **N043305-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032269**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1102.610 | 20 | 500.0 | 606.4 | 99.3 | 90 | 110 | | | | |

Sample ID **N043305-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032270**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9100.800 | 200 | 5000 | 3965 | 103 | 90 | 110 | | | | |

Sample ID **N043305-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032271**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9079.700 | 200 | 5000 | 4075 | 100 | 90 | 110 | | | | |

Sample ID **N043305-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032273**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 13.683 | 1.0 | 5.000 | 8.616 | 101 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043305-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032275**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.201 | 1.0 | 5.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID **N043305-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032277**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.594 | 1.0 | 5.000 | 0 | 91.9 | 90 | 110 | | | | |

Sample ID **N043305-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032281**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.278 | 1.0 | 5.000 | 4.366 | 98.2 | 90 | 110 | | | | |

Sample ID **N043305-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032283**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.990 | 0.20 | 1.000 | 0 | 99.0 | 90 | 110 | | | | |

Sample ID **N043305-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032285**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.980 | 0.20 | 1.000 | 0 | 98.0 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043305-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032287**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.976 | 0.20 | 1.000 | 0 | 97.6 | 90 | 110 | | | | |

Sample ID **N043305-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032289**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.028 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID **N043305-012ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032292**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 430.815 | 10 | | | | | | 433.3 | 0.579 | 20 | |

Sample ID **N043305-012AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032293**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 679.015 | 10 | 250.0 | 433.3 | 98.3 | 90 | 110 | 691.3 | 1.79 | 20 | |

Sample ID **N043348-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032295**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.002 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043348-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032296**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.844 | 1.0 | 5.000 | 0 | 96.9 | 90 | 110 | | | | |

Sample ID **N043348-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032299**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.820 | 1.0 | 5.000 | 0 | 96.4 | 90 | 110 | | | | |

Sample ID **N043348-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032301**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.918 | 1.0 | 5.000 | 0 | 98.4 | 90 | 110 | | | | |

Sample ID **N043348-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032305**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.093 | 0.20 | 1.000 | 0.09850 | 99.5 | 90 | 110 | | | | |

Sample ID **N043348-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032307**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.090 | 0.20 | 1.000 | 0.08750 | 100 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | MB-R149356 | SampType: | MBLK | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039311 |

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

| Sample ID | LCS-R149356 | SampType: | LCS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039312 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.897 | 0.20 | 5.000 | 0 | 97.9 | 90 | 110 | | | | |

| Sample ID | N043369-020AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039314 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.016 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID | N043369-021AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039316 |

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

| Sample ID | N043369-022AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039318 |

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

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N043369-023AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039322** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5273.600 | 100 | 2500 | 2749 | 101 | 90 | 110 | | | | |

| Sample ID **N043369-024AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039324** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5219.500 | 100 | 2500 | 2713 | 100 | 90 | 110 | | | | |

| Sample ID **N043369-019AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039325** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.288 | 1.0 | 5.000 | 0.3755 | 98.3 | 90 | 110 | | | | |

| Sample ID **N043385-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039334** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 238.566 | 4.0 | 100.0 | 136.1 | 102 | 90 | 110 | | | | |

| Sample ID **N043385-002AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039335** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1513.120 | 20 | 500.0 | 1001 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N043385-002AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039336** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1491.060 | 20 | 500.0 | 1001 | 98.0 | 90 | 110 | 1513 | 1.47 | 20 | |

| Sample ID **N043385-004AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039337** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 106.350 | 2.0 | 50.00 | 53.95 | 105 | 90 | 110 | | | | |

| Sample ID **N043385-005AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039338** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 105.819 | 2.0 | 50.00 | 52.72 | 106 | 90 | 110 | | | | |

| Sample ID **N043385-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039339** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4589.650 | 100 | 2500 | 2064 | 101 | 90 | 110 | | | | |

| Sample ID **N043385-001ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039340** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 137.428 | 4.0 | | | | | | 136.1 | 0.955 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043385-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039345**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 13.301 | 0.20 | 5.000 | 7.889 | 108 | 90 | 110 | | | | |

Sample ID **N043385-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039349**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 14.315 | 1.0 | 5.000 | 9.575 | 94.8 | 90 | 110 | | | | |

Sample ID **N043385-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039351**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 24.407 | 1.0 | 5.000 | 18.98 | 109 | 90 | 110 | | | | |

Sample ID **N043385-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039355**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 13.562 | 1.0 | 5.000 | 8.257 | 106 | 90 | 110 | | | | |

Sample ID **N043387-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039357**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.682 | 1.0 | 5.000 | 0 | 93.6 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N043385-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039360 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 685.990 | 10 | 250.0 | 423.2 | 105 | 90 | 110 | | | | |

| Sample ID | N043385-009AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039362 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

| Sample ID | N043385-012AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039364 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.035 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

| Sample ID | N043305-017AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149356 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149356 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4039366 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1128.600 | 20 | 500.0 | 619.2 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-83357 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149388 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83357 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/11/2020 | SeqNo: | 4041846 |

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

| Sample ID | LCS-83357 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149388 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83357 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/11/2020 | SeqNo: | 4041847 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.919 | 1.0 | 10.00 | 0 | 99.2 | 85 | 115 | | | | |

| Sample ID | N043263-001D-MS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149388 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83357 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/11/2020 | SeqNo: | 4041859 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 2387.389 | 25 | 10.00 | 2175 | 2120 | 75 | 125 | | | | S |

| Sample ID | N043263-001D-MSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149388 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83357 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/11/2020 | SeqNo: | 4041862 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 2376.049 | 25 | 10.00 | 2175 | 2010 | 75 | 125 | 2387 | 0.476 | 20 | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-83358 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042052 |

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

| Sample ID | LCS-83358 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042053 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.728 | 1.0 | 10.00 | 0 | 97.3 | 85 | 115 | | | | |

| Sample ID | N043348-013CMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042060 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 391.220 | 5.0 | 10.00 | 404.5 | -132 | 75 | 125 | | | | S |

| Sample ID | N043348-013CMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042064 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 391.536 | 5.0 | 10.00 | 404.5 | -129 | 75 | 125 | 391.2 | 0.0809 | 20 | S |

| Sample ID | N043348-016CMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042070 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 69.471 | 1.0 | 10.00 | 64.79 | 46.8 | 75 | 125 | | | | S |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | N043348-016CMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042074 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 69.405 | 1.0 | 10.00 | 64.79 | 46.2 | 75 | 125 | 69.47 | 0.0949 | 20 | S |

| Sample ID | N043348-020CMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042081 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 11.274 | 1.0 | 10.00 | 2.745 | 85.3 | 75 | 125 | | | | |

| Sample ID | N043348-020CMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042087 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 11.269 | 1.0 | 10.00 | 2.745 | 85.2 | 75 | 125 | 11.27 | 0.0433 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | N043263-001D-PS | SampType: | PS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | | RunNo: | 149388 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83357 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/11/2020 | SeqNo: | 4041854 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 2268.848 | 25 | 10.00 | 2175 | 935 | 80 | 120 | | | | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | N043348-013C-PS | SampType: | PS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | | RunNo: | 149389 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042058 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Chromium | 393.080 | 5.0 | 10.00 | 404.5 | -114 | 80 | 120 | | | | S | | |

| Sample ID | N043348-016C-PS | SampType: | PS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | | RunNo: | 149389 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042068 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Chromium | 69.741 | 1.0 | 10.00 | 64.79 | 49.5 | 80 | 120 | | | | S | | |

| Sample ID | N043348-020C-PS | SampType: | PS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | | RunNo: | 149389 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042079 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Chromium | 11.390 | 1.0 | 10.00 | 2.745 | 86.4 | 80 | 120 | | | | | | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-135-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:47:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 62 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-275-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 36 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-365-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 43 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-29-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 430 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-185-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:40:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-61-110-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 46 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 88 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-100-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 140 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-130-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 57 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-906-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 92 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-065-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:01:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID **LCS-R149310** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **149310** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149310** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | | | | SeqNo: **4035716** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | 96.774 | 5.0 | 100.0 | 0 | 96.8 | 85 | 115 | | | | |

| Sample ID **MB-R149310** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **149310** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149310** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | | | | SeqNo: **4035717** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID **N043305-005BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **149310** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149310** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | | | | SeqNo: **4035720** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | 36.290 | 5.0 | | | | | | 36.29 | 0 | 30 | |

| Sample ID **N043348-016BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **149310** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149310** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | | | | SeqNo: **4035732** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | 224.798 | 5.0 | 100.0 | 115.9 | 109 | 75 | 125 | | | | |

| Sample ID **N043348-016BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **149310** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149310** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | | | | SeqNo: **4035733** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | 225.806 | 5.0 | 100.0 | 115.9 | 110 | 75 | 125 | 224.8 | 0.447 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID | N043348-020BMS | SampType: | MS | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149310 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149310 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035735 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 294.355 | 5.0 | 100.0 | 201.6 | 92.7 | 75 | 125 | | | | |

| Sample ID | N043348-020BMSD | SampType: | MSD | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149310 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149310 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035736 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 294.355 | 5.0 | 100.0 | 201.6 | 92.7 | 75 | 125 | 294.4 | 0 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-004

**Client Sample ID:** MW-49-135-Q420
**Collection Date:** 12/4/2020 10:47:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 01:40 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201224A** QC Batch: **R149682** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 4000 | 35 | 500 | | mg/L | 1000 | 12/24/2020 12:04 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201224A** QC Batch: **R149682** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 840 | 4.0 | 50 | | mg/L | 100 | 12/24/2020 12:52 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-005

**Client Sample ID:** MW-49-275-Q420
**Collection Date:** 12/4/2020 9:42:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 01:54 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201224A** QC Batch: **R149682** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 7700 | 70 | 1000 | | mg/L | 2000 | 12/24/2020 12:20 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201224A** QC Batch: **R149682** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1300 | 8.0 | 100 | | mg/L | 200 | 12/24/2020 01:41 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-006

**Client Sample ID:** MW-49-365-Q420
**Collection Date:** 12/4/2020 8:58:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 02:08 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 15000 | 70 | 1000 | | mg/L | 2000 | 12/8/2020 01:35 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1700 | 8.0 | 100 | | mg/L | 200 | 12/7/2020 10:00 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-007

**Client Sample ID:** MW-29-Q420
**Collection Date:** 12/4/2020 11:24:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 02:22 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 260 | 1.7 | 25 | | mg/L | 50 | 12/7/2020 06:26 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 250 | 2.0 | 25 | | mg/L | 50 | 12/7/2020 06:26 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-010

**Client Sample ID:** MW-57-070-Q420
**Collection Date:** 12/4/2020 8:51:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 01:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 550 | 3.5 | 50 | | mg/L | 100 | 12/8/2020 01:49 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 110 | 0.40 | 5.0 | | mg/L | 10 | 12/7/2020 10:14 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-011

**Client Sample ID:** MW-57-185-Q420
**Collection Date:** 12/4/2020 9:40:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 03:20 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5700 | 70 | 1000 | | mg/L | 2000 | 12/8/2020 02:03 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 700 | 4.0 | 50 | | mg/L | 100 | 12/7/2020 10:29 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-012

**Client Sample ID:** MW-61-110-Q420
**Collection Date:** 12/4/2020 10:37:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/7/2020 03:34 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5400 | 35 | 500 | | mg/L | 1000 | 12/8/2020 02:46 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 720 | 4.0 | 50 | | mg/L | 100 | 12/7/2020 10:43 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-013

**Client Sample ID:** MW-20-070-Q420
**Collection Date:** 12/4/2020 10:53:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/7/2020 03:48 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 470 | 3.5 | 50 | | mg/L | 100 | 12/8/2020 03:00 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 320 | 2.0 | 25 | | mg/L | 50 | 12/7/2020 10:57 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-014

**Client Sample ID:** MW-20-100-Q420
**Collection Date:** 12/4/2020 11:41:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/7/2020 04:03 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 460 | 3.5 | 50 | | mg/L | 100 | 12/8/2020 03:15 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 210 | 0.80 | 10 | | mg/L | 20 | 12/7/2020 11:12 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-015

**Client Sample ID:** MW-20-130-Q420
**Collection Date:** 12/4/2020 10:02:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 04:17 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2200 | 17 | 250 | | mg/L | 500 | 12/8/2020 03:29 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1000 | 4.0 | 50 | | mg/L | 100 | 12/7/2020 11:55 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-016

**Client Sample ID:** MW-906-Q420
**Collection Date:** 12/4/2020 10:12:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 04:31 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201224A** QC Batch: **R149682** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2500 | 17 | 250 | | mg/L | 500 | 12/24/2020 12:36 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201224A** QC Batch: **R149682** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 940 | 4.0 | 50 | | mg/L | 100 | 12/24/2020 01:58 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-017

**Client Sample ID:** MW-62-065-Q420
**Collection Date:** 12/4/2020 9:01:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 04:45 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1800 | 17 | 250 | | mg/L | 500 | 12/8/2020 03:58 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 430 | 2.0 | 25 | | mg/L | 50 | 12/8/2020 04:12 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID | LCS-R149217_BR | SampType: | LCS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030232 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.277 | 0.50 | 1.250 | 0 | 102 | 90 | 110 | | | | |

| Sample ID | MB-R149217_BR | SampType: | MBLK | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030235 |

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

| Sample ID | N043305-010BDUP | SampType: | DUP | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030244 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.268 | 2.5 | | | | | | 0.2840 | 0 | 20 | |

| Sample ID | N043305-007BMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030254 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.560 | 2.5 | 6.250 | 0.3250 | 99.8 | 80 | 120 | | | | |

| Sample ID | N043305-007BMSD | SampType: | MSD | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030255 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.423 | 2.5 | 6.250 | 0.3250 | 97.6 | 80 | 120 | 6.560 | 2.12 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID | N043263-010BMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030259 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 8.251 | 2.5 | 6.250 | 1.982 | 100 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | LCS-R149217_CL | SampType: | LCS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030191 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.930 | 0.50 | 2.000 | 0 | 96.5 | 90 | 110 | | | | |

| Sample ID | MB-R149217_CL | SampType: | MBLK | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030194 |

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

| Sample ID | N043305-007BDUP | SampType: | DUP | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030200 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 258.205 | 25 | | | | | | 258.6 | 0.145 | 20 | |

| Sample ID | N043305-007BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030201 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 361.010 | 25 | 100.0 | 258.6 | 102 | 80 | 120 | | | | |

| Sample ID | N043305-007BMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030202 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 359.905 | 25 | 100.0 | 258.6 | 101 | 80 | 120 | 361.0 | 0.307 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | N043263-007BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030204 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1279.180 | 100 | 400.0 | 871.2 | 102 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | MB-R149682_CL | SampType: | MBLK | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059235 |

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

| Sample ID | LCS-R149682_CL | SampType: | LCS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059236 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.919 | 0.50 | 2.000 | 0 | 95.9 | 90 | 110 | | | | |

| Sample ID | N043305-004BDUP | SampType: | DUP | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059242 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3915.400 | 500 | | | | | | 3950 | 0.880 | 20 | |

| Sample ID | N043305-004BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059243 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5866.400 | 500 | 2000 | 3950 | 95.8 | 80 | 120 | | | | |

| Sample ID | N043305-004BMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059244 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5852.400 | 500 | 2000 | 3950 | 95.1 | 80 | 120 | 5866 | 0.239 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | LCS-R149217_SO4 | SampType: | LCS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030272 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.022 | 0.50 | 4.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID | MB-R149217_SO4 | SampType: | MBLK | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030275 |

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

| Sample ID | N043305-007BDUP | SampType: | DUP | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030281 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 246.280 | 25 | | | | | | 245.4 | 0.344 | 20 | |

| Sample ID | N043305-007BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030282 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 448.890 | 25 | 200.0 | 245.4 | 102 | 80 | 120 | | | | |

| Sample ID | N043305-007BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030283 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 448.650 | 25 | 200.0 | 245.4 | 102 | 80 | 120 | 448.9 | 0.0535 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | N043263-007BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149217 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149217 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/7/2020 | SeqNo: | 4030285 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 618.990 | 25 | 200.0 | 420.1 | 99.4 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | MB-R149682_SO4 | SampType: | MBLK | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059251 |

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

| Sample ID | LCS-R149682_SO4 | SampType: | LCS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059252 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.940 | 0.50 | 4.000 | 0 | 98.5 | 90 | 110 | | | | |

| Sample ID | N043305-004BDUP | SampType: | DUP | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059258 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 860.520 | 50 | | | | | | 841.3 | 2.25 | 20 | |

| Sample ID | N043305-004BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059259 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1257.290 | 50 | 400.0 | 841.3 | 104 | 80 | 120 | | | | |

| Sample ID | N043305-004BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149682 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149682 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/24/2020 | SeqNo: | 4059260 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1257.080 | 50 | 400.0 | 841.3 | 104 | 80 | 120 | 1257 | 0.0167 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-004

**Client Sample ID:** MW-49-135-Q420
**Collection Date:** 12/4/2020 10:47:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 750 | 74 | 100 | | ug/L | 1 | 12/17/2020 02:12 PM |
| Calcium | 270000 | 85 | 500 | | ug/L | 1 | 12/13/2020 08:07 PM |
| Iron | 180 | 18 | 20 | | ug/L | 1 | 12/13/2020 08:07 PM |
| Magnesium | 34000 | 48 | 100 | | ug/L | 1 | 12/13/2020 08:07 PM |
| Sodium | 2600000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 04:45 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-005

**Client Sample ID:** MW-49-275-Q420
**Collection Date:** 12/4/2020 9:42:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 2800 | 370 | 500 | | ug/L | 5 | 12/17/2020 02:35 PM |
| Calcium | 230000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 08:34 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 08:34 PM |
| Magnesium | 8200 | 240 | 500 | | ug/L | 5 | 12/13/2020 08:34 PM |
| Sodium | 5900000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 04:58 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-006

**Client Sample ID:** MW-49-365-Q420
**Collection Date:** 12/4/2020 8:58:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 3500 | 370 | 500 | | ug/L | 5 | 12/17/2020 02:39 PM |
| Calcium | 380000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 08:38 PM |
| Iron | 180 | 89 | 100 | | ug/L | 5 | 12/13/2020 08:38 PM |
| Magnesium | 16000 | 240 | 500 | | ug/L | 5 | 12/13/2020 08:38 PM |
| Sodium | 7700000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 05:49 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-007

**Client Sample ID:** MW-29-Q420
**Collection Date:** 12/4/2020 11:24:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 570 | 74 | 100 | | ug/L | 1 | 12/17/2020 02:45 PM |
| Calcium | 84000 | 85 | 500 | | ug/L | 1 | 12/13/2020 08:44 PM |
| Iron | 1400 | 18 | 20 | | ug/L | 1 | 12/13/2020 08:44 PM |
| Magnesium | 45000 | 48 | 100 | | ug/L | 1 | 12/13/2020 08:44 PM |
| Sodium | 220000 | 2400 | 12000 | | ug/L | 25 | 12/14/2020 05:52 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 400 | 74 | 100 | | ug/L | 1 | 12/17/2020 02:50 PM |
| Calcium | 250000 | 85 | 500 | | ug/L | 1 | 12/13/2020 08:48 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/13/2020 08:48 PM |
| Magnesium | 18000 | 48 | 100 | | ug/L | 1 | 12/13/2020 08:48 PM |
| Sodium | 75000 | 480 | 2500 | | ug/L | 5 | 12/14/2020 05:55 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-011

**Client Sample ID:** MW-57-185-Q420
**Collection Date:** 12/4/2020 9:40:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 2400 | 370 | 500 | | ug/L | 5 | 12/17/2020 03:14 PM |
| Calcium | 330000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 09:03 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 09:03 PM |
| Magnesium | ND | 240 | 500 | | ug/L | 5 | 12/13/2020 09:03 PM |
| Sodium | 2800000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 05:59 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-012

**Client Sample ID:** MW-61-110-Q420
**Collection Date:** 12/4/2020 10:37:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 2400 | 370 | 500 | | ug/L | 5 | 12/17/2020 03:19 PM |
| Calcium | 610000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 09:07 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 09:07 PM |
| Magnesium | 26000 | 240 | 500 | | ug/L | 5 | 12/13/2020 09:07 PM |
| Sodium | 2700000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 06:07 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-013

**Client Sample ID:** MW-20-070-Q420
**Collection Date:** 12/4/2020 10:53:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 600 | 74 | 100 | | ug/L | 1 | 12/17/2020 03:23 PM |
| Calcium | 78000 | 85 | 500 | | ug/L | 1 | 12/13/2020 09:13 PM |
| Iron | 24 | 18 | 20 | | ug/L | 1 | 12/13/2020 09:13 PM |
| Magnesium | 22000 | 48 | 100 | | ug/L | 1 | 12/13/2020 09:13 PM |
| Potassium | 5900 | 430 | 2500 | | ug/L | 5 | 12/14/2020 06:10 PM |
| Sodium | 280000 | 2400 | 12000 | | ug/L | 25 | 12/14/2020 06:20 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-014

**Client Sample ID:** MW-20-100-Q420
**Collection Date:** 12/4/2020 11:41:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 1000 | 74 | 100 | | ug/L | 1 | 12/17/2020 03:27 PM |
| Calcium | 95000 | 85 | 500 | | ug/L | 1 | 12/13/2020 09:17 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/13/2020 09:17 PM |
| Magnesium | 19000 | 48 | 100 | | ug/L | 1 | 12/13/2020 09:17 PM |
| Potassium | 6100 | 430 | 2500 | | ug/L | 5 | 12/14/2020 06:23 PM |
| Sodium | 250000 | 2400 | 12000 | | ug/L | 25 | 12/14/2020 06:27 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-015

**Client Sample ID:** MW-20-130-Q420
**Collection Date:** 12/4/2020 10:02:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 2000 | 74 | 100 | | ug/L | 1 | 12/17/2020 03:32 PM |
| Calcium | 140000 | 85 | 500 | | ug/L | 1 | 12/13/2020 09:23 PM |
| Iron | 92 | 18 | 20 | | ug/L | 1 | 12/13/2020 09:23 PM |
| Magnesium | 20000 | 48 | 100 | | ug/L | 1 | 12/13/2020 09:23 PM |
| Potassium | 64000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 06:30 PM |
| Sodium | 1200000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 06:35 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-016

**Client Sample ID:** MW-906-Q420
**Collection Date:** 12/4/2020 10:12:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 2200 | 74 | 100 | | ug/L | 1 | 12/17/2020 03:37 PM |
| Calcium | 150000 | 85 | 500 | | ug/L | 1 | 12/13/2020 09:28 PM |
| Iron | 23 | 18 | 20 | | ug/L | 1 | 12/13/2020 09:28 PM |
| Magnesium | 21000 | 48 | 100 | | ug/L | 1 | 12/13/2020 09:28 PM |
| Potassium | 67000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 06:38 PM |
| Sodium | 1300000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 06:43 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-017

**Client Sample ID:** MW-62-065-Q420
**Collection Date:** 12/4/2020 9:01:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83453** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 880 | 74 | 100 | | ug/L | 1 | 12/17/2020 03:42 PM |
| Calcium | 180000 | 85 | 500 | | ug/L | 1 | 12/13/2020 09:34 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/13/2020 09:34 PM |
| Magnesium | 30000 | 48 | 100 | | ug/L | 1 | 12/13/2020 09:34 PM |
| Sodium | 870000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 06:46 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **MB-83453** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83453** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041423** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 133.787 | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

| Sample ID **LCS1-83453** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83453** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041426** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 10871.677 | 500 | 10000 | 0 | 109 | 85 | 115 | | | | |
| Iron | 104.961 | 20 | 100.0 | 0 | 105 | 85 | 115 | | | | |
| Magnesium | 10293.244 | 100 | 10000 | 0 | 103 | 85 | 115 | | | | |

| Sample ID **N043305-004C-MS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83453** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041430** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 250202.505 | 500 | 10000 | 272900 | -227 | 75 | 125 | | | | S |
| Iron | 232.641 | 20 | 100.0 | 184.1 | 48.5 | 75 | 125 | | | | S |
| Magnesium | 37013.259 | 100 | 10000 | 33970 | 30.4 | 75 | 125 | | | | S |

| Sample ID **N043305-004C-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83453** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041431** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 263212.273 | 500 | 10000 | 272900 | -96.9 | 75 | 125 | 250200 | 5.07 | 20 | S |
| Iron | 288.430 | 20 | 100.0 | 184.1 | 104 | 75 | 125 | 232.6 | 21.4 | 20 | R |
| Magnesium | 38978.877 | 100 | 10000 | 33970 | 50.1 | 75 | 125 | 37010 | 5.17 | 20 | S |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | MB-83453 | SampType: | MBLK | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044386 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | ND | 500 | | | | | | | | | |
| Sodium | 183.799 | 500 | | | | | | | | | |

| Sample ID | LCS2-83453 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044387 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 19790.477 | 500 | 20000 | 0 | 99.0 | 85 | 115 | | | | |
| Sodium | 18833.202 | 500 | 20000 | 0 | 94.2 | 85 | 115 | | | | |

| Sample ID | N043305-005C-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044394 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 122184.576 | 2500 | 20000 | 81340 | 204 | 75 | 125 | | | | S |

| Sample ID | N043305-005C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044395 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 121239.502 | 2500 | 20000 | 81340 | 200 | 75 | 125 | 122200 | 0.776 | 20 | S |

| Sample ID | N043305-005C-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044401 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 5132915.860 | 120000 | 20000 | 5950000 | -4080 | 75 | 125 | | | | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N043305-005C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044402 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 5098976.405 | 120000 | 20000 | 5950000 | -4250 | 75 | 125 | 5133000 | 0.663 | 20 | S |

| Sample ID | MB-83453 | SampType: | MBLK | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049523 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

| Sample ID | LCS1-83453 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049526 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4954.982 | 100 | 5000 | 0 | 99.1 | 85 | 115 | | | | |

| Sample ID | N043305-004C-MS1 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049530 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3123.833 | 100 | 5000 | 753.5 | 47.4 | 75 | 125 | | | | S |

| Sample ID | N043305-004C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83453 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049531 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3173.465 | 100 | 5000 | 753.5 | 48.4 | 75 | 125 | 3124 | 1.58 | 20 | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **N043305-004C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83453** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041429** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 256922.542 | 500 | 10000 | 272900 | -160 | 80 | 120 | | | | S |
| Iron | 260.367 | 20 | 100.0 | 184.1 | 76.2 | 80 | 120 | | | | S |
| Magnesium | 38050.037 | 100 | 10000 | 33970 | 40.8 | 80 | 120 | | | | S |

| Sample ID **N043305-005C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83453** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4044393** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 114944.903 | 2500 | 20000 | 81340 | 168 | 80 | 120 | | | | S |

| Sample ID **N043305-005C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83453** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4044400** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 5156448.003 | 120000 | 20000 | 5950000 | -3970 | 80 | 120 | | | | S |

| Sample ID **N043305-004C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83453** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/17/2020** | SeqNo: **4049529** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3142.043 | 100 | 5000 | 753.5 | 47.8 | 80 | 120 | | | | S |

**Qualifiers:**

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

Calculations are based on raw values

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-135-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:47:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-004 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201211A** QC Batch: **83357** PrepDate: **12/8/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 05:56 PM |
| Manganese | 100 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 05:56 PM |
| Molybdenum | 30 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 05:56 PM |
| Selenium | 1.2 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 05:56 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-275-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Manganese | 310 | 1.3 | 2.5 | | µg/L | 5 | 12/11/2020 06:20 PM |
| Molybdenum | 260 | 1.1 | 2.5 | | µg/L | 5 | 12/11/2020 06:20 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 06:14 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-49-365-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Manganese | 64 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 06:49 PM |
| Molybdenum | 200 | 1.1 | 2.5 | | µg/L | 5 | 12/11/2020 06:55 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 06:49 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-29-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Arsenic | 15 | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 07:06 PM |
| Manganese | 220 | 1.3 | 2.5 | | µg/L | 5 | 12/11/2020 07:12 PM |
| Molybdenum | 9.2 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 07:06 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 07:06 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-010 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201211A** QC Batch: **83357** PrepDate: **12/8/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 1.3 | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 07:23 PM |
| Manganese | 0.98 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 07:23 PM |
| Molybdenum | 2.6 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 07:23 PM |
| Selenium | 3.2 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 07:23 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-57-185-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:40:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Arsenic | 5.4 | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 08:10 PM |
| Manganese | 1.4 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 08:10 PM |
| Molybdenum | 83 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 08:10 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 08:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-61-110-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | | PrepDate: | **12/8/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 08:27 PM |
| Manganese | 240 | 1.3 | 2.5 | | µg/L | 5 | 12/11/2020 08:33 PM |
| Molybdenum | 22 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 08:27 PM |
| Selenium | 1.3 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 08:27 PM |

**Qualifiers:**

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

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-070-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 08:45 PM |
| Molybdenum | 27 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 08:45 PM |
| Selenium | 11 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 08:45 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-100-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 11:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | | PrepDate: | **12/8/2020** | Analyst: **CEI** |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 09:20 PM |
| Molybdenum | 3.8 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 09:20 PM |
| Selenium | 5.6 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 09:20 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-20-130-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | | PrepDate: | **12/8/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 09:37 PM |
| Manganese | 2.5 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 09:37 PM |
| Molybdenum | 20 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 09:37 PM |
| Selenium | 53 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 09:37 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-906-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 10:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 09:54 PM |
| Manganese | 2.3 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 09:54 PM |
| Molybdenum | 19 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 09:54 PM |
| Selenium | 51 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 09:54 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-065-Q420 |
| **Lab Order:** | N043305 | **Collection Date:** | 12/4/2020 9:01:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043305-017 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201212A** QC Batch: **83358** PrepDate: **12/8/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 05:34 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 05:34 PM |
| Molybdenum | 12 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 05:34 PM |
| Selenium | 3.5 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 05:34 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **MB-83357** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **PBW** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041949**

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

Sample ID **LCS-83357** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **LCSW** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041950**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.179 | 0.10 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Manganese | 98.541 | 0.50 | 100.0 | 0 | 98.5 | 85 | 115 | | | | |
| Molybdenum | 9.693 | 0.50 | 10.00 | 0 | 96.9 | 85 | 115 | | | | |
| Selenium | 9.521 | 0.50 | 10.00 | 0 | 95.2 | 85 | 115 | | | | |

Sample ID **N043263-001D-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **ZZZZZZ** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041960**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.026 | 0.10 | 10.00 | 0.7351 | 103 | 75 | 125 | | | | |
| Manganese | 91.514 | 0.50 | 100.0 | 0 | 91.5 | 75 | 125 | | | | |
| Molybdenum | 42.614 | 0.50 | 10.00 | 32.75 | 98.7 | 75 | 125 | | | | |
| Selenium | 39.960 | 0.50 | 10.00 | 31.02 | 89.4 | 75 | 125 | | | | |

Sample ID **N043263-001D-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **ZZZZZZ** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041963**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.345 | 0.10 | 10.00 | 0.7351 | 106 | 75 | 125 | 11.03 | 2.85 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **N043263-001D-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **ZZZZZZ** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041963**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 91.711 | 0.50 | 100.0 | 0 | 91.7 | 75 | 125 | 91.51 | 0.216 | 20 | |
| Molybdenum | 41.513 | 0.50 | 10.00 | 32.75 | 87.7 | 75 | 125 | 42.61 | 2.62 | 20 | |
| Selenium | 39.723 | 0.50 | 10.00 | 31.02 | 87.0 | 75 | 125 | 39.96 | 0.596 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | MB-83358 | SampType: | MBLK | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042130 |

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

| Sample ID | LCS-83358 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042131 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.935 | 0.10 | 10.00 | 0 | 99.3 | 85 | 115 | | | | |
| Manganese | 99.691 | 0.50 | 100.0 | 0 | 99.7 | 85 | 115 | | | | |
| Molybdenum | 9.648 | 0.50 | 10.00 | 0 | 96.5 | 85 | 115 | | | | |
| Selenium | 9.932 | 0.50 | 10.00 | 0 | 99.3 | 85 | 115 | | | | |

| Sample ID | N043348-013CMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042137 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 93.615 | 0.50 | 100.0 | 1.022 | 92.6 | 75 | 125 | | | | |
| Molybdenum | 30.536 | 0.50 | 10.00 | 22.28 | 82.6 | 75 | 125 | | | | |
| Selenium | 12.676 | 0.50 | 10.00 | 3.337 | 93.4 | 75 | 125 | | | | |

| Sample ID | N043348-013CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042141 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 94.336 | 0.50 | 100.0 | 1.022 | 93.3 | 75 | 125 | 93.61 | 0.768 | 20 | |
| Molybdenum | 31.340 | 0.50 | 10.00 | 22.28 | 90.6 | 75 | 125 | 30.54 | 2.60 | 20 | |
| Selenium | 12.470 | 0.50 | 10.00 | 3.337 | 91.3 | 75 | 125 | 12.68 | 1.63 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043348-016CMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042148 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.783 | 0.10 | 10.00 | 0.7872 | 110 | 75 | 125 | | | | |
| Manganese | 95.580 | 0.50 | 100.0 | 0.5458 | 95.0 | 75 | 125 | | | | |
| Molybdenum | 15.956 | 0.50 | 10.00 | 5.926 | 100 | 75 | 125 | | | | |
| Selenium | 15.760 | 0.50 | 10.00 | 6.669 | 90.9 | 75 | 125 | | | | |

| Sample ID | N043348-016CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042152 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.705 | 0.10 | 10.00 | 0.7872 | 109 | 75 | 125 | 11.78 | 0.669 | 20 | |
| Manganese | 95.308 | 0.50 | 100.0 | 0.5458 | 94.8 | 75 | 125 | 95.58 | 0.285 | 20 | |
| Molybdenum | 15.783 | 0.50 | 10.00 | 5.926 | 98.6 | 75 | 125 | 15.96 | 1.09 | 20 | |
| Selenium | 16.332 | 0.50 | 10.00 | 6.669 | 96.6 | 75 | 125 | 15.76 | 3.56 | 20 | |

| Sample ID | N043348-020CMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042159 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.062 | 0.10 | 10.00 | 0 | 101 | 75 | 125 | | | | |
| Manganese | 92.541 | 0.50 | 100.0 | 1.425 | 91.1 | 75 | 125 | | | | |
| Molybdenum | 25.460 | 0.50 | 10.00 | 16.19 | 92.7 | 75 | 125 | | | | |
| Selenium | 10.748 | 0.50 | 10.00 | 1.240 | 95.1 | 75 | 125 | | | | |

| Sample ID | N043348-020CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042165 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.359 | 0.10 | 10.00 | 0 | 104 | 75 | 125 | 10.06 | 2.91 | 20 | |
| Manganese | 92.732 | 0.50 | 100.0 | 1.425 | 91.3 | 75 | 125 | 92.54 | 0.206 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043348-020CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042165 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 25.014 | 0.50 | 10.00 | 16.19 | 88.2 | 75 | 125 | 25.46 | 1.77 | 20 | |
| Selenium | 10.199 | 0.50 | 10.00 | 1.240 | 89.6 | 75 | 125 | 10.75 | 5.24 | 20 | |

| Sample ID | N043348-013CMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4051932 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.251 | 0.10 | 10.00 | 0.5349 | 107 | 75 | 125 | | | | |

| Sample ID | N043348-013CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4051933 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.578 | 0.10 | 10.00 | 0.5349 | 110 | 75 | 125 | 11.25 | 2.86 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-001

**Client Sample ID:** MW-67-185-Q420
**Collection Date:** 12/2/2020 10:16:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-001

**Client Sample ID:** MW-67-185-Q420
**Collection Date:** 12/2/2020 10:16:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Chloroform | 1.3 | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/8/2020 10:06 PM |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 72-119 | | %REC | 1 | 12/8/2020 10:06 PM |
| Surr: 4-Bromofluorobenzene | 88.5 | 0 | 76-119 | | %REC | 1 | 12/8/2020 10:06 PM |
| Surr: Dibromofluoromethane | 104 | 0 | 85-115 | | %REC | 1 | 12/8/2020 10:06 PM |
| Surr: Toluene-d8 | 99.0 | 0 | 81-120 | | %REC | 1 | 12/8/2020 10:06 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-002

**Client Sample ID:** MW-67-225-Q420
**Collection Date:** 12/2/2020 12:14:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-002

**Client Sample ID:** MW-67-225-Q420
**Collection Date:** 12/2/2020 12:14:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Chloroform | 3.0 | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/8/2020 10:29 PM |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 72-119 | | %REC | 1 | 12/8/2020 10:29 PM |
| Surr: 4-Bromofluorobenzene | 92.9 | 0 | 76-119 | | %REC | 1 | 12/8/2020 10:29 PM |
| Surr: Dibromofluoromethane | 110 | 0 | 85-115 | | %REC | 1 | 12/8/2020 10:29 PM |
| Surr: Toluene-d8 | 99.7 | 0 | 81-120 | | %REC | 1 | 12/8/2020 10:29 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-003

**Client Sample ID:** MW-67-260-Q420
**Collection Date:** 12/2/2020 11:10:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201214A** QC Batch: **P20VW129** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 2-Butanone | 53 | 4.7 | 10 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Acetone | 240 | 4.6 | 10 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-003

**Client Sample ID:** MW-67-260-Q420
**Collection Date:** 12/2/2020 11:10:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201214A** QC Batch: **P20VW129** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/15/2020 03:42 AM |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 72-119 | | %REC | 1 | 12/15/2020 03:42 AM |
| Surr: 4-Bromofluorobenzene | 115 | 0 | 76-119 | | %REC | 1 | 12/15/2020 03:42 AM |
| Surr: Dibromofluoromethane | 114 | 0 | 85-115 | | %REC | 1 | 12/15/2020 03:42 AM |
| Surr: Toluene-d8 | 111 | 0 | 81-120 | | %REC | 1 | 12/15/2020 03:42 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-020

**Client Sample ID:** Trip Blank_20201204
**Collection Date:** 12/4/2020 7:00:00 AM
**Matrix:** WATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043305
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043305-020

**Client Sample ID:** Trip Blank_20201204
**Collection Date:** 12/4/2020 7:00:00 AM
**Matrix:** WATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/8/2020 08:36 PM |
| Surr: 1,2-Dichloroethane-d4 | 115 | 0 | 72-119 | | %REC | 1 | 12/8/2020 08:36 PM |
| Surr: 4-Bromofluorobenzene | 99.4 | 0 | 76-119 | | %REC | 1 | 12/8/2020 08:36 PM |
| Surr: Dibromofluoromethane | 109 | 0 | 85-115 | | %REC | 1 | 12/8/2020 08:36 PM |
| Surr: Toluene-d8 | 108 | 0 | 81-120 | | %REC | 1 | 12/8/2020 08:36 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201208LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **LCSW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031320**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.030 | 0.50 | 20.00 | 0 | 100 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.690 | 1.0 | 20.00 | 0 | 103 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.300 | 0.50 | 20.00 | 0 | 102 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.090 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.640 | 1.0 | 20.00 | 0 | 103 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.660 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.950 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.760 | 1.0 | 20.00 | 0 | 109 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.290 | 1.0 | 20.00 | 0 | 101 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.200 | 2.0 | 20.00 | 0 | 106 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.610 | 1.0 | 20.00 | 0 | 108 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.190 | 1.0 | 20.00 | 0 | 106 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.900 | 0.50 | 20.00 | 0 | 99.5 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.130 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 19.550 | 1.0 | 20.00 | 0 | 97.8 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 20.890 | 1.0 | 20.00 | 0 | 104 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.320 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.260 | 0.50 | 20.00 | 0 | 106 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 19.360 | 1.0 | 20.00 | 0 | 96.8 | 69 | 137 | | | | |
| 2-Butanone | 248.830 | 10 | 200.0 | 0 | 124 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.430 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.500 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 202.740 | 10 | 200.0 | 0 | 101 | 58 | 134 | | | | |
| Acetone | 251.810 | 10 | 200.0 | 0 | 126 | 40 | 135 | | | | |
| Acrolein | 213.400 | 20 | 200.0 | 0 | 107 | 75 | 125 | | | | |
| Acrylonitrile | 223.800 | 20 | 200.0 | 0 | 112 | 75 | 125 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

| Sample ID **P201208LCS** | SampType: **LCS** | TestCode: **8260_WP_LL** | Units: **ug/L** | Prep Date: | RunNo: **149242** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **P20VW126** | TestNo: **EPA 8260B** | | Analysis Date: **12/8/2020** | SeqNo: **4031320** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 21.380 | 0.50 | 20.00 | 0 | 107 | 81 | 122 | | | | |
| Bromobenzene | 21.370 | 1.0 | 20.00 | 0 | 107 | 76 | 124 | | | | |
| Bromochloromethane | 20.570 | 1.0 | 20.00 | 0 | 103 | 65 | 129 | | | | |
| Bromodichloromethane | 21.220 | 0.50 | 20.00 | 0 | 106 | 76 | 121 | | | | |
| Bromoform | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 69 | 128 | | | | |
| Bromomethane | 22.800 | 1.0 | 20.00 | 0 | 114 | 53 | 141 | | | | |
| Carbon disulfide | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.500 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | | | | |
| Chlorobenzene | 20.890 | 0.50 | 20.00 | 0 | 104 | 81 | 122 | | | | |
| Chloroethane | 20.440 | 1.0 | 20.00 | 0 | 102 | 58 | 133 | | | | |
| Chloroform | 20.510 | 1.0 | 20.00 | 0 | 103 | 69 | 128 | | | | |
| Chloromethane | 18.870 | 1.0 | 20.00 | 0 | 94.4 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 21.450 | 1.0 | 20.00 | 0 | 107 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.370 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | | | | |
| Dibromochloromethane | 20.930 | 0.50 | 20.00 | 0 | 105 | 66 | 133 | | | | |
| Dibromomethane | 20.480 | 1.0 | 20.00 | 0 | 102 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 19.240 | 1.0 | 20.00 | 0 | 96.2 | 53 | 153 | | | | |
| Ethylbenzene | 20.920 | 1.0 | 20.00 | 0 | 105 | 73 | 127 | | | | |
| Freon-113 | 17.460 | 1.0 | 20.00 | 0 | 87.3 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.330 | 0.50 | 20.00 | 0 | 96.7 | 67 | 131 | | | | |
| Isopropylbenzene | 22.790 | 1.0 | 20.00 | 0 | 114 | 75 | 127 | | | | |
| m,p-Xylene | 43.290 | 1.0 | 40.00 | 0 | 108 | 76 | 128 | | | | |
| Methylene chloride | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 63 | 137 | | | | |
| MTBE | 21.660 | 1.0 | 20.00 | 0 | 108 | 65 | 123 | | | | |
| n-Butylbenzene | 22.090 | 1.0 | 20.00 | 0 | 110 | 69 | 137 | | | | |
| n-Propylbenzene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 72 | 129 | | | | |
| Naphthalene | 17.500 | 1.0 | 20.00 | 0 | 87.5 | 54 | 138 | | | | |
| o-Xylene | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.690 | 1.0 | 20.00 | 0 | 98.4 | 72 | 127 | | | | |
| Styrene | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 65 | 134 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201208LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **LCSW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031320**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 70 | 129 | | | | |
| Tetrachloroethene | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 66 | 128 | | | | |
| Toluene | 21.490 | 0.50 | 20.00 | 0 | 107 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 20.150 | 1.0 | 20.00 | 0 | 101 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.270 | 1.0 | 20.00 | 0 | 111 | 59 | 135 | | | | |
| Trichloroethene | 21.050 | 1.0 | 20.00 | 0 | 105 | 70 | 127 | | | | |
| Trichlorofluoromethane | 18.930 | 1.0 | 20.00 | 0 | 94.6 | 57 | 129 | | | | |
| Vinyl chloride | 20.140 | 0.50 | 20.00 | 0 | 101 | 50 | 134 | | | | |
| Xylenes, Total | 62.340 | 2.0 | 60.00 | 0 | 104 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.610 | | 25.00 | | 106 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 27.290 | | 25.00 | | 109 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.160 | | 25.00 | | 105 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.680 | | 25.00 | | 111 | 81 | 120 | | | | |

Sample ID **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 0.50 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 0.50 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ND | 0.50 | | | | | | | | | |
| Dibromochloromethane | ND | 0.50 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.50 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | 0.550 | 1.0 | | | | | | | | | |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.990 | | 25.00 | | 108 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.200 | | 25.00 | | 101 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.080 | | 25.00 | | 104 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.250 | | 25.00 | | 109 | 81 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043262-002EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.980 | 0.50 | 20.00 | 0 | 99.9 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 22.760 | 1.0 | 20.00 | 0 | 114 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.220 | 0.50 | 20.00 | 0 | 106 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.460 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 21.110 | 1.0 | 20.00 | 0 | 106 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 21.030 | 1.0 | 20.00 | 0 | 105 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 22.950 | 1.0 | 20.00 | 0 | 115 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.050 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.810 | 1.0 | 20.00 | 0 | 109 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 21.280 | 1.0 | 20.00 | 0 | 106 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.200 | 1.0 | 20.00 | 0 | 101 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.160 | 2.0 | 20.00 | 0 | 106 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 22.410 | 1.0 | 20.00 | 0 | 112 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.150 | 1.0 | 20.00 | 0 | 106 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.530 | 0.50 | 20.00 | 0 | 103 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.090 | 1.0 | 20.00 | 0 | 100 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.260 | 1.0 | 20.00 | 0 | 101 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 21.140 | 1.0 | 20.00 | 0 | 106 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.680 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.300 | 0.50 | 20.00 | 0 | 106 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 20.710 | 1.0 | 20.00 | 0 | 104 | 69 | 137 | | | | |
| 2-Butanone | 191.200 | 10 | 200.0 | 0 | 95.6 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.780 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.320 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 214.330 | 10 | 200.0 | 0 | 107 | 58 | 134 | | | | |
| Acetone | 149.270 | 10 | 200.0 | 0 | 74.6 | 40 | 135 | | | | |
| Acrolein | 227.260 | 20 | 200.0 | 0 | 114 | 75 | 125 | | | | |
| Acrylonitrile | 233.180 | 20 | 200.0 | 0 | 117 | 75 | 125 | | | | |
| Benzene | 22.210 | 0.50 | 20.00 | 0 | 111 | 81 | 122 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043262-002EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 21.090 | 1.0 | 20.00 | 0 | 105 | 76 | 124 | | | | |
| Bromochloromethane | 22.160 | 1.0 | 20.00 | 0 | 111 | 65 | 129 | | | | |
| Bromodichloromethane | 21.860 | 0.50 | 20.00 | 0 | 109 | 76 | 121 | | | | |
| Bromoform | 20.920 | 1.0 | 20.00 | 0 | 105 | 69 | 128 | | | | |
| Bromomethane | 22.080 | 1.0 | 20.00 | 0 | 110 | 53 | 141 | | | | |
| Carbon disulfide | 22.010 | 1.0 | 20.00 | 0 | 110 | 75 | 125 | | | | |
| Carbon tetrachloride | 21.710 | 0.50 | 20.00 | 0 | 109 | 66 | 138 | | | | |
| Chlorobenzene | 21.510 | 0.50 | 20.00 | 0 | 108 | 81 | 122 | | | | |
| Chloroethane | 22.550 | 1.0 | 20.00 | 0 | 113 | 58 | 133 | | | | |
| Chloroform | 21.910 | 1.0 | 20.00 | 1.090 | 104 | 69 | 128 | | | | |
| Chloromethane | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 21.820 | 1.0 | 20.00 | 0 | 109 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.360 | 0.50 | 20.00 | 0 | 112 | 69 | 131 | | | | |
| Dibromochloromethane | 21.140 | 0.50 | 20.00 | 0 | 106 | 66 | 133 | | | | |
| Dibromomethane | 21.150 | 1.0 | 20.00 | 0 | 106 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 23.500 | 1.0 | 20.00 | 0 | 118 | 53 | 153 | | | | |
| Ethylbenzene | 21.630 | 1.0 | 20.00 | 0 | 108 | 73 | 127 | | | | |
| Freon-113 | 19.830 | 1.0 | 20.00 | 0 | 99.2 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.330 | 0.50 | 20.00 | 0 | 96.7 | 67 | 131 | | | | |
| Isopropylbenzene | 23.110 | 1.0 | 20.00 | 0 | 116 | 75 | 127 | | | | |
| m,p-Xylene | 46.140 | 1.0 | 40.00 | 0 | 115 | 76 | 128 | | | | |
| Methylene chloride | 21.380 | 1.0 | 20.00 | 0 | 107 | 63 | 137 | | | | |
| MTBE | 22.330 | 1.0 | 20.00 | 0 | 112 | 65 | 123 | | | | |
| n-Butylbenzene | 22.780 | 1.0 | 20.00 | 0 | 114 | 69 | 137 | | | | |
| n-Propylbenzene | 20.290 | 1.0 | 20.00 | 0 | 101 | 72 | 129 | | | | |
| Naphthalene | 21.310 | 1.0 | 20.00 | 0 | 107 | 54 | 138 | | | | |
| o-Xylene | 19.750 | 1.0 | 20.00 | 0 | 98.8 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.950 | 1.0 | 20.00 | 0 | 99.8 | 72 | 127 | | | | |
| Styrene | 20.030 | 1.0 | 20.00 | 0 | 100 | 65 | 134 | | | | |
| tert-Butylbenzene | 19.660 | 1.0 | 20.00 | 0 | 98.3 | 70 | 129 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

| Sample ID **N043262-002EMS** | SampType: **MS** | TestCode: **8260_WP_LL** | Units: **ug/L** | Prep Date: | RunNo: **149242** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **P20VW126** | TestNo: **EPA 8260B** | | Analysis Date: **12/8/2020** | SeqNo: **4031326** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 21.980 | 1.0 | 20.00 | 0 | 110 | 66 | 128 | | | | |
| Toluene | 22.170 | 0.50 | 20.00 | 0 | 111 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 20.720 | 1.0 | 20.00 | 0 | 104 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 23.420 | 1.0 | 20.00 | 0 | 117 | 59 | 135 | | | | |
| Trichloroethene | 22.370 | 1.0 | 20.00 | 0 | 112 | 70 | 127 | | | | |
| Trichlorofluoromethane | 21.700 | 1.0 | 20.00 | 0 | 108 | 57 | 129 | | | | |
| Vinyl chloride | 21.980 | 0.50 | 20.00 | 0 | 110 | 50 | 134 | | | | |
| Xylenes, Total | 65.890 | 2.0 | 60.00 | 0 | 110 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.190 | | 25.00 | | 109 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 28.160 | | 25.00 | | 113 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.890 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.370 | | 25.00 | | 109 | 81 | 120 | | | | |

| Sample ID **N043262-002EMSD** | SampType: **MSD** | TestCode: **8260_WP_LL** | Units: **ug/L** | Prep Date: | RunNo: **149242** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **P20VW126** | TestNo: **EPA 8260B** | | Analysis Date: **12/8/2020** | SeqNo: **4031327** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.700 | 0.50 | 20.00 | 0 | 104 | 81 | 129 | 19.98 | 3.54 | 20 | |
| 1,1,1-Trichloroethane | 22.440 | 1.0 | 20.00 | 0 | 112 | 67 | 132 | 22.76 | 1.42 | 20 | |
| 1,1,2,2-Tetrachloroethane | 22.560 | 0.50 | 20.00 | 0 | 113 | 63 | 128 | 21.22 | 6.12 | 20 | |
| 1,1,2-Trichloroethane | 22.550 | 1.0 | 20.00 | 0 | 113 | 75 | 125 | 21.46 | 4.95 | 20 | |
| 1,1-Dichloroethane | 22.190 | 1.0 | 20.00 | 0 | 111 | 69 | 133 | 21.11 | 4.99 | 20 | |
| 1,1-Dichloroethene | 22.310 | 1.0 | 20.00 | 0 | 112 | 68 | 130 | 21.03 | 5.91 | 20 | |
| 1,1-Dichloropropene | 23.210 | 1.0 | 20.00 | 0 | 116 | 73 | 132 | 22.95 | 1.13 | 20 | |
| 1,2,3-Trichlorobenzene | 24.190 | 1.0 | 20.00 | 0 | 121 | 67 | 137 | 21.05 | 13.9 | 20 | |
| 1,2,3-Trichloropropane | 23.170 | 1.0 | 20.00 | 0 | 116 | 73 | 124 | 21.81 | 6.05 | 20 | |
| 1,2,4-Trichlorobenzene | 23.210 | 1.0 | 20.00 | 0 | 116 | 66 | 134 | 21.28 | 8.68 | 20 | |
| 1,2,4-Trimethylbenzene | 20.700 | 1.0 | 20.00 | 0 | 104 | 74 | 132 | 20.20 | 2.44 | 20 | |
| 1,2-Dibromo-3-chloropropane | 23.290 | 2.0 | 20.00 | 0 | 116 | 50 | 132 | 21.16 | 9.58 | 20 | |
| 1,2-Dibromoethane | 23.670 | 1.0 | 20.00 | 0 | 118 | 80 | 121 | 22.41 | 5.47 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043262-002EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 22.330 | 1.0 | 20.00 | 0 | 112 | 71 | 122 | 21.15 | 5.43 | 20 | |
| 1,2-Dichloroethane | 21.480 | 0.50 | 20.00 | 0 | 107 | 69 | 132 | 20.53 | 4.52 | 20 | |
| 1,2-Dichloropropane | 20.800 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | 20.09 | 3.47 | 20 | |
| 1,3,5-Trimethylbenzene | 20.960 | 1.0 | 20.00 | 0 | 105 | 74 | 131 | 20.26 | 3.40 | 20 | |
| 1,3-Dichlorobenzene | 22.560 | 1.0 | 20.00 | 0 | 113 | 75 | 124 | 21.14 | 6.50 | 20 | |
| 1,3-Dichloropropane | 22.260 | 1.0 | 20.00 | 0 | 111 | 73 | 126 | 21.68 | 2.64 | 20 | |
| 1,4-Dichlorobenzene | 21.890 | 0.50 | 20.00 | 0 | 109 | 74 | 123 | 21.30 | 2.73 | 20 | |
| 2,2-Dichloropropane | 21.260 | 1.0 | 20.00 | 0 | 106 | 69 | 137 | 20.71 | 2.62 | 20 | |
| 2-Butanone | 208.660 | 10 | 200.0 | 0 | 104 | 49 | 136 | 191.2 | 8.73 | 20 | |
| 2-Chlorotoluene | 22.970 | 1.0 | 20.00 | 0 | 115 | 73 | 126 | 21.78 | 5.32 | 20 | |
| 4-Chlorotoluene | 23.130 | 1.0 | 20.00 | 0 | 116 | 74 | 128 | 22.32 | 3.56 | 20 | |
| 4-Isopropyltoluene | 20.720 | 1.0 | 20.00 | 0 | 104 | 73 | 130 | 19.93 | 3.89 | 20 | |
| 4-Methyl-2-pentanone | 238.820 | 10 | 200.0 | 0 | 119 | 58 | 134 | 214.3 | 10.8 | 20 | |
| Acetone | 159.420 | 10 | 200.0 | 0 | 79.7 | 40 | 135 | 149.3 | 6.58 | 20 | |
| Acrolein | 239.240 | 20 | 200.0 | 0 | 120 | 75 | 125 | 227.3 | 5.14 | 20 | |
| Acrylonitrile | 245.530 | 20 | 200.0 | 0 | 123 | 75 | 125 | 233.2 | 5.16 | 20 | |
| Benzene | 22.530 | 0.50 | 20.00 | 0 | 113 | 81 | 122 | 22.21 | 1.43 | 20 | |
| Bromobenzene | 22.310 | 1.0 | 20.00 | 0 | 112 | 76 | 124 | 21.09 | 5.62 | 20 | |
| Bromochloromethane | 22.120 | 1.0 | 20.00 | 0 | 111 | 65 | 129 | 22.16 | 0.181 | 20 | |
| Bromodichloromethane | 22.370 | 0.50 | 20.00 | 0 | 112 | 76 | 121 | 21.86 | 2.31 | 20 | |
| Bromoform | 21.470 | 1.0 | 20.00 | 0 | 107 | 69 | 128 | 20.92 | 2.59 | 20 | |
| Bromomethane | 22.090 | 1.0 | 20.00 | 0 | 110 | 53 | 141 | 22.08 | 0.0453 | 20 | |
| Carbon disulfide | 21.230 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | 22.01 | 3.61 | 20 | |
| Carbon tetrachloride | 22.620 | 0.50 | 20.00 | 0 | 113 | 66 | 138 | 21.71 | 4.11 | 20 | |
| Chlorobenzene | 21.360 | 0.50 | 20.00 | 0 | 107 | 81 | 122 | 21.51 | 0.700 | 20 | |
| Chloroethane | 22.620 | 1.0 | 20.00 | 0 | 113 | 58 | 133 | 22.55 | 0.310 | 20 | |
| Chloroform | 22.260 | 1.0 | 20.00 | 1.090 | 106 | 69 | 128 | 21.91 | 1.58 | 20 | |
| Chloromethane | 20.250 | 1.0 | 20.00 | 0 | 101 | 56 | 131 | 19.93 | 1.59 | 20 | |
| cis-1,2-Dichloroethene | 22.320 | 1.0 | 20.00 | 0 | 112 | 72 | 126 | 21.82 | 2.27 | 20 | |
| cis-1,3-Dichloropropene | 23.160 | 0.50 | 20.00 | 0 | 116 | 69 | 131 | 22.36 | 3.51 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043262-002EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 21.120 | 0.50 | 20.00 | 0 | 106 | 66 | 133 | 21.14 | 0.0947 | 20 | |
| Dibromomethane | 23.140 | 1.0 | 20.00 | 0 | 116 | 76 | 125 | 21.15 | 8.99 | 20 | |
| Dichlorodifluoromethane | 23.190 | 1.0 | 20.00 | 0 | 116 | 53 | 153 | 23.50 | 1.33 | 20 | |
| Ethylbenzene | 21.460 | 1.0 | 20.00 | 0 | 107 | 73 | 127 | 21.63 | 0.789 | 20 | |
| Freon-113 | 20.610 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | 19.83 | 3.86 | 20 | |
| Hexachlorobutadiene | 20.350 | 0.50 | 20.00 | 0 | 102 | 67 | 131 | 19.33 | 5.14 | 20 | |
| Isopropylbenzene | 24.130 | 1.0 | 20.00 | 0 | 121 | 75 | 127 | 23.11 | 4.32 | 20 | |
| m,p-Xylene | 44.660 | 1.0 | 40.00 | 0 | 112 | 76 | 128 | 46.14 | 3.26 | 20 | |
| Methylene chloride | 21.680 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | 21.38 | 1.39 | 20 | |
| MTBE | 23.330 | 1.0 | 20.00 | 0 | 117 | 65 | 123 | 22.33 | 4.38 | 20 | |
| n-Butylbenzene | 24.110 | 1.0 | 20.00 | 0 | 121 | 69 | 137 | 22.78 | 5.67 | 20 | |
| n-Propylbenzene | 20.910 | 1.0 | 20.00 | 0 | 105 | 72 | 129 | 20.29 | 3.01 | 20 | |
| Naphthalene | 22.100 | 1.0 | 20.00 | 0 | 110 | 54 | 138 | 21.31 | 3.64 | 20 | |
| o-Xylene | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 80 | 121 | 19.75 | 0.711 | 20 | |
| sec-Butylbenzene | 21.260 | 1.0 | 20.00 | 0 | 106 | 72 | 127 | 19.95 | 6.36 | 20 | |
| Styrene | 19.150 | 1.0 | 20.00 | 0 | 95.8 | 65 | 134 | 20.03 | 4.49 | 20 | |
| tert-Butylbenzene | 20.690 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | 19.66 | 5.11 | 20 | |
| Tetrachloroethene | 22.430 | 1.0 | 20.00 | 0 | 112 | 66 | 128 | 21.98 | 2.03 | 20 | |
| Toluene | 22.650 | 0.50 | 20.00 | 0 | 113 | 77 | 122 | 22.17 | 2.14 | 20 | |
| trans-1,2-Dichloroethene | 21.580 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | 20.72 | 4.07 | 20 | |
| trans-1,3-Dichloropropene | 24.050 | 1.0 | 20.00 | 0 | 120 | 59 | 135 | 23.42 | 2.65 | 20 | |
| Trichloroethene | 22.120 | 1.0 | 20.00 | 0 | 111 | 70 | 127 | 22.37 | 1.12 | 20 | |
| Trichlorofluoromethane | 21.580 | 1.0 | 20.00 | 0 | 108 | 57 | 129 | 21.70 | 0.555 | 20 | |
| Vinyl chloride | 22.360 | 0.50 | 20.00 | 0 | 112 | 50 | 134 | 21.98 | 1.71 | 20 | |
| Xylenes, Total | 64.270 | 2.0 | 60.00 | 0 | 107 | 75 | 125 | 65.89 | 2.49 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 27.700 | | 25.00 | | 111 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 27.730 | | 25.00 | | 111 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 26.280 | | 25.00 | | 105 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 28.030 | | 25.00 | | 112 | 81 | 120 | | 0 | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

| Sample ID | N043262-003EMS | SampType: | MS | TestCode: | 8260_WP_LL | Units: | ug/L | Prep Date: | | RunNo: | 149242 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | P20VW126 | TestNo: | EPA 8260B | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031328 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.550 | 0.50 | 20.00 | 0 | 97.8 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 22.850 | 1.0 | 20.00 | 0 | 114 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.290 | 0.50 | 20.00 | 0 | 106 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 22.260 | 1.0 | 20.00 | 0 | 111 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 22.100 | 1.0 | 20.00 | 0 | 110 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 23.200 | 1.0 | 20.00 | 0 | 116 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 23.780 | 1.0 | 20.00 | 0 | 119 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 22.840 | 1.0 | 20.00 | 0 | 114 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.630 | 1.0 | 20.00 | 0 | 108 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 22.460 | 1.0 | 20.00 | 0 | 112 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.530 | 1.0 | 20.00 | 0 | 103 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.520 | 2.0 | 20.00 | 0 | 108 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 23.140 | 1.0 | 20.00 | 0 | 116 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 22.030 | 1.0 | 20.00 | 0 | 110 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.180 | 0.50 | 20.00 | 0 | 101 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.610 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.410 | 1.0 | 20.00 | 0 | 102 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 22.160 | 1.0 | 20.00 | 0 | 111 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.880 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.780 | 0.50 | 20.00 | 0 | 109 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 22.310 | 1.0 | 20.00 | 0 | 112 | 69 | 137 | | | | |
| 2-Butanone | 199.560 | 10 | 200.0 | 0 | 99.8 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.640 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.450 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 20.970 | 1.0 | 20.00 | 0 | 105 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 216.590 | 10 | 200.0 | 0 | 108 | 58 | 134 | | | | |
| Acetone | 153.920 | 10 | 200.0 | 0 | 77.0 | 40 | 135 | | | | |
| Acrolein | 239.500 | 20 | 200.0 | 0 | 120 | 75 | 125 | | | | |
| Acrylonitrile | 238.460 | 20 | 200.0 | 0 | 119 | 75 | 125 | | | | |
| Benzene | 22.040 | 0.50 | 20.00 | 0 | 110 | 81 | 122 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

| Sample ID | N043262-003EMS | SampType: | MS | TestCode: | 8260_WP_LL | Units: | ug/L | Prep Date: | | RunNo: | 149242 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | P20VW126 | TestNo: | EPA 8260B | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031328 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 21.900 | 1.0 | 20.00 | 0 | 110 | 76 | 124 | | | | |
| Bromochloromethane | 22.330 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | | | | |
| Bromodichloromethane | 21.670 | 0.50 | 20.00 | 0 | 108 | 76 | 121 | | | | |
| Bromoform | 20.290 | 1.0 | 20.00 | 0 | 101 | 69 | 128 | | | | |
| Bromomethane | 22.190 | 1.0 | 20.00 | 0 | 111 | 53 | 141 | | | | |
| Carbon disulfide | 22.780 | 1.0 | 20.00 | 0 | 114 | 75 | 125 | | | | |
| Carbon tetrachloride | 23.280 | 0.50 | 20.00 | 0 | 116 | 66 | 138 | | | | |
| Chlorobenzene | 21.120 | 0.50 | 20.00 | 0 | 106 | 81 | 122 | | | | |
| Chloroethane | 22.060 | 1.0 | 20.00 | 0 | 110 | 58 | 133 | | | | |
| Chloroform | 22.580 | 1.0 | 20.00 | 1.390 | 106 | 69 | 128 | | | | |
| Chloromethane | 20.810 | 1.0 | 20.00 | 0 | 104 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 22.030 | 1.0 | 20.00 | 0 | 110 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.500 | 0.50 | 20.00 | 0 | 112 | 69 | 131 | | | | |
| Dibromochloromethane | 21.420 | 0.50 | 20.00 | 0 | 107 | 66 | 133 | | | | |
| Dibromomethane | 21.060 | 1.0 | 20.00 | 0 | 105 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 25.000 | 1.0 | 20.00 | 0 | 125 | 53 | 153 | | | | |
| Ethylbenzene | 21.420 | 1.0 | 20.00 | 0 | 107 | 73 | 127 | | | | |
| Freon-113 | 22.060 | 1.0 | 20.00 | 0 | 110 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.150 | 0.50 | 20.00 | 0 | 101 | 67 | 131 | | | | |
| Isopropylbenzene | 23.670 | 1.0 | 20.00 | 0 | 118 | 75 | 127 | | | | |
| m,p-Xylene | 45.360 | 1.0 | 40.00 | 0 | 113 | 76 | 128 | | | | |
| Methylene chloride | 21.380 | 1.0 | 20.00 | 0.6900 | 103 | 63 | 137 | | | | |
| MTBE | 23.390 | 1.0 | 20.00 | 0 | 117 | 65 | 123 | | | | |
| n-Butylbenzene | 23.970 | 1.0 | 20.00 | 0 | 120 | 69 | 137 | | | | |
| n-Propylbenzene | 20.850 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | | | | |
| Naphthalene | 19.540 | 1.0 | 20.00 | 0 | 97.7 | 54 | 138 | | | | |
| o-Xylene | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 80 | 121 | | | | |
| sec-Butylbenzene | 21.010 | 1.0 | 20.00 | 0 | 105 | 72 | 127 | | | | |
| Styrene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 70 | 129 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043262-003EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 22.700 | 1.0 | 20.00 | 0 | 114 | 66 | 128 | | | | |
| Toluene | 22.270 | 0.50 | 20.00 | 0 | 111 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 22.320 | 1.0 | 20.00 | 0 | 112 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 23.830 | 1.0 | 20.00 | 0 | 119 | 59 | 135 | | | | |
| Trichloroethene | 21.620 | 1.0 | 20.00 | 0 | 108 | 70 | 127 | | | | |
| Trichlorofluoromethane | 23.390 | 1.0 | 20.00 | 0 | 117 | 57 | 129 | | | | |
| Vinyl chloride | 23.510 | 0.50 | 20.00 | 0 | 118 | 50 | 134 | | | | |
| Xylenes, Total | 64.970 | 2.0 | 60.00 | 0 | 108 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.410 | | 25.00 | | 110 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 27.530 | | 25.00 | | 110 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 27.070 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.920 | | 25.00 | | 108 | 81 | 120 | | | | |

Sample ID **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.460 | 0.50 | 20.00 | 0 | 92.3 | 81 | 129 | 19.55 | 5.74 | 20 | |
| 1,1,1-Trichloroethane | 20.790 | 1.0 | 20.00 | 0 | 104 | 67 | 132 | 22.85 | 9.44 | 20 | |
| 1,1,2,2-Tetrachloroethane | 18.940 | 0.50 | 20.00 | 0 | 94.7 | 63 | 128 | 21.29 | 11.7 | 20 | |
| 1,1,2-Trichloroethane | 18.510 | 1.0 | 20.00 | 0 | 92.6 | 75 | 125 | 22.26 | 18.4 | 20 | |
| 1,1-Dichloroethane | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 69 | 133 | 22.10 | 12.8 | 20 | |
| 1,1-Dichloroethene | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 68 | 130 | 23.20 | 15.8 | 20 | |
| 1,1-Dichloropropene | 22.030 | 1.0 | 20.00 | 0 | 110 | 73 | 132 | 23.78 | 7.64 | 20 | |
| 1,2,3-Trichlorobenzene | 20.370 | 1.0 | 20.00 | 0 | 102 | 67 | 137 | 22.84 | 11.4 | 20 | |
| 1,2,3-Trichloropropane | 19.920 | 1.0 | 20.00 | 0 | 99.6 | 73 | 124 | 21.63 | 8.23 | 20 | |
| 1,2,4-Trichlorobenzene | 20.600 | 1.0 | 20.00 | 0 | 103 | 66 | 134 | 22.46 | 8.64 | 20 | |
| 1,2,4-Trimethylbenzene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 74 | 132 | 20.53 | 3.97 | 20 | |
| 1,2-Dibromo-3-chloropropane | 20.530 | 2.0 | 20.00 | 0 | 103 | 50 | 132 | 21.52 | 4.71 | 20 | |
| 1,2-Dibromoethane | 19.620 | 1.0 | 20.00 | 0 | 98.1 | 80 | 121 | 23.14 | 16.5 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 20.480 | 1.0 | 20.00 | 0 | 102 | 71 | 122 | 22.03 | 7.29 | 20 | |
| 1,2-Dichloroethane | 18.380 | 0.50 | 20.00 | 0 | 91.9 | 69 | 132 | 20.18 | 9.34 | 20 | |
| 1,2-Dichloropropane | 18.410 | 1.0 | 20.00 | 0 | 92.0 | 75 | 125 | 20.61 | 11.3 | 20 | |
| 1,3,5-Trimethylbenzene | 19.570 | 1.0 | 20.00 | 0 | 97.9 | 74 | 131 | 20.41 | 4.20 | 20 | |
| 1,3-Dichlorobenzene | 20.690 | 1.0 | 20.00 | 0 | 103 | 75 | 124 | 22.16 | 6.86 | 20 | |
| 1,3-Dichloropropane | 20.150 | 1.0 | 20.00 | 0 | 101 | 73 | 126 | 21.88 | 8.23 | 20 | |
| 1,4-Dichlorobenzene | 20.740 | 0.50 | 20.00 | 0 | 104 | 74 | 123 | 21.78 | 4.89 | 20 | |
| 2,2-Dichloropropane | 19.990 | 1.0 | 20.00 | 0 | 100 | 69 | 137 | 22.31 | 11.0 | 20 | |
| 2-Butanone | 163.900 | 10 | 200.0 | 0 | 82.0 | 49 | 136 | 199.6 | 19.6 | 20 | |
| 2-Chlorotoluene | 21.420 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | 21.64 | 1.02 | 20 | |
| 4-Chlorotoluene | 21.600 | 1.0 | 20.00 | 0 | 108 | 74 | 128 | 22.45 | 3.86 | 20 | |
| 4-Isopropyltoluene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 73 | 130 | 20.97 | 5.94 | 20 | |
| 4-Methyl-2-pentanone | 184.530 | 10 | 200.0 | 0 | 92.3 | 58 | 134 | 216.6 | 16.0 | 20 | |
| Acetone | 126.780 | 10 | 200.0 | 0 | 63.4 | 40 | 135 | 153.9 | 19.3 | 20 | |
| Acrolein | 203.180 | 20 | 200.0 | 0 | 102 | 75 | 125 | 239.5 | 16.4 | 20 | |
| Acrylonitrile | 198.820 | 20 | 200.0 | 0 | 99.4 | 75 | 125 | 238.5 | 18.1 | 20 | |
| Benzene | 20.200 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 22.04 | 8.71 | 20 | |
| Bromobenzene | 20.520 | 1.0 | 20.00 | 0 | 103 | 76 | 124 | 21.90 | 6.51 | 20 | |
| Bromochloromethane | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 65 | 129 | 22.33 | 13.7 | 20 | |
| Bromodichloromethane | 19.510 | 0.50 | 20.00 | 0 | 97.6 | 76 | 121 | 21.67 | 10.5 | 20 | |
| Bromoform | 18.660 | 1.0 | 20.00 | 0 | 93.3 | 69 | 128 | 20.29 | 8.37 | 20 | |
| Bromomethane | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 53 | 141 | 22.19 | 12.3 | 20 | |
| Carbon disulfide | 20.150 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 22.78 | 12.3 | 20 | |
| Carbon tetrachloride | 20.630 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | 23.28 | 12.1 | 20 | |
| Chlorobenzene | 19.730 | 0.50 | 20.00 | 0 | 98.6 | 81 | 122 | 21.12 | 6.81 | 20 | |
| Chloroethane | 20.070 | 1.0 | 20.00 | 0 | 100 | 58 | 133 | 22.06 | 9.45 | 20 | |
| Chloroform | 19.980 | 1.0 | 20.00 | 1.390 | 93.0 | 69 | 128 | 22.58 | 12.2 | 20 | |
| Chloromethane | 18.200 | 1.0 | 20.00 | 0 | 91.0 | 56 | 131 | 20.81 | 13.4 | 20 | |
| cis-1,2-Dichloroethene | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 72 | 126 | 22.03 | 14.8 | 20 | |
| cis-1,3-Dichloropropene | 20.050 | 0.50 | 20.00 | 0 | 100 | 69 | 131 | 22.50 | 11.5 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.200 | 0.50 | 20.00 | 0 | 96.0 | 66 | 133 | 21.42 | 10.9 | 20 | |
| Dibromomethane | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 76 | 125 | 21.06 | 10.3 | 20 | |
| Dichlorodifluoromethane | 22.150 | 1.0 | 20.00 | 0 | 111 | 53 | 153 | 25.00 | 12.1 | 20 | |
| Ethylbenzene | 20.760 | 1.0 | 20.00 | 0 | 104 | 73 | 127 | 21.42 | 3.13 | 20 | |
| Freon-113 | 20.020 | 1.0 | 20.00 | 0 | 100 | 75 | 125 | 22.06 | 9.70 | 20 | |
| Hexachlorobutadiene | 18.050 | 0.50 | 20.00 | 0 | 90.3 | 67 | 131 | 20.15 | 11.0 | 20 | |
| Isopropylbenzene | 23.170 | 1.0 | 20.00 | 0 | 116 | 75 | 127 | 23.67 | 2.13 | 20 | |
| m,p-Xylene | 42.120 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | 45.36 | 7.41 | 20 | |
| Methylene chloride | 18.450 | 1.0 | 20.00 | 0.6900 | 88.8 | 63 | 137 | 21.38 | 14.7 | 20 | |
| MTBE | 19.110 | 1.0 | 20.00 | 0 | 95.6 | 65 | 123 | 23.39 | 20.1 | 20 | R |
| n-Butylbenzene | 23.410 | 1.0 | 20.00 | 0 | 117 | 69 | 137 | 23.97 | 2.36 | 20 | |
| n-Propylbenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 72 | 129 | 20.85 | 2.62 | 20 | |
| Naphthalene | 18.650 | 1.0 | 20.00 | 0 | 93.3 | 54 | 138 | 19.54 | 4.66 | 20 | |
| o-Xylene | 18.100 | 1.0 | 20.00 | 0 | 90.5 | 80 | 121 | 19.61 | 8.01 | 20 | |
| sec-Butylbenzene | 20.240 | 1.0 | 20.00 | 0 | 101 | 72 | 127 | 21.01 | 3.73 | 20 | |
| Styrene | 18.230 | 1.0 | 20.00 | 0 | 91.2 | 65 | 134 | 19.89 | 8.71 | 20 | |
| tert-Butylbenzene | 20.040 | 1.0 | 20.00 | 0 | 100 | 70 | 129 | 20.31 | 1.34 | 20 | |
| Tetrachloroethene | 21.060 | 1.0 | 20.00 | 0 | 105 | 66 | 128 | 22.70 | 7.50 | 20 | |
| Toluene | 20.320 | 0.50 | 20.00 | 0 | 102 | 77 | 122 | 22.27 | 9.16 | 20 | |
| trans-1,2-Dichloroethene | 19.410 | 1.0 | 20.00 | 0 | 97.0 | 63 | 137 | 22.32 | 13.9 | 20 | |
| trans-1,3-Dichloropropene | 20.890 | 1.0 | 20.00 | 0 | 104 | 59 | 135 | 23.83 | 13.1 | 20 | |
| Trichloroethene | 19.510 | 1.0 | 20.00 | 0 | 97.6 | 70 | 127 | 21.62 | 10.3 | 20 | |
| Trichlorofluoromethane | 21.160 | 1.0 | 20.00 | 0 | 106 | 57 | 129 | 23.39 | 10.0 | 20 | |
| Vinyl chloride | 21.570 | 0.50 | 20.00 | 0 | 108 | 50 | 134 | 23.51 | 8.61 | 20 | |
| Xylenes, Total | 60.220 | 2.0 | 60.00 | 0 | 100 | 75 | 125 | 64.97 | 7.59 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 23.940 | | 25.00 | | 95.8 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 25.720 | | 25.00 | | 103 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 23.020 | | 25.00 | | 92.1 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.230 | | 25.00 | | 101 | 81 | 120 | | 0 | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201214LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **LCSW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046018**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.680 | 0.50 | 20.00 | 0 | 103 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.150 | 1.0 | 20.00 | 0 | 101 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 19.780 | 0.50 | 20.00 | 0 | 98.9 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.670 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 18.250 | 1.0 | 20.00 | 0 | 91.2 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 22.240 | 1.0 | 20.00 | 0 | 111 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.900 | 1.0 | 20.00 | 0 | 110 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.600 | 1.0 | 20.00 | 0 | 103 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.790 | 1.0 | 20.00 | 0 | 104 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 23.480 | 2.0 | 20.00 | 0 | 117 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.840 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.790 | 1.0 | 20.00 | 0 | 104 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 22.170 | 0.50 | 20.00 | 0 | 111 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.740 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 22.600 | 1.0 | 20.00 | 0 | 113 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 20.910 | 1.0 | 20.00 | 0 | 105 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.010 | 1.0 | 20.00 | 0 | 105 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 20.110 | 0.50 | 20.00 | 0 | 101 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 20.400 | 1.0 | 20.00 | 0 | 102 | 69 | 137 | | | | |
| 2-Butanone | 209.530 | 10 | 200.0 | 0 | 105 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.570 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.330 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 22.380 | 1.0 | 20.00 | 0 | 112 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 236.720 | 10 | 200.0 | 0 | 118 | 58 | 134 | | | | |
| Acetone | 202.230 | 10 | 200.0 | 0 | 101 | 40 | 135 | | | | |
| Acrolein | 225.730 | 20 | 200.0 | 0 | 113 | 75 | 125 | | | | |
| Acrylonitrile | 219.920 | 20 | 200.0 | 0 | 110 | 75 | 125 | | | | |
| Benzene | 21.650 | 0.50 | 20.00 | 0 | 108 | 81 | 122 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201214LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **LCSW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046018**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 20.240 | 1.0 | 20.00 | 0 | 101 | 76 | 124 | | | | |
| Bromochloromethane | 20.840 | 1.0 | 20.00 | 0 | 104 | 65 | 129 | | | | |
| Bromodichloromethane | 20.420 | 0.50 | 20.00 | 0 | 102 | 76 | 121 | | | | |
| Bromoform | 20.910 | 1.0 | 20.00 | 0 | 105 | 69 | 128 | | | | |
| Bromomethane | 23.570 | 1.0 | 20.00 | 0 | 118 | 53 | 141 | | | | |
| Carbon disulfide | 20.910 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.830 | 0.50 | 20.00 | 0 | 104 | 66 | 138 | | | | |
| Chlorobenzene | 20.920 | 0.50 | 20.00 | 0 | 105 | 81 | 122 | | | | |
| Chloroethane | 21.770 | 1.0 | 20.00 | 0 | 109 | 58 | 133 | | | | |
| Chloroform | 20.290 | 1.0 | 20.00 | 0 | 101 | 69 | 128 | | | | |
| Chloromethane | 22.720 | 1.0 | 20.00 | 0 | 114 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 21.200 | 1.0 | 20.00 | 0 | 106 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.050 | 0.50 | 20.00 | 0 | 105 | 69 | 131 | | | | |
| Dibromochloromethane | 21.010 | 0.50 | 20.00 | 0 | 105 | 66 | 133 | | | | |
| Dibromomethane | 22.310 | 1.0 | 20.00 | 0 | 112 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 20.910 | 1.0 | 20.00 | 0 | 105 | 53 | 153 | | | | |
| Ethylbenzene | 21.760 | 1.0 | 20.00 | 0 | 109 | 73 | 127 | | | | |
| Freon-113 | 20.250 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.520 | 0.50 | 20.00 | 0 | 97.6 | 67 | 131 | | | | |
| Isopropylbenzene | 22.090 | 1.0 | 20.00 | 0 | 110 | 75 | 127 | | | | |
| m,p-Xylene | 45.610 | 1.0 | 40.00 | 0 | 114 | 76 | 128 | | | | |
| Methylene chloride | 20.380 | 1.0 | 20.00 | 0 | 102 | 63 | 137 | | | | |
| MTBE | 21.470 | 1.0 | 20.00 | 0 | 107 | 65 | 123 | | | | |
| n-Butylbenzene | 21.330 | 1.0 | 20.00 | 0 | 107 | 69 | 137 | | | | |
| n-Propylbenzene | 21.880 | 1.0 | 20.00 | 0 | 109 | 72 | 129 | | | | |
| Naphthalene | 23.160 | 1.0 | 20.00 | 0 | 116 | 54 | 138 | | | | |
| o-Xylene | 22.130 | 1.0 | 20.00 | 0 | 111 | 80 | 121 | | | | |
| sec-Butylbenzene | 22.990 | 1.0 | 20.00 | 0 | 115 | 72 | 127 | | | | |
| Styrene | 22.470 | 1.0 | 20.00 | 0 | 112 | 65 | 134 | | | | |
| tert-Butylbenzene | 22.600 | 1.0 | 20.00 | 0 | 113 | 70 | 129 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201214LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **LCSW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046018**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 20.310 | 1.0 | 20.00 | 0 | 102 | 66 | 128 | | | | |
| Toluene | 21.050 | 0.50 | 20.00 | 0 | 105 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 21.050 | 1.0 | 20.00 | 0 | 105 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.050 | 1.0 | 20.00 | 0 | 110 | 59 | 135 | | | | |
| Trichloroethene | 20.870 | 1.0 | 20.00 | 0 | 104 | 70 | 127 | | | | |
| Trichlorofluoromethane | 20.120 | 1.0 | 20.00 | 0 | 101 | 57 | 129 | | | | |
| Vinyl chloride | 21.870 | 0.50 | 20.00 | 0 | 109 | 50 | 134 | | | | |
| Xylenes, Total | 67.740 | 2.0 | 60.00 | 0 | 113 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 25.740 | | 25.00 | | 103 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 28.410 | | 25.00 | | 114 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.780 | | 25.00 | | 107 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.160 | | 25.00 | | 109 | 81 | 120 | | | | |

Sample ID **P201214MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **PBW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046019**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201214MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **PBW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046019**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 0.50 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 0.50 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.50 | | | | | | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **P201214MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **PBW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046019**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | ND | 0.50 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.50 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | ND | 1.0 | | | | | | | | | |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 28.170 | | 25.00 | | 113 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.090 | | 25.00 | | 100 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.910 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.550 | | 25.00 | | 106 | 81 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043351-001AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046030**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.900 | 0.50 | 20.00 | 0 | 94.5 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 16.590 | 1.0 | 20.00 | 0 | 83.0 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.910 | 0.50 | 20.00 | 0 | 105 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.360 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 17.060 | 1.0 | 20.00 | 0 | 85.3 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 16.370 | 1.0 | 20.00 | 0 | 81.8 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.400 | 1.0 | 20.00 | 0 | 102 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 18.910 | 1.0 | 20.00 | 0 | 94.6 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 18.600 | 1.0 | 20.00 | 0 | 93.0 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 19.170 | 1.0 | 20.00 | 0 | 95.9 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 23.110 | 2.0 | 20.00 | 0 | 116 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.820 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.460 | 1.0 | 20.00 | 0 | 102 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 21.280 | 0.50 | 20.00 | 0 | 106 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.700 | 1.0 | 20.00 | 0 | 104 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 19.520 | 1.0 | 20.00 | 0 | 97.6 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 20.170 | 1.0 | 20.00 | 0 | 101 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 18.560 | 0.50 | 20.00 | 0 | 92.8 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 15.480 | 1.0 | 20.00 | 0 | 77.4 | 69 | 137 | | | | |
| 2-Butanone | 184.590 | 10 | 200.0 | 0 | 92.3 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 73 | 126 | | | | |
| 4-Chlorotoluene | 20.770 | 1.0 | 20.00 | 0 | 104 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 233.990 | 10 | 200.0 | 0 | 117 | 58 | 134 | | | | |
| Acetone | 850.190 | 10 | 200.0 | 616.2 | 117 | 40 | 135 | | | | |
| Acrolein | 198.820 | 20 | 200.0 | 0 | 99.4 | 75 | 125 | | | | |
| Acrylonitrile | 195.270 | 20 | 200.0 | 0 | 97.6 | 75 | 125 | | | | |
| Benzene | 20.000 | 0.50 | 20.00 | 0 | 100 | 81 | 122 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043351-001AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046030**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 18.720 | 1.0 | 20.00 | 0 | 93.6 | 76 | 124 | | | | |
| Bromochloromethane | 19.230 | 1.0 | 20.00 | 0 | 96.2 | 65 | 129 | | | | |
| Bromodichloromethane | 19.730 | 0.50 | 20.00 | 0 | 98.6 | 76 | 121 | | | | |
| Bromoform | 20.920 | 1.0 | 20.00 | 0 | 105 | 69 | 128 | | | | |
| Bromomethane | 21.300 | 1.0 | 20.00 | 0 | 106 | 53 | 141 | | | | |
| Carbon disulfide | 17.020 | 1.0 | 20.00 | 0 | 85.1 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.090 | 0.50 | 20.00 | 0 | 95.4 | 66 | 138 | | | | |
| Chlorobenzene | 19.150 | 0.50 | 20.00 | 0 | 95.8 | 81 | 122 | | | | |
| Chloroethane | 18.230 | 1.0 | 20.00 | 0 | 91.2 | 58 | 133 | | | | |
| Chloroform | 17.740 | 1.0 | 20.00 | 0 | 88.7 | 69 | 128 | | | | |
| Chloromethane | 20.120 | 1.0 | 20.00 | 0 | 101 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 17.900 | 1.0 | 20.00 | 0 | 89.5 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 18.600 | 0.50 | 20.00 | 0 | 93.0 | 69 | 131 | | | | |
| Dibromochloromethane | 20.010 | 0.50 | 20.00 | 0 | 100 | 66 | 133 | | | | |
| Dibromomethane | 22.100 | 1.0 | 20.00 | 0 | 110 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 53 | 153 | | | | |
| Ethylbenzene | 19.870 | 1.0 | 20.00 | 0 | 99.4 | 73 | 127 | | | | |
| Freon-113 | 17.450 | 1.0 | 20.00 | 0 | 87.2 | 75 | 125 | | | | |
| Hexachlorobutadiene | 18.200 | 0.50 | 20.00 | 0 | 91.0 | 67 | 131 | | | | |
| Isopropylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 75 | 127 | | | | |
| m,p-Xylene | 41.440 | 1.0 | 40.00 | 0 | 104 | 76 | 128 | | | | |
| Methylene chloride | 18.490 | 1.0 | 20.00 | 0.4600 | 90.2 | 63 | 137 | | | | |
| MTBE | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 65 | 123 | | | | |
| n-Butylbenzene | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 69 | 137 | | | | |
| n-Propylbenzene | 19.860 | 1.0 | 20.00 | 0 | 99.3 | 72 | 129 | | | | |
| Naphthalene | 20.720 | 1.0 | 20.00 | 0 | 104 | 54 | 138 | | | | |
| o-Xylene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 80 | 121 | | | | |
| sec-Butylbenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 72 | 127 | | | | |
| Styrene | 20.360 | 1.0 | 20.00 | 0 | 102 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.540 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043351-001AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046030**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.810 | 1.0 | 20.00 | 0 | 94.1 | 66 | 128 | | | | |
| Toluene | 19.490 | 0.50 | 20.00 | 0 | 97.5 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 17.090 | 1.0 | 20.00 | 0 | 85.4 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 20.930 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | | | | |
| Trichloroethene | 18.440 | 1.0 | 20.00 | 0 | 92.2 | 70 | 127 | | | | |
| Trichlorofluoromethane | 17.140 | 1.0 | 20.00 | 0 | 85.7 | 57 | 129 | | | | |
| Vinyl chloride | 18.100 | 0.50 | 20.00 | 0 | 90.5 | 50 | 134 | | | | |
| Xylenes, Total | 61.330 | 2.0 | 60.00 | 0 | 102 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 22.930 | | 25.00 | | 91.7 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 24.840 | | 25.00 | | 99.4 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 22.470 | | 25.00 | | 89.9 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 24.770 | | 25.00 | | 99.1 | 81 | 120 | | | | |

Sample ID **N043351-001AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046031**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 17.970 | 0.50 | 20.00 | 0 | 89.8 | 81 | 129 | 18.90 | 5.04 | 20 | |
| 1,1,1-Trichloroethane | 16.070 | 1.0 | 20.00 | 0 | 80.4 | 67 | 132 | 16.59 | 3.18 | 20 | |
| 1,1,2,2-Tetrachloroethane | 19.270 | 0.50 | 20.00 | 0 | 96.4 | 63 | 128 | 20.91 | 8.16 | 20 | |
| 1,1,2-Trichloroethane | 20.530 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | 21.36 | 3.96 | 20 | |
| 1,1-Dichloroethane | 16.630 | 1.0 | 20.00 | 0 | 83.2 | 69 | 133 | 17.06 | 2.55 | 20 | |
| 1,1-Dichloroethene | 16.100 | 1.0 | 20.00 | 0 | 80.5 | 68 | 130 | 16.37 | 1.66 | 20 | |
| 1,1-Dichloropropene | 18.370 | 1.0 | 20.00 | 0 | 91.9 | 73 | 132 | 20.40 | 10.5 | 20 | |
| 1,2,3-Trichlorobenzene | 19.490 | 1.0 | 20.00 | 0 | 97.5 | 67 | 137 | 19.65 | 0.818 | 20 | |
| 1,2,3-Trichloropropane | 19.090 | 1.0 | 20.00 | 0 | 95.4 | 73 | 124 | 18.91 | 0.947 | 20 | |
| 1,2,4-Trichlorobenzene | 17.230 | 1.0 | 20.00 | 0 | 86.2 | 66 | 134 | 18.60 | 7.65 | 20 | |
| 1,2,4-Trimethylbenzene | 17.460 | 1.0 | 20.00 | 0 | 87.3 | 74 | 132 | 19.17 | 9.34 | 20 | |
| 1,2-Dibromo-3-chloropropane | 22.180 | 2.0 | 20.00 | 0 | 111 | 50 | 132 | 23.11 | 4.11 | 20 | |
| 1,2-Dibromoethane | 20.050 | 1.0 | 20.00 | 0 | 100 | 80 | 121 | 20.82 | 3.77 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043351-001AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046031**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 18.580 | 1.0 | 20.00 | 0 | 92.9 | 71 | 122 | 20.46 | 9.63 | 20 | |
| 1,2-Dichloroethane | 20.230 | 0.50 | 20.00 | 0 | 101 | 69 | 132 | 21.28 | 5.06 | 20 | |
| 1,2-Dichloropropane | 17.790 | 1.0 | 20.00 | 0 | 89.0 | 75 | 125 | 18.99 | 6.53 | 20 | |
| 1,3,5-Trimethylbenzene | 18.930 | 1.0 | 20.00 | 0 | 94.6 | 74 | 131 | 20.70 | 8.93 | 20 | |
| 1,3-Dichlorobenzene | 17.910 | 1.0 | 20.00 | 0 | 89.6 | 75 | 124 | 19.52 | 8.60 | 20 | |
| 1,3-Dichloropropane | 19.130 | 1.0 | 20.00 | 0 | 95.7 | 73 | 126 | 20.17 | 5.29 | 20 | |
| 1,4-Dichlorobenzene | 17.080 | 0.50 | 20.00 | 0 | 85.4 | 74 | 123 | 18.56 | 8.31 | 20 | |
| 2,2-Dichloropropane | 14.660 | 1.0 | 20.00 | 0 | 73.3 | 69 | 137 | 15.48 | 5.44 | 20 | |
| 2-Butanone | 197.140 | 10 | 200.0 | 0 | 98.6 | 49 | 136 | 184.6 | 6.58 | 20 | |
| 2-Chlorotoluene | 18.630 | 1.0 | 20.00 | 0 | 93.2 | 73 | 126 | 19.89 | 6.54 | 20 | |
| 4-Chlorotoluene | 18.820 | 1.0 | 20.00 | 0 | 94.1 | 74 | 128 | 20.77 | 9.85 | 20 | |
| 4-Isopropyltoluene | 18.370 | 1.0 | 20.00 | 0 | 91.9 | 73 | 130 | 19.76 | 7.29 | 20 | |
| 4-Methyl-2-pentanone | 230.950 | 10 | 200.0 | 0 | 115 | 58 | 134 | 234.0 | 1.31 | 20 | |
| Acetone | 864.520 | 10 | 200.0 | 616.2 | 124 | 40 | 135 | 850.2 | 1.67 | 20 | |
| Acrolein | 203.290 | 20 | 200.0 | 0 | 102 | 75 | 125 | 198.8 | 2.22 | 20 | |
| Acrylonitrile | 203.560 | 20 | 200.0 | 0 | 102 | 75 | 125 | 195.3 | 4.16 | 20 | |
| Benzene | 18.190 | 0.50 | 20.00 | 0 | 91.0 | 81 | 122 | 20.00 | 9.48 | 20 | |
| Bromobenzene | 17.490 | 1.0 | 20.00 | 0 | 87.5 | 76 | 124 | 18.72 | 6.79 | 20 | |
| Bromochloromethane | 18.490 | 1.0 | 20.00 | 0 | 92.5 | 65 | 129 | 19.23 | 3.92 | 20 | |
| Bromodichloromethane | 18.540 | 0.50 | 20.00 | 0 | 92.7 | 76 | 121 | 19.73 | 6.22 | 20 | |
| Bromoform | 19.850 | 1.0 | 20.00 | 0 | 99.2 | 69 | 128 | 20.92 | 5.25 | 20 | |
| Bromomethane | 20.810 | 1.0 | 20.00 | 0 | 104 | 53 | 141 | 21.30 | 2.33 | 20 | |
| Carbon disulfide | 16.590 | 1.0 | 20.00 | 0 | 83.0 | 75 | 125 | 17.02 | 2.56 | 20 | |
| Carbon tetrachloride | 17.740 | 0.50 | 20.00 | 0 | 88.7 | 66 | 138 | 19.09 | 7.33 | 20 | |
| Chlorobenzene | 18.240 | 0.50 | 20.00 | 0 | 91.2 | 81 | 122 | 19.15 | 4.87 | 20 | |
| Chloroethane | 18.450 | 1.0 | 20.00 | 0 | 92.2 | 58 | 133 | 18.23 | 1.20 | 20 | |
| Chloroform | 17.430 | 1.0 | 20.00 | 0 | 87.2 | 69 | 128 | 17.74 | 1.76 | 20 | |
| Chloromethane | 19.340 | 1.0 | 20.00 | 0 | 96.7 | 56 | 131 | 20.12 | 3.95 | 20 | |
| cis-1,2-Dichloroethene | 18.030 | 1.0 | 20.00 | 0 | 90.2 | 72 | 126 | 17.90 | 0.724 | 20 | |
| cis-1,3-Dichloropropene | 17.860 | 0.50 | 20.00 | 0 | 89.3 | 69 | 131 | 18.60 | 4.06 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043305
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID **N043351-001AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046031**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 18.210 | 0.50 | 20.00 | 0 | 91.1 | 66 | 133 | 20.01 | 9.42 | 20 | |
| Dibromomethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 76 | 125 | 22.10 | 5.82 | 20 | |
| Dichlorodifluoromethane | 20.550 | 1.0 | 20.00 | 0 | 103 | 53 | 153 | 19.65 | 4.48 | 20 | |
| Ethylbenzene | 18.220 | 1.0 | 20.00 | 0 | 91.1 | 73 | 127 | 19.87 | 8.66 | 20 | |
| Freon-113 | 16.440 | 1.0 | 20.00 | 0 | 82.2 | 75 | 125 | 17.45 | 5.96 | 20 | |
| Hexachlorobutadiene | 16.480 | 0.50 | 20.00 | 0 | 82.4 | 67 | 131 | 18.20 | 9.92 | 20 | |
| Isopropylbenzene | 18.320 | 1.0 | 20.00 | 0 | 91.6 | 75 | 127 | 19.90 | 8.27 | 20 | |
| m,p-Xylene | 37.970 | 1.0 | 40.00 | 0 | 94.9 | 76 | 128 | 41.44 | 8.74 | 20 | |
| Methylene chloride | 18.090 | 1.0 | 20.00 | 0.4600 | 88.2 | 63 | 137 | 18.49 | 2.19 | 20 | |
| MTBE | 20.150 | 1.0 | 20.00 | 0 | 101 | 65 | 123 | 19.33 | 4.15 | 20 | |
| n-Butylbenzene | 17.490 | 1.0 | 20.00 | 0 | 87.5 | 69 | 137 | 19.33 | 9.99 | 20 | |
| n-Propylbenzene | 18.230 | 1.0 | 20.00 | 0 | 91.2 | 72 | 129 | 19.86 | 8.56 | 20 | |
| Naphthalene | 20.730 | 1.0 | 20.00 | 0 | 104 | 54 | 138 | 20.72 | 0.0483 | 20 | |
| o-Xylene | 18.470 | 1.0 | 20.00 | 0 | 92.4 | 80 | 121 | 19.89 | 7.40 | 20 | |
| sec-Butylbenzene | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 72 | 127 | 20.31 | 6.72 | 20 | |
| Styrene | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 65 | 134 | 20.36 | 5.45 | 20 | |
| tert-Butylbenzene | 18.930 | 1.0 | 20.00 | 0 | 94.6 | 70 | 129 | 20.54 | 8.16 | 20 | |
| Tetrachloroethene | 17.080 | 1.0 | 20.00 | 0 | 85.4 | 66 | 128 | 18.81 | 9.64 | 20 | |
| Toluene | 17.930 | 0.50 | 20.00 | 0 | 89.7 | 77 | 122 | 19.49 | 8.34 | 20 | |
| trans-1,2-Dichloroethene | 16.430 | 1.0 | 20.00 | 0 | 82.2 | 63 | 137 | 17.09 | 3.94 | 20 | |
| trans-1,3-Dichloropropene | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 59 | 135 | 20.93 | 7.95 | 20 | |
| Trichloroethene | 17.760 | 1.0 | 20.00 | 0 | 88.8 | 70 | 127 | 18.44 | 3.76 | 20 | |
| Trichlorofluoromethane | 16.860 | 1.0 | 20.00 | 0 | 84.3 | 57 | 129 | 17.14 | 1.65 | 20 | |
| Vinyl chloride | 17.620 | 0.50 | 20.00 | 0 | 88.1 | 50 | 134 | 18.10 | 2.69 | 20 | |
| Xylenes, Total | 56.440 | 2.0 | 60.00 | 0 | 94.1 | 75 | 125 | 61.33 | 8.30 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 22.730 | | 25.00 | | 90.9 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 23.920 | | 25.00 | | 95.7 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 22.470 | | 25.00 | | 89.9 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 22.810 | | 25.00 | | 91.2 | 81 | 120 | | 0 | | |

**Qualifiers:**

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

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
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# CHAIN OF CUSTODY RECORD



| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Specify: RWQCB |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 |
| Submitted By: Jesse D. Boyd | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Field Tech | | | Global ID: |
| Signature: Jesse D Boyd 12/4/20 | Sampled By: Nara Tey | | |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/4/20 | |
| Project Number: 30035275 | | | |

QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory

Specify State:

Sample Receipt Condition

| | Y | N |
|---|---|---|
| 1. Chilled | ✓ | |
| 2. Headspace | | |
| 3. Container Intact | ✓ | |
| 4. Seal Present | | ✓ |
| 5. IR number | #2 | |
| 6. Method of Cooling: | ICE | |

Sample Temp: 14.2 / 4.4°C / 0.5°C

Courier: ASSETS

Tracking No.:

Matrix: Ground x Sediment; Potable; Soil; NPDES; Other Solid; Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CFIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 2x250 mL poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOAs | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 Cu, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | VOCs (8260) 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043305-01 | MW-67-185-Q420 | 12/2/2020 | 10:16 | | | | | | | | | | | | | | | | | | | | | | X | E | 3 | PV | BNSH | |
| 2 | -02 | MW-67-225-Q420 | 12/2/2020 | 12:14 | | | | | | | | | | | | | | | | | | | | | | X | E | 3 | PV | BNSH | |
| 3 | -03 | MW-67-260-Q420 | 12/2/2020 | 11:10 | | | | | | | | | | | | | | | | | | | | | | X | E | 3 | PV | BNSH | |
| 4 | -04 | MW-49-135-Q420 | 12/4/2020 | 10:47 | | X | X | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 8 | P | BNS | |
| 5 | -05 | MW-49-275-Q420 | 12/4/2020 | 9:42 | | X | X | X | X | X | | X | X | | | | | X | | | | | | X | | | E | 6 | P | BNS | |
| 6 | -06 | MW-49-365-Q420 | 12/4/2020 | 8:58 | | X | X | X | X | X | | X | X | | | | | X | | | | | | X | | | E | 6 | P | BNS | |
| 7 | -07 | MW-29-Q420 | 12/4/2020 | 11:24 | | | | X | X | X | | X | X | X | | | | X | X | | | | | | | | E | 5 | P | BNS | |
| 8 | -08 | MW-29-EB-Q420 | 12/4/2020 | 10:55 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |
| 9 | -09 | EB-710-Q420 | 12/4/2020 | 12:00 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 10 | -10 | MW-57-070-Q420 | 12/4/2020 | 8:51 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 11 | -11 | MW-57-185-Q420 | 12/4/2020 | 9:40 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 12 | -12 | MW-61-110-Q420 | 12/4/2020 | 10:37 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |

| Relinquished by (Signature and Printed Name) | Date/Time | Received by (Signature and Printed Name) | Date/Time |
|---|---|---|---|
| Nara Tey | 12/4/20 1330 | | |
| [illegible] ALCANTAR | 12-04-20 3:55 pm | Ramon Rodriguez | 12/4/20 3:55pm |
| | | | |

Turn Around Time (TAT)

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

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

Special Instruction:
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

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

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

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

White=Laboratory Copy

Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD

Page 2 of 2

| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ Specify: RWQCB; Global ID: |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State: |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Sample Receipt Condition (Y / N): 1. Chilled ✓; 2. Headspace; 3. Container Intact ✓; 4. Seal Present ✓; 5. IR number #2; 6. Method of Cooling: ICE |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.#: SWA-ASSET-C9817-057 |
| Submitted By: Jacked Boyd | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Field Tech | Sampled By: Nam Ty | | |
| Signature: Date: 12/4/20 — I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Signature: Date: 12/4/20 | | |
| Project Name: PG&E Topock - GMP | | | |
| Project Number: 30035275 | | | |

Matrix: Ground x; Sediment; Potable; Soil; NPDES; Other Solid; Surface

Courier: ASSETS
Tracking No.:
Sample Temp: 1.4°C / 4.4°C / 0.5°C

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Oxygen and Deuterium Isotopes (CFIRM), Ice (250 mL poly) | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (8x250 mL poly) | Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly) | Bromide, Sulfate, Chloride (EPA 300.0) (1 liter poly) | Fluoride (EPA 300.0) (1 liter poly) | Specific Conductance (EPA 120.1) (1 liter poly) | Total Dissolved Solids (SM2540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 (125 mL poly) | Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOAs) | Metals Dissolved (EPA7470A FF) Hg; HNO3 (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Potassium (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni (500 mL poly) | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se (500 mL poly) | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 (500 mL poly) | VOCs (8260) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043305-13 | MW-20-070-Q420 | 12/4/2020 | 10:53 | | X | X | | X | X | | X | X | X | | | X | X | | | | | X | | E | 5 | P | BNS | |
| 2 | -14 | MW-20-100-Q420 | 12/4/2020 | 11:41 | | X | X | | X | X | | X | X | X | | | X | X | | | | | X | | E | 5 | P | BNS | |
| 3 | -15 | MW-20-130-Q420 | 12/4/2020 | 10:02 | | X | X | | X | X | | X | X | X | | | X | X | X | | | | | | E | 5 | P | BNS | |
| 4 | -16 | MW-906-Q420 | 12/4/2020 | 10:12 | | X | X | | X | X | | X | X | X | | | X | X | X | | | | | | E | 5 | P | BNS | |
| 5 | -17 | MW-62-065-Q420 | 12/4/2020 | 9:01 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | E | 4 | P | BNS | |
| 6 | -18 | EB-708-Q420 | 12/4/2020 | 12:00 | | X | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 7 | -19 | EB-709-Q420 | 12/4/2020 | 11:00 | | X | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 8 | -20 | Trip Blank-1 | 12/4/20 | 0700 | | | | | | | | | | | | | | | | | | | | X | E | 2 | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nam Ty | 12/4/20 1330 | | 12-4-20 13:30 |
| (Signature) (Printed Name) | 12-4-20 1455 | Yeandro Rodriguez | 12/4/20 3:55 pm |
| | | | |

**Turn Around Time (TAT)**

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

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

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Ti, V, Zn, K, Na

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

**Preservatives:**

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

**Container Type:**

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

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

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

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

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/4/2020 | Workorder: | N043305 |
| Rep sample Temp (Deg C): | 1.4/4.4/0.5 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

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

Comments: See Correspondence.

For:

Checklist Completed By: YR BHdez 12/8/2020

Reviewed By: MBC 12/14/2020

**Subject:** Re: Sample ID Updates
**From:** Nancy Sibucao <nancy@assetlaboratories.com>
**Date:** 12/8/2020, 11:14 AM
**To:** Tina Rice <Tina.Rice@critigen.com>, Yoandra Rodriguez <yoandra@assetlaboratories.com>, "maryann.balilu@assetlaboratoriesph.com" <maryann.balilu@assetlaboratoriesph.com>

Will do Tina.

Thanks,
Nancy

---

**From:** Tina Rice [mailto:Tina.Rice@critigen.com]
**Sent:** Tuesday, December 8, 2020, 11:09 AM
**To:** Nancy Sibucao
**Subject:** Sample ID Updates

> Hi Nancy,
>
> Could you please make the following sample updates?
>
> Hinkley
>
| WorkOrder | ClientSampID | New ClientSampID |
|---|---|---|
| N043208 | EB-792-Q420 | EB-792-RE-Q420 |
| N043208 | EB-793-Q420 | EB-793-RE-Q420 |
>
> Topock
>
| WorkOrder | ClientSampID | New ClientSampID |
|---|---|---|
| N043194 | EB-701-Q420 | EB-701-1120 |
| N043194 | EB-702-Q420 | EB-702-1120 |
| N043305 | Trip Blank | Trip Blank_20201204 |
>
> Thank you!

**Tina Rice**

**Sr EDM Analyst**

**CRITIGEN**

Tina.Rice@critigen.com

critigen.com

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-001A | MW-67-185-Q420 | 12/2/2020 10:16:00 AM | 12/18/2020 | Groundwater | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N043305-002A | MW-67-225-Q420 | 12/2/2020 12:14:00 PM | 12/18/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N043305-003A | MW-67-260-Q420 | 12/2/2020 11:10:00 AM | 12/18/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N043305-004A | MW-49-135-Q420 | 12/4/2020 10:47:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-004B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-004C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-004D | | | 12/18/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043305-004E | | | | | | | ☐ | ☐ | ☐ | SUB |
| N043305-005A | MW-49-275-Q420 | 12/4/2020 9:42:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-005B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-005B | MW-49-275-Q420 | 12/4/2020 9:42:00 AM | 12/18/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-005C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-005D | | | 12/18/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043305-006A | MW-49-365-Q420 | 12/4/2020 8:58:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-006B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-006C | MW-49-365-Q420 | 12/4/2020 8:58:00 AM | 12/18/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-006D | | | 12/18/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043305-007A | MW-29-Q420 | 12/4/2020 11:24:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-007B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-007C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-007D | | | 12/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-008A | MW-29-EB-Q420 | 12/4/2020 10:55:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-009A | EB-710-Q420 | 12/4/2020 12:00:00 PM | 12/18/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-010A | MW-57-070-Q420 | 12/4/2020 8:51:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-010B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-010C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-010D | | | 12/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-011A | MW-57-185-Q420 | 12/4/2020 9:40:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-011B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-011B | MW-57-185-Q420 | 12/4/2020 9:40:00 AM | 12/18/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-011C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-011D | | | 12/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-012A | MW-61-110-Q420 | 12/4/2020 10:37:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-012B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-012C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

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## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-012C | MW-61-110-Q420 | 12/4/2020 10:37:00 AM | 12/18/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-012D | | | 12/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-013A | MW-20-070-Q420 | 12/4/2020 10:53:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-013B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-013C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-013D | | | 12/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-013E | | | 12/18/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043305-014A | MW-20-100-Q420 | 12/4/2020 11:41:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-014B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-014B | MW-20-100-Q420 | 12/4/2020 11:41:00 AM | 12/18/2020 | Groundwater | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-014C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-014D | | | 12/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-014E | | | 12/18/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043305-015A | MW-20-130-Q420 | 12/4/2020 10:02:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-015B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-015C | MW-20-130-Q420 | 12/4/2020 10:02:00 AM | 12/18/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-015D | | | 12/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-015E | | | 12/18/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☑ | ☐ | ☑ | SUB |
| N043305-016A | MW-906-Q420 | 12/4/2020 10:12:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-016B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-016C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-016D | MW-906-Q420 | 12/4/2020 10:12:00 AM | 12/18/2020 | Groundwater | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-016E | | | 12/18/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043305-017A | MW-62-065-Q420 | 12/4/2020 9:01:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-017B | | | 12/18/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/18/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043305-017C | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043305-017D | | | 12/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043305-018A | EB-708-Q420 | 12/4/2020 12:00:00 PM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-019A | EB-709-Q420 | 12/4/2020 11:00:00 AM | 12/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043305-020A | Trip Blank_20201204 | 12/4/2020 7:00:00 AM | 12/18/2020 | Water | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N043305-021A | FOLDER | 12/18/2020 | 12/18/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043305

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/4/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043305-021A | FOLDER | 12/18/2020 | 12/18/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/18/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/18/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Nara Tep

**10-Dec-20**

| Sample ID | Matrix | Date Collected | Bottle Type | Requested Tests: SM4500-NO3F | | |
|---|---|---|---|---|---|---|
| N043305-007D / MW-29-Q420 | Groundwater | 12/4/2020 11:24:00 AM | 8OZP | 1 | | |
| N043305-010D / MW-57-070-Q420 | Groundwater | 12/4/2020 8:51:00 AM | 8OZP | 1 | | |
| N043305-011D / MW-57-185-Q420 | Groundwater | 12/4/2020 9:40:00 AM | 8OZP | 1 | | |
| N043305-012D / MW-61-110-Q420 | Groundwater | 12/4/2020 10:37:00 AM | 8OZP | 1 | | |
| N043305-013D / MW-20-070-Q420 | Groundwater | 12/4/2020 10:53:00 AM | 8OZP | 1 | | |
| N043305-014D / MW-20-100-Q420 | Groundwater | 12/4/2020 11:41:00 AM | 8OZP | 1 | | |
| N043305-015D / MW-20-130-Q420 | Groundwater | 12/4/2020 10:02:00 AM | 8OZP | 1 | | |
| N043305-016D / MW-906-Q420 | Groundwater | 12/4/2020 10:12:00 AM | 8OZP | 1 | | |
| N043305-017D / MW-62-065-Q420 | Groundwater | 12/4/2020 9:01:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43305B Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/Nitrite by SM4500NO3F. EDD Requirement Labspec7 edata.

GSO #: 5514866845

| | | Date/Time | | Date/Time |
|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/9/2020 1630 | **Received by:** | |
| **Relinquished by:** | | | **Received by:** | |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: Nara Tep

**07-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043305-004D / MW-49-135-Q420 | Groundwater | 12/4/2020 10:47:00 AM | 8OZP | 1 | | |
| N043305-005D / MW-49-275-Q420 | Groundwater | 12/4/2020 9:42:00 AM | 8OZP | 1 | | |
| N043305-006D / MW-49-365-Q420 | Groundwater | 12/4/2020 8:58:00 AM | 8OZP | 1 | | |
| N043305-013E / MW-20-070-Q420 | Groundwater | 12/4/2020 10:53:00 AM | 8OZP | 1 | | |
| N043305-014E / MW-20-100-Q420 | Groundwater | 12/4/2020 11:41:00 AM | 8OZP | 1 | | |
| N043305-015E / MW-20-130-Q420 | Groundwater | 12/4/2020 10:02:00 AM | 8OZP | 1 | | |
| N043305-016E / MW-906-Q420 | Groundwater | 12/4/2020 10:12:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43305A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium by CF-IRMS. EDD Requirement Labspec7 edata.

Fedex #: 772289919056

| | **Date/Time** | | **Date/Time** |
|---|---|---|---|
| **Relinquished by:** YRJ | 12/7/2020 1600 | **Received by:** | |
| **Relinquished by:** | | **Received by:** | |

December 24, 2020

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

TEL: (916) 786-3302
FAX:

Workorder No.: N043348

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 07, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Nancy Sibucao
Laboratory Director

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043348

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

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

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

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

Samples were analyzed within method holding time.

Subcontracted Analyses:

SM 4500-NO3F was subcontracted to BC Labs- Bakersfield,CA.

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (2.7 ug/L) and hexavalent chromium (1.7 ug/L) for sample N043348-020 (MW-63-065-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

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

Analytical Comments for EPA 6010B_Dissolved:

Initial dilution was necessary on some samples due to high solids concentration. The plasma was also extinguished for some samples when they were analyzed at lower dilution.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043348-013CMS1, N043348-013CMSD1, N043348-016CMS1, N043348-016CMSD1, N043348-020CMS1, N043348-020CMSD1, N043348-013CMS2, N043348-013CMSD2, N043348-016CMSD2, N043348-020CMS2 and N043348-020CMSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043348-013CMS1, N043348-013CMSD1, N043348-016CMS1, N043348-016CMSD1, N043348-020CMS1, N043348-020CMSD1, N043348-013CMS2, N043348-013CMS2, N043348-020CMS2, N043348-020CMSD2 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (2.7 ug/L) and hexavalent chromium (1.7 ug/L) for sample N043348-020 (MW-63-065-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.6 and 2.0 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N043348-013CMS, N043348-013CMSD, N043348-016CMS and N043348-016CMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043348-013CMS, N043348-013CMSD, N043348-016CMS, N043348-016CMSD, N043348-020CMS and N043348-020CMSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for SM 2320B:

Method Blank MB_R149311 has detect greater than 1/2 the reporting limit. However, samples results were greater than 5x the Method Blank detection therefore reanalysis of the samples was not necessary.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043348
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043348-001A | MW-30-030-Q420 | Groundwater | 12/7/2020 1:21:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-001B | MW-30-030-Q420 | Groundwater | 12/7/2020 1:21:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-001C | MW-30-030-Q420 | Groundwater | 12/7/2020 1:21:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-001D | MW-30-030-Q420 | Groundwater | 12/7/2020 1:21:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-002A | MW-30-030-EB-Q420 | Groundwater | 12/7/2020 12:53:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-003A | MW-30-050-Q420 | Groundwater | 12/7/2020 12:36:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-003B | MW-30-050-Q420 | Groundwater | 12/7/2020 12:36:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-003C | MW-30-050-Q420 | Groundwater | 12/7/2020 12:36:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-003D | MW-30-050-Q420 | Groundwater | 12/7/2020 12:36:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-003E | MW-30-050-Q420 | Groundwater | 12/7/2020 12:36:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-004A | MW-32-020-Q420 | Groundwater | 12/7/2020 3:10:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-004B | MW-32-020-Q420 | Groundwater | 12/7/2020 3:10:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-004C | MW-32-020-Q420 | Groundwater | 12/7/2020 3:10:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-004D | MW-32-020-Q420 | Groundwater | 12/7/2020 3:10:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-005A | MW-32-020-EB-Q420 | Groundwater | 12/7/2020 2:44:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-006A | MW-32-035-Q420 | Groundwater | 12/7/2020 2:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-006B | MW-32-035-Q420 | Groundwater | 12/7/2020 2:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-006C | MW-32-035-Q420 | Groundwater | 12/7/2020 2:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-006D | MW-32-035-Q420 | Groundwater | 12/7/2020 2:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-006E | MW-32-035-Q420 | Groundwater | 12/7/2020 2:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-007A | MW-910-Q420 | Groundwater | 12/7/2020 2:29:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-007B | MW-910-Q420 | Groundwater | 12/7/2020 2:29:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-007C | MW-910-Q420 | Groundwater | 12/7/2020 2:29:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-007D | MW-910-Q420 | Groundwater | 12/7/2020 2:29:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-007E | MW-910-Q420 | Groundwater | 12/7/2020 2:29:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-008A | MW-32-035-EB-Q420 | Groundwater | 12/7/2020 2:34:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-009A | MW-50-095-Q420 | Groundwater | 12/7/2020 2:10:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-009B | MW-50-095-Q420 | Groundwater | 12/7/2020 2:10:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-009C | MW-50-095-Q420 | Groundwater | 12/7/2020 2:10:00 PM | 12/7/2020 | 12/24/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043348
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043348-010A | MW-50-200-Q420 | Groundwater | 12/7/2020 2:48:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-010B | MW-50-200-Q420 | Groundwater | 12/7/2020 2:48:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-010C | MW-50-200-Q420 | Groundwater | 12/7/2020 2:48:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-011A | MW-915-Q420 | Groundwater | 12/7/2020 2:58:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-011B | MW-915-Q420 | Groundwater | 12/7/2020 2:58:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-011C | MW-915-Q420 | Groundwater | 12/7/2020 2:58:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-012A | TW-05-Q420 | Groundwater | 12/7/2020 12:28:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-012B | TW-05-Q420 | Groundwater | 12/7/2020 12:28:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-012C | TW-05-Q420 | Groundwater | 12/7/2020 12:28:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-013A | MW-31-060-Q420 | Groundwater | 12/7/2020 1:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-013B | MW-31-060-Q420 | Groundwater | 12/7/2020 1:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-013C | MW-31-060-Q420 | Groundwater | 12/7/2020 1:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-013D | MW-31-060-Q420 | Groundwater | 12/7/2020 1:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-013E | MW-31-060-Q420 | Groundwater | 12/7/2020 1:19:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-014A | MW-31-135-Q420 | Groundwater | 12/7/2020 12:27:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-014B | MW-31-135-Q420 | Groundwater | 12/7/2020 12:27:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-014C | MW-31-135-Q420 | Groundwater | 12/7/2020 12:27:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-014D | MW-31-135-Q420 | Groundwater | 12/7/2020 12:27:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-015A | MW-19-Q420 | Groundwater | 12/7/2020 2:01:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-015B | MW-19-Q420 | Groundwater | 12/7/2020 2:01:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-015C | MW-19-Q420 | Groundwater | 12/7/2020 2:01:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-016A | MW-25-Q420 | Groundwater | 12/7/2020 2:57:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-016B | MW-25-Q420 | Groundwater | 12/7/2020 2:57:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-016C | MW-25-Q420 | Groundwater | 12/7/2020 2:57:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-016D | MW-25-Q420 | Groundwater | 12/7/2020 2:57:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-016E | MW-25-Q420 | Groundwater | 12/7/2020 2:57:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-017A | EB-711-Q420 | Groundwater | 12/7/2020 3:30:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-018A | EB-712-Q420 | Groundwater | 12/7/2020 3:15:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-019A | EB-713-Q420 | Groundwater | 12/7/2020 3:30:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-020A | MW-63-065-Q420 | Groundwater | 12/7/2020 1:20:00 PM | 12/7/2020 | 12/24/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043348
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043348-020B | MW-63-065-Q420 | Groundwater | 12/7/2020 1:20:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-020C | MW-63-065-Q420 | Groundwater | 12/7/2020 1:20:00 PM | 12/7/2020 | 12/24/2020 |
| N043348-020D | MW-63-065-Q420 | Groundwater | 12/7/2020 1:20:00 PM | 12/7/2020 | 12/24/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-030-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:21:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7300 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-050-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 920 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-020-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 3:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 21000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-035-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7800 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-910-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:29:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7900 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-095-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-200-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 20000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-915-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 20000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-05-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 16000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-060-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3100 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-135-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 13000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-19-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-25-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:57:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-63-065-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201208B** | QC Batch: **R149211** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/8/2020 11:10 AM |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

| Sample ID | **N043348-007BDUP** | SampType: | **DUP** | TestCode: | **120.1_WPGE** | Units: | **umhos/cm** | Prep Date: | | RunNo: | **149211** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R149211** | TestNo: | **EPA 120.1** | | | Analysis Date: | **12/8/2020** | SeqNo: | **4029961** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 7920.000 | 0.10 | | | | | | 7910 | 0.126 | 2 | |

| Sample ID | **N043348-020BDUP** | SampType: | **DUP** | TestCode: | **120.1_WPGE** | Units: | **umhos/cm** | Prep Date: | | RunNo: | **149211** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R149211** | TestNo: | **EPA 120.1** | | | Analysis Date: | **12/8/2020** | SeqNo: | **4029971** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 7260.000 | 0.10 | | | | | | 7250 | 0.138 | 2 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-030-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:21:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 5000 | 50 | 50 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-050-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 630 | 10 | 10 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-020-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 3:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 16000 | 200 | 200 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-035-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 5200 | 50 | 50 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-910-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:29:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 5300 | 50 | 50 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-095-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3600 | 50 | 50 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-200-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | | PrepDate: | **12/9/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 13000 | 100 | 100 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-915-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 14000 | 100 | 100 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-05-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-060-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1700 | 25 | 25 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-135-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 7900 | 100 | 100 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-19-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201209F** | QC Batch: **83399** | | | PrepDate: | **12/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1200 | 17 | 17 | | mg/L | 1 | 12/9/2020 12:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-25-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:57:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201210G** | QC Batch: **83418** | | | PrepDate: | **12/10/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1200 | 17 | 17 | | mg/L | 1 | 12/10/2020 12:56 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-63-065-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201210G** | QC Batch: **83418** | | | PrepDate: | **12/10/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4400 | 50 | 50 | | mg/L | 1 | 12/10/2020 12:56 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID | LCS-83365 | SampType: | LCS | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/8/2020 | RunNo: | 149285 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83365 | TestNo: | SM2540C | | | Analysis Date: | 12/8/2020 | SeqNo: | 4033721 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 977.000 | 10 | 1000 | 0 | 97.7 | 80 | 120 | | | | |

| Sample ID | MB-83365 | SampType: | MBLK | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/8/2020 | RunNo: | 149285 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83365 | TestNo: | SM2540C | | | Analysis Date: | 12/8/2020 | SeqNo: | 4033722 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID | N043263-006BDUP | SampType: | DUP | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/8/2020 | RunNo: | 149285 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83365 | TestNo: | SM2540C | | | Analysis Date: | 12/8/2020 | SeqNo: | 4033726 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 10400.000 | 100 | | | | | | 10490 | 0.862 | 5 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID | LCS-83399 | SampType: | LCS | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/9/2020 | RunNo: | 149286 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83399 | TestNo: | SM2540C | | | Analysis Date: | 12/9/2020 | SeqNo: | 4033735 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 978.000 | 10 | 1000 | 0 | 97.8 | 80 | 120 | | | | |

| Sample ID | MB-83399 | SampType: | MBLK | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/9/2020 | RunNo: | 149286 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83399 | TestNo: | SM2540C | | | Analysis Date: | 12/9/2020 | SeqNo: | 4033736 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID | N043348-004BDUP | SampType: | DUP | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/9/2020 | RunNo: | 149286 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83399 | TestNo: | SM2540C | | | Analysis Date: | 12/9/2020 | SeqNo: | 4033738 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 16420.000 | 200 | | | | | | 15720 | 4.36 | 5 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID | LCS-83418 | SampType: | LCS | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/10/2020 | RunNo: | 149328 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83418 | TestNo: | SM2540C | | | Analysis Date: | 12/10/2020 | SeqNo: | 4036798 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 978.000 | 10 | 1000 | 0 | 97.8 | 80 | 120 | | | | |

| Sample ID | MB-83418 | SampType: | MBLK | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/10/2020 | RunNo: | 149328 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83418 | TestNo: | SM2540C | | | Analysis Date: | 12/10/2020 | SeqNo: | 4036799 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID | N043367-008ADUP | SampType: | DUP | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/10/2020 | RunNo: | 149328 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83418 | TestNo: | SM2540C | | | Analysis Date: | 12/10/2020 | SeqNo: | 4036810 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 19750.000 | 500 | | | | | | 20350 | 2.99 | 5 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-030-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:21:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/8/2020 04:36 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 05:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-030-EB-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/8/2020 05:42 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-050-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/8/2020 04:07 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 05:57 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-020-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 3:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/8/2020 04:45 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 06:08 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-020-EB-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:44:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/8/2020 06:01 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-035-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201208A** | QC Batch: **R149254** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/8/2020 05:04 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 06:32 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-910-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:29:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/9/2020 10:46 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 06:43 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-035-EB-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:34:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/9/2020 04:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-095-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** QC Batch: **R149305** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 13 | 0.17 | 1.0 | | µg/L | 5 | 12/9/2020 09:30 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** QC Batch: **83358** | | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 14 | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 06:55 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-200-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2300 | 17 | 100 | | µg/L | 500 | 12/9/2020 10:08 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 2100 | 3.2 | 25 | | µg/L | 25 | 12/12/2020 07:18 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-915-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2300 | 17 | 100 | | µg/L | 500 | 12/9/2020 10:37 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 2100 | 3.2 | 25 | | µg/L | 25 | 12/12/2020 07:47 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-05-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** QC Batch: **R149305** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 18 | 0.17 | 1.0 | | µg/L | 5 | 12/9/2020 09:40 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** QC Batch: **83358** | | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 16 | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 07:53 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-060-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 410 | 3.3 | 20 | | µg/L | 100 | 12/9/2020 12:49 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 400 | 0.65 | 5.0 | | µg/L | 5 | 12/12/2020 01:57 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-135-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** QC Batch: **R149305** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 15 | 0.17 | 1.0 | | µg/L | 5 | 12/9/2020 09:49 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** QC Batch: **83358** | | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 13 | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-19-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** QC Batch: **R149305** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 94 | 0.66 | 4.0 | | µg/L | 20 | 12/9/2020 01:17 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201212A** QC Batch: **83358** | | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 92 | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 08:16 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-25-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:57:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** QC Batch: **R149305** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 68 | 0.66 | 4.0 | | µg/L | 20 | 12/9/2020 09:11 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201212A** QC Batch: **83358** | | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 65 | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-711-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 3:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/9/2020 04:53 PM |

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-712-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 3:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/9/2020 05:12 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-713-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 3:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/9/2020 05:31 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-63-065-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201209A** | QC Batch: **R149305** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 1.7 | 0.033 | 0.20 | | µg/L | 1 | 12/9/2020 09:21 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 2.7 | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 04:12 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | MB-R149254 | SampType: | MBLK | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032252 |

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

| Sample ID | LCS-R149254 | SampType: | LCS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032253 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.286 | 0.20 | 5.000 | 0 | 106 | 90 | 110 | | | | |

| Sample ID | N043305-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032263 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.062 | 0.20 | 1.000 | 0 | 106 | 90 | 110 | | | | |

| Sample ID | N043305-010AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032264 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 898.705 | 10 | 250.0 | 631.3 | 107 | 90 | 110 | | | | |

| Sample ID | N043305-012AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149254 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149254 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4032265 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 691.310 | 10 | 250.0 | 433.3 | 103 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N043305-013AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032268** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2615.760 | 40 | 1000 | 1597 | 102 | 90 | 110 | | | | |

| Sample ID **N043305-014AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032269** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1102.610 | 20 | 500.0 | 606.4 | 99.3 | 90 | 110 | | | | |

| Sample ID **N043305-015AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032270** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9100.800 | 200 | 5000 | 3965 | 103 | 90 | 110 | | | | |

| Sample ID **N043305-016AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032271** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9079.700 | 200 | 5000 | 4075 | 100 | 90 | 110 | | | | |

| Sample ID **N043305-004AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032273** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 13.683 | 1.0 | 5.000 | 8.616 | 101 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043305-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032275**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.201 | 1.0 | 5.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID **N043305-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032277**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.594 | 1.0 | 5.000 | 0 | 91.9 | 90 | 110 | | | | |

Sample ID **N043305-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032281**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.278 | 1.0 | 5.000 | 4.366 | 98.2 | 90 | 110 | | | | |

Sample ID **N043305-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032283**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.990 | 0.20 | 1.000 | 0 | 99.0 | 90 | 110 | | | | |

Sample ID **N043305-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032285**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.980 | 0.20 | 1.000 | 0 | 98.0 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N043305-018AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032287** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.976 | 0.20 | 1.000 | 0 | 97.6 | 90 | 110 | | | | |

| Sample ID **N043305-019AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032289** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.028 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

| Sample ID **N043305-012ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032292** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 430.815 | 10 | | | | | | 433.3 | 0.579 | 20 | |

| Sample ID **N043305-012AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032293** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 679.015 | 10 | 250.0 | 433.3 | 98.3 | 90 | 110 | 691.3 | 1.79 | 20 | |

| Sample ID **N043348-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149254** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149254** | TestNo: **EPA 218.6** | | Analysis Date: **12/8/2020** | SeqNo: **4032295** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.002 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043348-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032296**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.844 | 1.0 | 5.000 | 0 | 96.9 | 90 | 110 | | | | |

Sample ID **N043348-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032299**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.820 | 1.0 | 5.000 | 0 | 96.4 | 90 | 110 | | | | |

Sample ID **N043348-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032301**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.918 | 1.0 | 5.000 | 0 | 98.4 | 90 | 110 | | | | |

Sample ID **N043348-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032305**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.093 | 0.20 | 1.000 | 0.09850 | 99.5 | 90 | 110 | | | | |

Sample ID **N043348-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149254**
Client ID: **ZZZZZZ** Batch ID: **R149254** TestNo: **EPA 218.6** Analysis Date: **12/8/2020** SeqNo: **4032307**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.090 | 0.20 | 1.000 | 0.08750 | 100 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | MB-R149305 | SampType: | MBLK | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149305 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149305 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035386 | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Hexavalent Chromium | | ND | 0.20 | | | | | | | | | | |

| Sample ID | LCS-R149305 | SampType: | LCS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149305 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149305 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035387 | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Hexavalent Chromium | | 5.025 | 0.20 | 5.000 | 0 | 101 | 90 | 110 | | | | | |

| Sample ID | N043348-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149305 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149305 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035398 | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Hexavalent Chromium | | 4.806 | 1.0 | 5.000 | 0 | 96.1 | 90 | 110 | | | | | |

| Sample ID | N043348-016AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149305 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149305 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035399 | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Hexavalent Chromium | | 167.800 | 4.0 | 100.0 | 67.76 | 100 | 90 | 110 | | | | | |

| Sample ID | N043348-016AMSD | SampType: | MSD | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149305 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149305 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035400 | | |
| Analyte | | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Hexavalent Chromium | | 170.936 | 4.0 | 100.0 | 67.76 | 103 | 90 | 110 | 167.8 | 1.85 | 20 | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N043348-020AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035402** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.713 | 0.20 | 1.000 | 1.680 | 103 | 90 | 110 | 2.695 | 0.677 | 20 | |

| Sample ID **N043348-009AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035403** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 37.881 | 1.0 | 25.00 | 12.55 | 101 | 90 | 110 | | | | |

| Sample ID **N043348-012AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035404** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 43.339 | 1.0 | 25.00 | 17.59 | 103 | 90 | 110 | | | | |

| Sample ID **N043348-014AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035405** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 40.269 | 1.0 | 25.00 | 14.78 | 102 | 90 | 110 | | | | |

| Sample ID **N043348-010AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035408** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4812.950 | 100 | 2500 | 2257 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N043348-011AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035409** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4829.400 | 100 | 2500 | 2256 | 103 | 90 | 110 | | | | |

| Sample ID **N043348-013AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035411** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 918.980 | 20 | 500.0 | 411.0 | 102 | 90 | 110 | | | | |

| Sample ID **N043348-013AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035412** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 924.770 | 20 | 500.0 | 411.0 | 103 | 90 | 110 | 919.0 | 0.628 | 20 | |

| Sample ID **N043348-015ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035414** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 93.092 | 4.0 | | | | | | 93.52 | 0.461 | 20 | |

| Sample ID **N043348-015AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149305** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149305** | TestNo: **EPA 218.6** | | Analysis Date: **12/9/2020** | SeqNo: **4035415** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 195.200 | 4.0 | 100.0 | 93.52 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043368-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035419**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.102 | 0.20 | 1.000 | 0.07360 | 103 | 90 | 110 | | | | |

Sample ID **N043368-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035421**

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

Sample ID **N043368-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035423**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.335 | 0.20 | 1.000 | 1.312 | 102 | 90 | 110 | | | | |

Sample ID **N043368-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035425**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.029 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID **N043368-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035427**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.296 | 0.20 | 1.000 | 2.329 | 96.7 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043348-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035431**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.064 | 0.20 | 1.000 | 0.08650 | 97.7 | 90 | 110 | | | | |

Sample ID **N043348-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035433**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.006 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID **N043348-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035435**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.040 | 0.20 | 1.000 | 0.04620 | 99.4 | 90 | 110 | | | | |

Sample ID **N043348-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035437**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.032 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID **N043348-020AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149305**
Client ID: **ZZZZZZ** Batch ID: **R149305** TestNo: **EPA 218.6** Analysis Date: **12/9/2020** SeqNo: **4035438**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.695 | 0.20 | 1.000 | 1.680 | 101 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N043368-004AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149305 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149305 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035442 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.975 | 1.0 | 5.000 | 0 | 99.5 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-83358 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042052 |

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

| Sample ID | LCS-83358 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042053 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.728 | 1.0 | 10.00 | 0 | 97.3 | 85 | 115 | | | | |

| Sample ID | N043348-013CMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042060 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 391.220 | 5.0 | 10.00 | 404.5 | -132 | 75 | 125 | | | | S |

| Sample ID | N043348-013CMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042064 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 391.536 | 5.0 | 10.00 | 404.5 | -129 | 75 | 125 | 391.2 | 0.0809 | 20 | S |

| Sample ID | N043348-016CMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042070 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 69.471 | 1.0 | 10.00 | 64.79 | 46.8 | 75 | 125 | | | | S |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | N043348-016CMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042074 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 69.405 | 1.0 | 10.00 | 64.79 | 46.2 | 75 | 125 | 69.47 | 0.0949 | 20 | S |

| Sample ID | N043348-020CMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042081 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 11.274 | 1.0 | 10.00 | 2.745 | 85.3 | 75 | 125 | | | | |

| Sample ID | N043348-020CMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042087 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 11.269 | 1.0 | 10.00 | 2.745 | 85.2 | 75 | 125 | 11.27 | 0.0433 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | N043348-013C-PS | SampType: | PS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | | RunNo: | 149389 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042058 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 393.080 | 5.0 | 10.00 | 404.5 | -114 | 80 | 120 | | | | S |

| Sample ID | N043348-016C-PS | SampType: | PS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | | RunNo: | 149389 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042068 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 69.741 | 1.0 | 10.00 | 64.79 | 49.5 | 80 | 120 | | | | S |

| Sample ID | N043348-020C-PS | SampType: | PS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | | RunNo: | 149389 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042079 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 11.390 | 1.0 | 10.00 | 2.745 | 86.4 | 80 | 120 | | | | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-030-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:21:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209J** | QC Batch: **R149311** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 1000 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 05:20 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-050-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 180 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-020-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 3:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209J** | QC Batch: **R149311** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 1400 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 05:20 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-035-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 720 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-910-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:29:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 730 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-095-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 52 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-200-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 35 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-915-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 34 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-05-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 38 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-060-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 99 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-135-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 35 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-19-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 100 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-25-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:57:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 120 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-63-065-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209I** | QC Batch: **R149310** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 200 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 03:35 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID **LCS-R149309** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035692** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 97.917 | 5.0 | 100.0 | 0 | 97.9 | 85 | 115 | | | | |

| Sample ID **MB-R149309** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035693** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID **N043263-001BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035695** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 137.500 | 5.0 | | | | | | 133.3 | 3.08 | 30 | |

| Sample ID **N043348-013BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035712** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 200.000 | 5.0 | 100.0 | 98.96 | 101 | 75 | 125 | | | | |

| Sample ID **N043348-013BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035713** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 200.000 | 5.0 | 100.0 | 98.96 | 101 | 75 | 125 | 200.0 | 0 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID | LCS-R149310 | SampType: | LCS | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149310 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149310 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035716 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 96.774 | 5.0 | 100.0 | 0 | 96.8 | 85 | 115 | | | | |

| Sample ID | MB-R149310 | SampType: | MBLK | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149310 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149310 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035717 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID | N043305-005BDUP | SampType: | DUP | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149310 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149310 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035720 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 36.290 | 5.0 | | | | | | 36.29 | 0 | 30 | |

| Sample ID | N043348-016BMS | SampType: | MS | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149310 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149310 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035732 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 224.798 | 5.0 | 100.0 | 115.9 | 109 | 75 | 125 | | | | |

| Sample ID | N043348-016BMSD | SampType: | MSD | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149310 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149310 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035733 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 225.806 | 5.0 | 100.0 | 115.9 | 110 | 75 | 125 | 224.8 | 0.447 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID **N043348-020BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149310** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149310** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035735** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 294.355 | 5.0 | 100.0 | 201.6 | 92.7 | 75 | 125 | | | | |

| Sample ID **N043348-020BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149310** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149310** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035736** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 294.355 | 5.0 | 100.0 | 201.6 | 92.7 | 75 | 125 | 294.4 | 0 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID | LCS-R149311 | SampType: | LCS | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149311 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149311 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035737 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 505.208 | 5.0 | 500.0 | 0 | 101 | 85 | 115 | | | | |

| Sample ID | MB-R149311 | SampType: | MBLK | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149311 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149311 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035738 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 2.604 | 5.0 | | | | | | | | | |

| Sample ID | N043348-004BDUP | SampType: | DUP | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149311 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149311 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035742 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 1364.583 | 5.0 | | | | | | 1385 | 1.52 | 30 | |

| Sample ID | N043348-004BMS | SampType: | MS | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149311 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149311 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035743 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 1916.667 | 5.0 | 500.0 | 1385 | 106 | 75 | 125 | | | | |

| Sample ID | N043348-004BMSD | SampType: | MSD | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149311 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149311 | TestNo: | SM 2320 B | | | Analysis Date: | 12/9/2020 | SeqNo: | 4035744 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 1885.417 | 5.0 | 500.0 | 1385 | 100 | 75 | 125 | 1917 | 1.64 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-001

**Client Sample ID:** MW-30-030-Q420
**Collection Date:** 12/7/2020 1:21:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/8/2020 10:35 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1200 | 7.0 | 100 | | mg/L | 200 | 12/8/2020 11:29 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1400 | 8.0 | 100 | | mg/L | 200 | 12/8/2020 11:29 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-003

**Client Sample ID:** MW-30-050-Q420
**Collection Date:** 12/7/2020 12:36:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/8/2020 10:50 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 87 | 0.70 | 10 | | mg/L | 20 | 12/8/2020 10:46 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 200 | 0.80 | 10 | | mg/L | 20 | 12/8/2020 10:46 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-004

**Client Sample ID:** MW-32-020-Q420
**Collection Date:** 12/7/2020 3:10:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/8/2020 11:04 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5800 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 02:21 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 3800 | 20 | 250 | | mg/L | 500 | 12/8/2020 11:43 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-006

**Client Sample ID:** MW-32-035-Q420
**Collection Date:** 12/7/2020 2:19:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/8/2020 11:18 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2000 | 17 | 250 | | mg/L | 500 | 12/9/2020 02:35 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 840 | 4.0 | 50 | | mg/L | 100 | 12/8/2020 11:58 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-007

**Client Sample ID:** MW-910-Q420
**Collection Date:** 12/7/2020 2:29:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/8/2020 11:32 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2000 | 17 | 250 | | mg/L | 500 | 12/9/2020 02:49 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 850 | 4.0 | 50 | | mg/L | 100 | 12/9/2020 12:12 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-009

**Client Sample ID:** MW-50-095-Q420
**Collection Date:** 12/7/2020 2:10:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/8/2020 11:47 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1800 | 17 | 250 | | mg/L | 500 | 12/9/2020 03:04 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 300 | 2.0 | 25 | | mg/L | 50 | 12/9/2020 12:26 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-010

**Client Sample ID:** MW-50-200-Q420
**Collection Date:** 12/7/2020 2:48:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/8/2020 12:01 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6700 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 03:18 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 810 | 4.0 | 50 | | mg/L | 100 | 12/9/2020 12:41 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-011

**Client Sample ID:** MW-915-Q420
**Collection Date:** 12/7/2020 2:58:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/8/2020 12:15 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6800 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 03:32 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 810 | 4.0 | 50 | | mg/L | 100 | 12/9/2020 01:23 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-012

**Client Sample ID:** TW-05-Q420
**Collection Date:** 12/7/2020 12:28:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/8/2020 12:30 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5200 | 35 | 500 | | mg/L | 1000 | 12/9/2020 04:15 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 600 | 2.0 | 25 | | mg/L | 50 | 12/9/2020 01:38 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-013

**Client Sample ID:** MW-31-060-Q420
**Collection Date:** 12/7/2020 1:19:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/8/2020 12:44 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 790 | 7.0 | 100 | | mg/L | 200 | 12/8/2020 08:09 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 220 | 0.80 | 10 | | mg/L | 20 | 12/8/2020 05:31 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-014

**Client Sample ID:** MW-31-135-Q420
**Collection Date:** 12/7/2020 12:27:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/8/2020 12:58 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3900 | 35 | 500 | | mg/L | 1000 | 12/9/2020 04:29 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 500 | 2.0 | 25 | | mg/L | 50 | 12/9/2020 01:52 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-015

**Client Sample ID:** MW-19-Q420
**Collection Date:** 12/7/2020 2:01:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/8/2020 01:55 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 510 | 3.5 | 50 | | mg/L | 100 | 12/9/2020 04:44 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 160 | 0.80 | 10 | | mg/L | 20 | 12/9/2020 02:06 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-016

**Client Sample ID:** MW-25-Q420
**Collection Date:** 12/7/2020 2:57:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/8/2020 02:10 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 400 | 3.5 | 50 | | mg/L | 100 | 12/8/2020 08:52 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 220 | 0.80 | 10 | | mg/L | 20 | 12/8/2020 06:14 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-020

**Client Sample ID:** MW-63-065-Q420
**Collection Date:** 12/7/2020 1:20:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/8/2020 02:24 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1900 | 17 | 250 | | mg/L | 500 | 12/8/2020 09:35 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 570 | 4.0 | 50 | | mg/L | 100 | 12/8/2020 06:57 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID **N043348-013BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031842** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.318 | 2.5 | 6.250 | 0.2825 | 96.6 | 80 | 120 | | | | |

| Sample ID **N043348-013BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031843** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.488 | 2.5 | 6.250 | 0.2825 | 99.3 | 80 | 120 | 6.318 | 2.66 | 20 | |

| Sample ID **N043348-016BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031844** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.612 | 2.5 | 6.250 | 0.3400 | 100 | 80 | 120 | | | | |

| Sample ID **N043348-016BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031845** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.612 | 2.5 | 6.250 | 0.3400 | 100 | 80 | 120 | 6.612 | 0 | 20 | |

| Sample ID **N043348-020BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031846** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.214 | 2.5 | 6.250 | 0.1655 | 96.8 | 80 | 120 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID | N043348-020BMSD | SampType: | MSD | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031847 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.177 | 2.5 | 6.250 | 0.1655 | 96.2 | 80 | 120 | 6.214 | 0.605 | 20 | |

| Sample ID | LCS-R149252_BR | SampType: | LCS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031848 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.236 | 0.50 | 1.250 | 0 | 98.9 | 90 | 110 | | | | |

| Sample ID | MB-R149252_BR | SampType: | MBLK | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031851 |

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

| Sample ID | N043348-012BDUP | SampType: | DUP | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031852 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 5.0 | | | | | | 0 | 0 | 20 | |

| Sample ID | N043348-012BMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031853 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 11.236 | 5.0 | 12.50 | 0 | 89.9 | 80 | 120 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | LCS-R149252_CL | SampType: | LCS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031786 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.085 | 0.50 | 2.000 | 0 | 104 | 90 | 110 | | | | |

| Sample ID | MB-R149252_CL | SampType: | MBLK | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031789 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.150 | 0.50 | | | | | | | | | |

| Sample ID | N043348-013BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031793 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1196.880 | 100 | 400.0 | 785.1 | 103 | 80 | 120 | | | | |

| Sample ID | N043348-013BMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031794 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1177.160 | 100 | 400.0 | 785.1 | 98.0 | 80 | 120 | 1197 | 1.66 | 20 | |

| Sample ID | N043348-016BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031796 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 615.460 | 50 | 200.0 | 404.0 | 106 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | N043348-016BMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031797 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 604.010 | 50 | 200.0 | 404.0 | 100 | 80 | 120 | 615.5 | 1.88 | 20 | |

| Sample ID | N043348-020BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031799 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2902.400 | 250 | 1000 | 1904 | 99.9 | 80 | 120 | | | | |

| Sample ID | N043348-020BMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031802 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2924.950 | 250 | 1000 | 1904 | 102 | 80 | 120 | 2902 | 0.774 | 20 | |

| Sample ID | N043348-003BDUP | SampType: | DUP | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031804 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 84.960 | 10 | | | | | | 87.08 | 2.46 | 20 | |

| Sample ID | N043348-003BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031805 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 125.264 | 10 | 40.00 | 87.08 | 95.5 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | LCS-R149252_SO4 | SampType: | LCS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031870 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.978 | 0.50 | 4.000 | 0 | 99.5 | 90 | 110 | | | | |

| Sample ID | MB-R149252_SO4 | SampType: | MBLK | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031873 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.224 | 0.50 | | | | | | | | | |

| Sample ID | N043348-013BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031875 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 304.764 | 10 | 80.00 | 218.8 | 107 | 80 | 120 | | | | |

| Sample ID | N043348-013BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031876 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 305.024 | 10 | 80.00 | 218.8 | 108 | 80 | 120 | 304.8 | 0.0853 | 20 | |

| Sample ID | N043348-016BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031878 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 308.058 | 10 | 80.00 | 222.7 | 107 | 80 | 120 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | N043348-016BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031879 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 307.372 | 10 | 80.00 | 222.7 | 106 | 80 | 120 | 308.1 | 0.223 | 20 | |

| Sample ID | N043348-020BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031883 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 973.380 | 50 | 400.0 | 572.1 | 100 | 80 | 120 | | | | |

| Sample ID | N043348-020BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031884 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 968.380 | 50 | 400.0 | 572.1 | 99.1 | 80 | 120 | 973.4 | 0.515 | 20 | |

| Sample ID | N043348-003BDUP | SampType: | DUP | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031888 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 202.732 | 10 | | | | | | 202.8 | 0.0454 | 20 | |

| Sample ID | N043348-003BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149252 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149252 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/8/2020 | SeqNo: | 4031889 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 285.218 | 10 | 80.00 | 202.8 | 103 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-001

**Client Sample ID:** MW-30-030-Q420
**Collection Date:** 12/7/2020 1:21:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 1700 | 74 | 100 | | ug/L | 1 | 12/17/2020 04:30 PM |
| Calcium | 51000 | 85 | 500 | | ug/L | 1 | 12/13/2020 10:45 PM |
| Iron | 850 | 18 | 20 | | ug/L | 1 | 12/13/2020 10:45 PM |
| Magnesium | 52000 | 48 | 100 | | ug/L | 1 | 12/13/2020 10:45 PM |
| Sodium | 1400000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 07:43 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-003

**Client Sample ID:** MW-30-050-Q420
**Collection Date:** 12/7/2020 12:36:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 310 | 74 | 100 | | ug/L | 1 | 12/17/2020 04:35 PM |
| Calcium | 82000 | 85 | 500 | | ug/L | 1 | 12/13/2020 10:51 PM |
| Iron | 62 | 18 | 20 | | ug/L | 1 | 12/13/2020 10:51 PM |
| Magnesium | 19000 | 48 | 100 | | ug/L | 1 | 12/13/2020 10:51 PM |
| Sodium | 81000 | 480 | 2500 | | ug/L | 5 | 12/14/2020 07:54 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-004

**Client Sample ID:** MW-32-020-Q420
**Collection Date:** 12/7/2020 3:10:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 3800 | 370 | 500 | | ug/L | 5 | 12/17/2020 04:40 PM |
| Calcium | 340000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 10:55 PM |
| Iron | 6100 | 89 | 100 | | ug/L | 5 | 12/13/2020 10:55 PM |
| Magnesium | 440000 | 240 | 500 | | ug/L | 5 | 12/13/2020 10:55 PM |
| Sodium | 5000000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 07:57 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-006

**Client Sample ID:** MW-32-035-Q420
**Collection Date:** 12/7/2020 2:19:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 940 | 74 | 100 | | ug/L | 1 | 12/17/2020 04:43 PM |
| Calcium | 300000 | 85 | 500 | | ug/L | 1 | 12/13/2020 11:01 PM |
| Iron | 11000 | 18 | 20 | | ug/L | 1 | 12/13/2020 11:01 PM |
| Magnesium | 210000 | 48 | 100 | | ug/L | 1 | 12/13/2020 11:01 PM |
| Potassium | 18000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 08:00 PM |
| Sodium | 1100000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 08:05 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-007

**Client Sample ID:** MW-910-Q420
**Collection Date:** 12/7/2020 2:29:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 900 | 74 | 100 | | ug/L | 1 | 12/17/2020 04:47 PM |
| Calcium | 300000 | 85 | 500 | | ug/L | 1 | 12/13/2020 11:06 PM |
| Iron | 10000 | 18 | 20 | | ug/L | 1 | 12/13/2020 11:06 PM |
| Magnesium | 200000 | 48 | 100 | | ug/L | 1 | 12/13/2020 11:06 PM |
| Potassium | 19000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 08:08 PM |
| Sodium | 1100000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 08:13 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-009

**Client Sample ID:** MW-50-095-Q420
**Collection Date:** 12/7/2020 2:10:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 1000 | 74 | 100 | | ug/L | 1 | 12/17/2020 04:51 PM |
| Calcium | 130000 | 85 | 500 | | ug/L | 1 | 12/13/2020 11:12 PM |
| Iron | 64 | 18 | 20 | | ug/L | 1 | 12/13/2020 11:12 PM |
| Magnesium | 16000 | 48 | 100 | | ug/L | 1 | 12/13/2020 11:12 PM |
| Sodium | 910000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 08:16 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-200-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 2100 | 370 | 500 | | ug/L | 5 | 12/17/2020 05:04 PM |
| Calcium | 550000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 11:26 PM |
| Iron | 110 | 89 | 100 | | ug/L | 5 | 12/13/2020 11:26 PM |
| Magnesium | 49000 | 240 | 500 | | ug/L | 5 | 12/13/2020 11:26 PM |
| Sodium | 3800000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 08:19 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-011

**Client Sample ID:** MW-915-Q420
**Collection Date:** 12/7/2020 2:58:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 3000 | 370 | 500 | | ug/L | 5 | 12/17/2020 05:10 PM |
| Calcium | 430000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 11:40 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 11:40 PM |
| Magnesium | 39000 | 240 | 500 | | ug/L | 5 | 12/13/2020 11:40 PM |
| Sodium | 3500000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 08:23 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-012

**Client Sample ID:** TW-05-Q420
**Collection Date:** 12/7/2020 12:28:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 2500 | 370 | 500 | | ug/L | 5 | 12/17/2020 05:14 PM |
| Calcium | 380000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 11:44 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 11:44 PM |
| Magnesium | 36000 | 240 | 500 | | ug/L | 5 | 12/13/2020 11:44 PM |
| Sodium | 2600000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 08:26 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-013

**Client Sample ID:** MW-31-060-Q420
**Collection Date:** 12/7/2020 1:19:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 540 | 74 | 100 | | ug/L | 1 | 12/17/2020 03:55 PM |
| Calcium | 100000 | 85 | 500 | | ug/L | 1 | 12/13/2020 09:49 PM |
| Iron | 30 | 18 | 20 | | ug/L | 1 | 12/13/2020 09:49 PM |
| Magnesium | 19000 | 48 | 100 | | ug/L | 1 | 12/13/2020 09:49 PM |
| Potassium | 6000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 07:10 PM |
| Sodium | 450000 | 2400 | 12000 | | ug/L | 25 | 12/14/2020 07:14 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-014

**Client Sample ID:** MW-31-135-Q420
**Collection Date:** 12/7/2020 12:27:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 2400 | 370 | 500 | | ug/L | 5 | 12/17/2020 05:19 PM |
| Calcium | 340000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 11:48 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 11:48 PM |
| Magnesium | 31000 | 240 | 500 | | ug/L | 5 | 12/13/2020 11:48 PM |
| Sodium | 1800000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 08:36 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-015

**Client Sample ID:** MW-19-Q420
**Collection Date:** 12/7/2020 2:01:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 620 | 74 | 100 | | ug/L | 1 | 12/17/2020 05:23 PM |
| Calcium | 100000 | 85 | 500 | | ug/L | 1 | 12/13/2020 11:52 PM |
| Iron | 22 | 18 | 20 | | ug/L | 1 | 12/13/2020 11:52 PM |
| Magnesium | 19000 | 48 | 100 | | ug/L | 1 | 12/13/2020 11:52 PM |
| Sodium | 230000 | 2400 | 12000 | | ug/L | 25 | 12/14/2020 08:39 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-016

**Client Sample ID:** MW-25-Q420
**Collection Date:** 12/7/2020 2:57:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 550 | 74 | 100 | | ug/L | 1 | 12/17/2020 05:27 PM |
| Calcium | 110000 | 85 | 500 | | ug/L | 1 | 12/14/2020 11:58 PM |
| Iron | 32 | 18 | 20 | | ug/L | 1 | 12/14/2020 11:58 PM |
| Magnesium | 27000 | 48 | 100 | | ug/L | 1 | 12/14/2020 11:58 PM |
| Potassium | 7500 | 430 | 2500 | | ug/L | 5 | 12/14/2020 08:43 PM |
| Sodium | 180000 | 2400 | 12000 | | ug/L | 25 | 12/14/2020 08:46 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-020

**Client Sample ID:** MW-63-065-Q420
**Collection Date:** 12/7/2020 1:20:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83454** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 770 | 74 | 100 | | ug/L | 1 | 12/17/2020 06:07 PM |
| Calcium | 150000 | 85 | 500 | | ug/L | 1 | 12/21/2020 10:20 AM |
| Iron | 34 | 18 | 20 | | ug/L | 1 | 12/14/2020 12:40 AM |
| Magnesium | 23000 | 48 | 100 | | ug/L | 1 | 12/14/2020 12:40 AM |
| Sodium | 950000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 09:35 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **MB-83454** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041445** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 161.102 | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

| Sample ID **N043348-013CMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041455** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 103903.145 | 500 | 10000 | 102600 | 13.5 | 75 | 125 | | | | S |
| Iron | 64.117 | 20 | 100.0 | 30.16 | 34.0 | 75 | 125 | | | | S |
| Magnesium | 24084.357 | 100 | 10000 | 19440 | 46.5 | 75 | 125 | | | | S |

| Sample ID **N043348-013CMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041456** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 100217.276 | 500 | 10000 | 102600 | -23.4 | 75 | 125 | 103900 | 3.61 | 20 | S |
| Iron | 81.782 | 20 | 100.0 | 30.16 | 51.6 | 75 | 125 | 64.12 | 24.2 | 20 | SR |
| Magnesium | 23423.222 | 100 | 10000 | 19440 | 39.9 | 75 | 125 | 24080 | 2.78 | 20 | S |

| Sample ID **N043348-016CMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4041472** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 118273.620 | 500 | 10000 | 113000 | 52.3 | 75 | 125 | | | | S |
| Iron | 72.439 | 20 | 100.0 | 32.46 | 40.0 | 75 | 125 | | | | S |
| Magnesium | 32708.228 | 100 | 10000 | 27080 | 56.3 | 75 | 125 | | | | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID **N043348-016CMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83454** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4041473**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 117176.206 | 500 | 10000 | 113000 | 41.3 | 75 | 125 | 118300 | 0.932 | 20 | S |
| Iron | 72.731 | 20 | 100.0 | 32.46 | 40.3 | 75 | 125 | 72.44 | 0.403 | 20 | S |
| Magnesium | 32797.360 | 100 | 10000 | 27080 | 57.2 | 75 | 125 | 32710 | 0.272 | 20 | S |

Sample ID **N043348-020CMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83454** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4041480**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 83.010 | 20 | 100.0 | 33.86 | 49.1 | 75 | 125 | | | | S |
| Magnesium | 28157.228 | 100 | 10000 | 22590 | 55.6 | 75 | 125 | | | | S |

Sample ID **N043348-020CMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83454** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4041481**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 80.190 | 20 | 100.0 | 33.86 | 46.3 | 75 | 125 | 83.01 | 3.46 | 20 | S |
| Magnesium | 30616.558 | 100 | 10000 | 22590 | 80.2 | 75 | 125 | 28160 | 8.37 | 20 | |

Sample ID **MB-83454** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149396**
Client ID: **PBW** Batch ID: **83454** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4044420**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | ND | 500 | | | | | | | | | |
| Sodium | 249.915 | 500 | | | | | | | | | |

Sample ID **LCS2-83454** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149396**
Client ID: **LCSW** Batch ID: **83454** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4044421**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | LCS2-83454 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044421 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 19481.350 | 500 | 20000 | 0 | 97.4 | 85 | 115 | | | | |
| Sodium | 17871.164 | 500 | 20000 | 0 | 89.4 | 85 | 115 | | | | |

| Sample ID | N043348-013C-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044430 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 31623.763 | 2500 | 20000 | 6021 | 128 | 75 | 125 | | | | S |

| Sample ID | N043348-013C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044431 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 29919.965 | 2500 | 20000 | 6021 | 119 | 75 | 125 | 31620 | 5.54 | 20 | |

| Sample ID | N043348-013C-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044433 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 393619.274 | 12000 | 20000 | 445100 | -257 | 75 | 125 | | | | S |

| Sample ID | N043348-013C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044434 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 427588.179 | 12000 | 20000 | 445100 | -87.4 | 75 | 125 | 393600 | 8.27 | 20 | S |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N043348-016C-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044456 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 29448.696 | 2500 | 20000 | 7503 | 110 | 75 | 125 | | | | |

| Sample ID | N043348-016C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044457 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 29497.557 | 2500 | 20000 | 7503 | 110 | 75 | 125 | 29450 | 0.166 | 20 | |

| Sample ID | N043348-016C-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044459 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 194610.713 | 12000 | 20000 | 175700 | 94.7 | 75 | 125 | | | | |

| Sample ID | N043348-016C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044464 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 188196.229 | 12000 | 20000 | 175700 | 62.6 | 75 | 125 | 194600 | 3.35 | 20 | S |

| Sample ID | N043348-020C-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044470 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 44749.276 | 2500 | 20000 | 17340 | 137 | 75 | 125 | | | | S |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N043348-020C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044471 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Potassium | 44304.328 | 2500 | 20000 | 17340 | 135 | 75 | 125 | 44750 | 0.999 | 20 | S | | |

| Sample ID | N043348-020C-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044473 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Sodium | 1000153.823 | 50000 | 20000 | 954900 | 226 | 75 | 125 | | | | S | | |

| Sample ID | N043348-020C-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149396 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/14/2020 | SeqNo: | 4044476 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Sodium | 1200600.317 | 50000 | 20000 | 954900 | 1230 | 75 | 125 | 1000000 | 18.2 | 20 | S | | |

| Sample ID | LCS1-83454 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149472 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4047860 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Calcium | 11299.000 | 500 | 10000 | 0 | 113 | 85 | 115 | | | | | | |
| Iron | 93.990 | 20 | 100.0 | 0 | 94.0 | 85 | 115 | | | | | | |
| Magnesium | 9625.600 | 100 | 10000 | 0 | 96.3 | 85 | 115 | | | | | | |

| Sample ID | MB-83454 | SampType: | MBLK | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049548 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Boron | ND | 100 | | | | | | | | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | LCS1-83454 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049549 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5139.883 | 100 | 5000 | 0 | 103 | 85 | 115 | | | | |

| Sample ID | N043348-013CMS1 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049555 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3051.564 | 100 | 5000 | 539.6 | 50.2 | 75 | 125 | | | | S |

| Sample ID | N043348-013CMSD1 | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049556 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3189.409 | 100 | 5000 | 539.6 | 53.0 | 75 | 125 | 3052 | 4.42 | 20 | S |

| Sample ID | N043348-016CMS1 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4050256 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3220.237 | 100 | 5000 | 554.3 | 53.3 | 75 | 125 | | | | S |

| Sample ID | N043348-016CMSD1 | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4050257 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3139.208 | 100 | 5000 | 554.3 | 51.7 | 75 | 125 | 3220 | 2.55 | 20 | S |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N043348-020CMS1 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4050265 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Boron | 3067.262 | 100 | 5000 | 766.8 | 46.0 | 75 | 125 | | | | S | | |

| Sample ID | N043348-020CMSD1 | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149497 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4050266 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Boron | 2759.201 | 100 | 5000 | 766.8 | 39.8 | 75 | 125 | 3067 | 10.6 | 20 | S | | |

| Sample ID | N043348-020CMS1 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149570 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4053946 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Calcium | 160410.159 | 500 | 10000 | 149700 | 107 | 75 | 125 | | | | | | |

| Sample ID | N043348-020CMSD1 | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/12/2020 | RunNo: | 149570 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4053947 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Calcium | 159941.213 | 500 | 10000 | 149700 | 103 | 75 | 125 | 160400 | 0.293 | 20 | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **N043348-013C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041454** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 101132.143 | 500 | 10000 | 102600 | -14.2 | 80 | 120 | | | | S |
| Iron | 74.643 | 20 | 100.0 | 30.16 | 44.5 | 80 | 120 | | | | S |
| Magnesium | 23414.117 | 100 | 10000 | 19440 | 39.8 | 80 | 120 | | | | S |

| Sample ID **N043348-016C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4041471** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 117512.531 | 500 | 10000 | 113000 | 44.7 | 80 | 120 | | | | S |
| Iron | 71.963 | 20 | 100.0 | 32.46 | 39.5 | 80 | 120 | | | | S |
| Magnesium | 32913.582 | 100 | 10000 | 27080 | 58.4 | 80 | 120 | | | | S |

| Sample ID **N043348-020C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4041479** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 79.706 | 20 | 100.0 | 33.86 | 45.8 | 80 | 120 | | | | S |
| Magnesium | 29446.597 | 100 | 10000 | 22590 | 68.5 | 80 | 120 | | | | S |

| Sample ID **N043348-013C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4044429** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 34498.039 | 2500 | 20000 | 6021 | 142 | 80 | 120 | | | | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **N043348-013C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4044432** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 364099.399 | 12000 | 20000 | 445100 | -405 | 80 | 120 | | | | S |

| Sample ID **N043348-016C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4044455** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 30126.684 | 2500 | 20000 | 7503 | 113 | 80 | 120 | | | | |

| Sample ID **N043348-016C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4044458** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 187514.671 | 12000 | 20000 | 175700 | 59.2 | 80 | 120 | | | | S |

| Sample ID **N043348-020C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4044469** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 45151.854 | 2500 | 20000 | 17340 | 139 | 80 | 120 | | | | S |

| Sample ID **N043348-020C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83454** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4044472** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1011529.302 | 50000 | 20000 | 954900 | 283 | 80 | 120 | | | | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N043348-013C-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4049554 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3054.141 | 100 | 5000 | 539.6 | 50.3 | 80 | 120 | | | | S |

| Sample ID | N043348-016C-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4050255 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3134.841 | 100 | 5000 | 554.3 | 51.6 | 80 | 120 | | | | S |

| Sample ID | N043348-020C-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149497 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/17/2020 | SeqNo: | 4050264 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 3291.166 | 100 | 5000 | 766.8 | 50.5 | 80 | 120 | | | | S |

| Sample ID | N043348-020C-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149570 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83454 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4053945 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 155917.298 | 500 | 10000 | 149700 | 62.4 | 80 | 120 | | | | S |

**Qualifiers:**

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

Calculations are based on raw values

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-030-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:21:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201218A** | QC Batch: **83358** | | | | PrepDate: | **12/8/2020** | Analyst: **CEI** |
| Arsenic | 0.91 | 0.081 | 0.10 | | µg/L | 1 | 12/18/2020 01:40 PM |
| Manganese | 250 | 1.3 | 2.5 | | µg/L | 5 | 12/12/2020 05:51 PM |
| Molybdenum | 57 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 05:45 PM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 05:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-30-050-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Arsenic | 2.7 | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 05:57 PM |
| Manganese | 200 | 1.3 | 2.5 | | µg/L | 5 | 12/12/2020 06:03 PM |
| Molybdenum | 4.3 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 05:57 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 05:57 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-020-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 3:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Arsenic | 3.8 | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 06:08 PM |
| Manganese | 160 | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 06:08 PM |
| Molybdenum | 160 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 06:08 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 06:08 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-32-035-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | | PrepDate: | **12/8/2020** | Analyst: **CEI** |
| Arsenic | 17 | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 06:32 PM |
| Manganese | 750 | 1.3 | 2.5 | | µg/L | 5 | 12/12/2020 06:37 PM |
| Molybdenum | 13 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 06:32 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 06:32 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-910-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:29:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Arsenic | 17 | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 06:43 PM |
| Manganese | 730 | 1.3 | 2.5 | | µg/L | 5 | 12/12/2020 06:49 PM |
| Molybdenum | 13 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 06:43 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 06:43 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-095-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Manganese | 8.3 | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 06:55 PM |
| Molybdenum | 17 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 06:55 PM |
| Selenium | 0.76 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 06:55 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-010

**Client Sample ID:** MW-50-200-Q420
**Collection Date:** 12/7/2020 2:48:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201212A** QC Batch: **83358** PrepDate: **12/8/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Arsenic | 3.8 | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Barium | 44 | 0.15 | 1.0 | | µg/L | 1 | 12/18/2020 01:52 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Copper | 7.2 | 0.55 | 1.0 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Molybdenum | 44 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Vanadium | 3.7 | 0.28 | 1.0 | | µg/L | 1 | 12/12/2020 07:06 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/12/2020 07:06 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043348
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043348-011

**Client Sample ID:** MW-915-Q420
**Collection Date:** 12/7/2020 2:58:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201212A** QC Batch: **83358** PrepDate: **12/8/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Arsenic | 3.8 | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Barium | 45 | 0.15 | 1.0 | | µg/L | 1 | 12/18/2020 01:57 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Copper | 6.1 | 0.55 | 1.0 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Molybdenum | 44 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Nickel | 1.1 | 0.26 | 1.0 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Vanadium | 3.7 | 0.28 | 1.0 | | µg/L | 1 | 12/12/2020 07:24 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/12/2020 07:24 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-05-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Manganese | 1.5 | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 07:53 PM |
| Molybdenum | 25 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 07:53 PM |
| Selenium | 0.96 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 07:53 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-060-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:19:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201218A** | QC Batch: **83358** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Arsenic | 0.53 | 0.081 | 0.10 | | µg/L | 1 | 12/18/2020 01:34 PM |
| Manganese | 1.0 | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 01:51 PM |
| Molybdenum | 22 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 01:51 PM |
| Selenium | 3.3 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 01:51 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-31-135-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 12:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | | PrepDate: | **12/8/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 08:05 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 08:05 PM |
| Molybdenum | 26 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 08:05 PM |
| Selenium | 0.72 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 08:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-19-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 08:16 PM |
| Molybdenum | 6.6 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 08:16 PM |
| Selenium | 3.2 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 08:16 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-25-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:57:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Arsenic | 0.79 | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 03:00 PM |
| Manganese | 0.55 | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 03:00 PM |
| Molybdenum | 5.9 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 03:00 PM |
| Selenium | 6.7 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-63-065-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201212A** | QC Batch: **83358** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/12/2020 04:12 PM |
| Manganese | 1.4 | 0.26 | 0.50 | | µg/L | 1 | 12/12/2020 04:12 PM |
| Molybdenum | 16 | 0.21 | 0.50 | | µg/L | 1 | 12/12/2020 04:12 PM |
| Selenium | 1.2 | 0.36 | 0.50 | | µg/L | 1 | 12/12/2020 04:12 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID **MB-83358** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/8/2020** | RunNo: **149389** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83358** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/12/2020** | SeqNo: **4042130** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | ND | 1.0 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Copper | ND | 1.0 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

| Sample ID **LCS-83358** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/8/2020** | RunNo: **149389** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83358** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/12/2020** | SeqNo: **4042131** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.564 | 0.50 | 10.00 | 0 | 106 | 85 | 115 | | | | |
| Arsenic | 9.935 | 0.10 | 10.00 | 0 | 99.3 | 85 | 115 | | | | |
| Barium | 9.838 | 1.0 | 10.00 | 0 | 98.4 | 85 | 115 | | | | |
| Beryllium | 9.508 | 0.50 | 10.00 | 0 | 95.1 | 85 | 115 | | | | |
| Cadmium | 9.877 | 0.50 | 10.00 | 0 | 98.8 | 85 | 115 | | | | |
| Cobalt | 9.558 | 0.50 | 10.00 | 0 | 95.6 | 85 | 115 | | | | |
| Copper | 9.879 | 1.0 | 10.00 | 0 | 98.8 | 85 | 115 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **LCS-83358** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149389**
Client ID: **LCSW** Batch ID: **83358** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/12/2020** SeqNo: **4042131**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead | 9.846 | 1.0 | 10.00 | 0 | 98.5 | 85 | 115 | | | | |
| Manganese | 99.691 | 0.50 | 100.0 | 0 | 99.7 | 85 | 115 | | | | |
| Molybdenum | 9.648 | 0.50 | 10.00 | 0 | 96.5 | 85 | 115 | | | | |
| Nickel | 10.054 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Selenium | 9.932 | 0.50 | 10.00 | 0 | 99.3 | 85 | 115 | | | | |
| Silver | 10.151 | 0.50 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Thallium | 9.983 | 0.50 | 10.00 | 0 | 99.8 | 85 | 115 | | | | |
| Vanadium | 9.932 | 1.0 | 10.00 | 0 | 99.3 | 85 | 115 | | | | |
| Zinc | 101.188 | 10 | 100.0 | 0 | 101 | 85 | 115 | | | | |

Sample ID **N043348-013CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149389**
Client ID: **ZZZZZZ** Batch ID: **83358** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/12/2020** SeqNo: **4042137**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.869 | 0.50 | 10.00 | 0 | 109 | 75 | 125 | | | | |
| Barium | 77.510 | 1.0 | 10.00 | 70.32 | 71.9 | 75 | 125 | | | | S |
| Beryllium | 8.425 | 0.50 | 10.00 | 0 | 84.2 | 75 | 125 | | | | |
| Cadmium | 9.754 | 0.50 | 10.00 | 0 | 97.5 | 75 | 125 | | | | |
| Cobalt | 8.739 | 0.50 | 10.00 | 0.1525 | 85.9 | 75 | 125 | | | | |
| Copper | 8.747 | 1.0 | 10.00 | 0 | 87.5 | 75 | 125 | | | | |
| Lead | 10.950 | 1.0 | 10.00 | 0 | 110 | 75 | 125 | | | | |
| Manganese | 93.615 | 0.50 | 100.0 | 1.022 | 92.6 | 75 | 125 | | | | |
| Molybdenum | 30.536 | 0.50 | 10.00 | 22.28 | 82.6 | 75 | 125 | | | | |
| Nickel | 6.232 | 1.0 | 10.00 | 0 | 62.3 | 75 | 125 | | | | S |
| Selenium | 12.676 | 0.50 | 10.00 | 3.337 | 93.4 | 75 | 125 | | | | |
| Silver | 7.827 | 0.50 | 10.00 | 0 | 78.3 | 75 | 125 | | | | |
| Thallium | 9.277 | 0.50 | 10.00 | 0 | 92.8 | 75 | 125 | | | | |
| Vanadium | 14.523 | 1.0 | 10.00 | 5.078 | 94.4 | 75 | 125 | | | | |
| Zinc | 96.657 | 10 | 100.0 | 0 | 96.7 | 75 | 125 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043348-013CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042141 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.768 | 0.50 | 10.00 | 0 | 108 | 75 | 125 | 10.87 | 0.936 | 20 | |
| Barium | 78.046 | 1.0 | 10.00 | 70.32 | 77.2 | 75 | 125 | 77.51 | 0.690 | 20 | |
| Beryllium | 8.300 | 0.50 | 10.00 | 0 | 83.0 | 75 | 125 | 8.425 | 1.49 | 20 | |
| Cadmium | 9.750 | 0.50 | 10.00 | 0 | 97.5 | 75 | 125 | 9.754 | 0.0355 | 20 | |
| Cobalt | 8.764 | 0.50 | 10.00 | 0.1525 | 86.1 | 75 | 125 | 8.739 | 0.281 | 20 | |
| Copper | 8.769 | 1.0 | 10.00 | 0 | 87.7 | 75 | 125 | 8.747 | 0.247 | 20 | |
| Lead | 10.859 | 1.0 | 10.00 | 0 | 109 | 75 | 125 | 10.95 | 0.841 | 20 | |
| Manganese | 94.336 | 0.50 | 100.0 | 1.022 | 93.3 | 75 | 125 | 93.61 | 0.768 | 20 | |
| Molybdenum | 31.340 | 0.50 | 10.00 | 22.28 | 90.6 | 75 | 125 | 30.54 | 2.60 | 20 | |
| Nickel | 6.193 | 1.0 | 10.00 | 0 | 61.9 | 75 | 125 | 6.232 | 0.613 | 20 | S |
| Selenium | 12.470 | 0.50 | 10.00 | 3.337 | 91.3 | 75 | 125 | 12.68 | 1.63 | 20 | |
| Silver | 7.620 | 0.50 | 10.00 | 0 | 76.2 | 75 | 125 | 7.827 | 2.68 | 20 | |
| Thallium | 9.388 | 0.50 | 10.00 | 0 | 93.9 | 75 | 125 | 9.277 | 1.19 | 20 | |
| Vanadium | 14.648 | 1.0 | 10.00 | 5.078 | 95.7 | 75 | 125 | 14.52 | 0.861 | 20 | |
| Zinc | 96.089 | 10 | 100.0 | 0 | 96.1 | 75 | 125 | 96.66 | 0.590 | 20 | |

| Sample ID | N043348-016CMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042148 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.015 | 0.50 | 10.00 | 0 | 110 | 75 | 125 | | | | |
| Arsenic | 11.783 | 0.10 | 10.00 | 0.7872 | 110 | 75 | 125 | | | | |
| Barium | 56.420 | 1.0 | 10.00 | 50.39 | 60.3 | 75 | 125 | | | | S |
| Beryllium | 9.059 | 0.50 | 10.00 | 0 | 90.6 | 75 | 125 | | | | |
| Cadmium | 9.595 | 0.50 | 10.00 | 0 | 96.0 | 75 | 125 | | | | |
| Cobalt | 9.049 | 0.50 | 10.00 | 0.1959 | 88.5 | 75 | 125 | | | | |
| Copper | 8.705 | 1.0 | 10.00 | 0 | 87.1 | 75 | 125 | | | | |
| Lead | 10.903 | 1.0 | 10.00 | 0 | 109 | 75 | 125 | | | | |
| Manganese | 95.580 | 0.50 | 100.0 | 0.5458 | 95.0 | 75 | 125 | | | | |
| Molybdenum | 15.956 | 0.50 | 10.00 | 5.926 | 100 | 75 | 125 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043348-016CMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042148 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel | 8.572 | 1.0 | 10.00 | 0 | 85.7 | 75 | 125 | | | | |
| Selenium | 15.760 | 0.50 | 10.00 | 6.669 | 90.9 | 75 | 125 | | | | |
| Silver | 8.553 | 0.50 | 10.00 | 0 | 85.5 | 75 | 125 | | | | |
| Thallium | 9.816 | 0.50 | 10.00 | 0 | 98.2 | 75 | 125 | | | | |
| Vanadium | 16.442 | 1.0 | 10.00 | 7.246 | 92.0 | 75 | 125 | | | | |
| Zinc | 99.398 | 10 | 100.0 | 2.597 | 96.8 | 75 | 125 | | | | |

| Sample ID | N043348-016CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042152 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.909 | 0.50 | 10.00 | 0 | 109 | 75 | 125 | 11.01 | 0.962 | 20 | |
| Arsenic | 11.705 | 0.10 | 10.00 | 0.7872 | 109 | 75 | 125 | 11.78 | 0.669 | 20 | |
| Barium | 57.860 | 1.0 | 10.00 | 50.39 | 74.7 | 75 | 125 | 56.42 | 2.52 | 20 | S |
| Beryllium | 9.422 | 0.50 | 10.00 | 0 | 94.2 | 75 | 125 | 9.059 | 3.93 | 20 | |
| Cadmium | 9.945 | 0.50 | 10.00 | 0 | 99.4 | 75 | 125 | 9.595 | 3.58 | 20 | |
| Cobalt | 8.928 | 0.50 | 10.00 | 0.1959 | 87.3 | 75 | 125 | 9.049 | 1.35 | 20 | |
| Copper | 8.762 | 1.0 | 10.00 | 0 | 87.6 | 75 | 125 | 8.705 | 0.651 | 20 | |
| Lead | 11.157 | 1.0 | 10.00 | 0 | 112 | 75 | 125 | 10.90 | 2.30 | 20 | |
| Manganese | 95.308 | 0.50 | 100.0 | 0.5458 | 94.8 | 75 | 125 | 95.58 | 0.285 | 20 | |
| Molybdenum | 15.783 | 0.50 | 10.00 | 5.926 | 98.6 | 75 | 125 | 15.96 | 1.09 | 20 | |
| Nickel | 8.651 | 1.0 | 10.00 | 0 | 86.5 | 75 | 125 | 8.572 | 0.912 | 20 | |
| Selenium | 16.332 | 0.50 | 10.00 | 6.669 | 96.6 | 75 | 125 | 15.76 | 3.56 | 20 | |
| Silver | 8.845 | 0.50 | 10.00 | 0 | 88.4 | 75 | 125 | 8.553 | 3.36 | 20 | |
| Thallium | 9.901 | 0.50 | 10.00 | 0 | 99.0 | 75 | 125 | 9.816 | 0.866 | 20 | |
| Vanadium | 16.427 | 1.0 | 10.00 | 7.246 | 91.8 | 75 | 125 | 16.44 | 0.0913 | 20 | |
| Zinc | 101.144 | 10 | 100.0 | 2.597 | 98.5 | 75 | 125 | 99.40 | 1.74 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **N043348-020CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149389**
Client ID: **ZZZZZZ** Batch ID: **83358** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/12/2020** SeqNo: **4042159**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.983 | 0.50 | 10.00 | 0 | 110 | 75 | 125 | | | | |
| Arsenic | 10.062 | 0.10 | 10.00 | 0 | 101 | 75 | 125 | | | | |
| Barium | 41.473 | 1.0 | 10.00 | 34.91 | 65.6 | 75 | 125 | | | | S |
| Beryllium | 6.649 | 0.50 | 10.00 | 0 | 66.5 | 75 | 125 | | | | S |
| Cadmium | 9.414 | 0.50 | 10.00 | 0 | 94.1 | 75 | 125 | | | | |
| Cobalt | 8.485 | 0.50 | 10.00 | 0.3183 | 81.7 | 75 | 125 | | | | |
| Copper | 11.992 | 1.0 | 10.00 | 4.082 | 79.1 | 75 | 125 | | | | |
| Lead | 10.850 | 1.0 | 10.00 | 0 | 108 | 75 | 125 | | | | |
| Manganese | 92.541 | 0.50 | 100.0 | 1.425 | 91.1 | 75 | 125 | | | | |
| Molybdenum | 25.460 | 0.50 | 10.00 | 16.19 | 92.7 | 75 | 125 | | | | |
| Nickel | ND | 1.0 | 10.00 | 0 | 0 | 75 | 125 | | | | S |
| Selenium | 10.748 | 0.50 | 10.00 | 1.240 | 95.1 | 75 | 125 | | | | |
| Silver | 8.757 | 0.50 | 10.00 | 0 | 87.6 | 75 | 125 | | | | |
| Thallium | 9.229 | 0.50 | 10.00 | 0.3993 | 88.3 | 75 | 125 | | | | |
| Vanadium | 10.014 | 1.0 | 10.00 | 0.5477 | 94.7 | 75 | 125 | | | | |
| Zinc | 90.154 | 10 | 100.0 | 0 | 90.2 | 75 | 125 | | | | |

Sample ID **N043348-020CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149389**
Client ID: **ZZZZZZ** Batch ID: **83358** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/12/2020** SeqNo: **4042165**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.781 | 0.50 | 10.00 | 0 | 108 | 75 | 125 | 10.98 | 1.85 | 20 | |
| Arsenic | 10.359 | 0.10 | 10.00 | 0 | 104 | 75 | 125 | 10.06 | 2.91 | 20 | |
| Beryllium | 6.550 | 0.50 | 10.00 | 0 | 65.5 | 75 | 125 | 6.649 | 1.50 | 20 | S |
| Cadmium | 9.163 | 0.50 | 10.00 | 0 | 91.6 | 75 | 125 | 9.414 | 2.70 | 20 | |
| Cobalt | 8.530 | 0.50 | 10.00 | 0.3183 | 82.1 | 75 | 125 | 8.485 | 0.521 | 20 | |
| Copper | 12.243 | 1.0 | 10.00 | 4.082 | 81.6 | 75 | 125 | 11.99 | 2.07 | 20 | |
| Lead | 10.767 | 1.0 | 10.00 | 0 | 108 | 75 | 125 | 10.85 | 0.766 | 20 | |
| Manganese | 92.732 | 0.50 | 100.0 | 1.425 | 91.3 | 75 | 125 | 92.54 | 0.206 | 20 | |
| Molybdenum | 25.014 | 0.50 | 10.00 | 16.19 | 88.2 | 75 | 125 | 25.46 | 1.77 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043348-020CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042165 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel | ND | 1.0 | 10.00 | 0 | 0 | 75 | 125 | 0 | 0 | 20 | S |
| Selenium | 10.199 | 0.50 | 10.00 | 1.240 | 89.6 | 75 | 125 | 10.75 | 5.24 | 20 | |
| Silver | 8.666 | 0.50 | 10.00 | 0 | 86.7 | 75 | 125 | 8.757 | 1.04 | 20 | |
| Thallium | 8.838 | 0.50 | 10.00 | 0.3993 | 84.4 | 75 | 125 | 9.229 | 4.33 | 20 | |
| Vanadium | 10.044 | 1.0 | 10.00 | 0.5477 | 95.0 | 75 | 125 | 10.01 | 0.299 | 20 | |
| Zinc | 90.974 | 10 | 100.0 | 0 | 91.0 | 75 | 125 | 90.15 | 0.906 | 20 | |

| Sample ID | N043348-013CMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4051932 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.251 | 0.10 | 10.00 | 0.5349 | 107 | 75 | 125 | | | | |

| Sample ID | N043348-013CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4051933 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.578 | 0.10 | 10.00 | 0.5349 | 110 | 75 | 125 | 11.25 | 2.86 | 20 | |

| Sample ID | N043348-020CMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/8/2020 | RunNo: | 149567 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/18/2020 | SeqNo: | 4054017 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 38.989 | 1.0 | 10.00 | 34.91 | 40.8 | 75 | 125 | 41.47 | 6.17 | 20 | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **N043348-013C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149389**
Client ID: **ZZZZZZ** Batch ID: **83358** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/12/2020** SeqNo: **4042135**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.754 | 0.50 | 10.00 | 0 | 108 | 80 | 120 | | | | |
| Barium | 77.667 | 1.0 | 10.00 | 70.32 | 73.4 | 80 | 120 | | | | S |
| Beryllium | 8.179 | 0.50 | 10.00 | 0 | 81.8 | 80 | 120 | | | | |
| Cadmium | 9.770 | 0.50 | 10.00 | 0 | 97.7 | 80 | 120 | | | | |
| Cobalt | 8.694 | 0.50 | 10.00 | 0.1525 | 85.4 | 80 | 120 | | | | |
| Copper | 8.791 | 1.0 | 10.00 | 0 | 87.9 | 80 | 120 | | | | |
| Lead | 11.007 | 1.0 | 10.00 | 0 | 110 | 80 | 120 | | | | |
| Manganese | 92.636 | 0.50 | 100.0 | 1.022 | 91.6 | 80 | 120 | | | | |
| Molybdenum | 30.470 | 0.50 | 10.00 | 22.28 | 81.9 | 80 | 120 | | | | |
| Nickel | 6.350 | 1.0 | 10.00 | 0 | 63.5 | 80 | 120 | | | | S |
| Selenium | 12.541 | 0.50 | 10.00 | 3.337 | 92.0 | 80 | 120 | | | | |
| Silver | 6.545 | 0.50 | 10.00 | 0 | 65.5 | 80 | 120 | | | | S |
| Thallium | 9.448 | 0.50 | 10.00 | 0 | 94.5 | 80 | 120 | | | | |
| Vanadium | 14.455 | 1.0 | 10.00 | 5.078 | 93.8 | 80 | 120 | | | | |
| Zinc | 98.300 | 10 | 100.0 | 0 | 98.3 | 80 | 120 | | | | |

Sample ID **N043348-016C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149389**
Client ID: **ZZZZZZ** Batch ID: **83358** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/12/2020** SeqNo: **4042146**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.830 | 0.50 | 10.00 | 0 | 108 | 80 | 120 | | | | |
| Arsenic | 11.190 | 0.10 | 10.00 | 0.7872 | 104 | 80 | 120 | | | | |
| Barium | 54.880 | 1.0 | 10.00 | 50.39 | 44.9 | 80 | 120 | | | | S |
| Beryllium | 8.882 | 0.50 | 10.00 | 0 | 88.8 | 80 | 120 | | | | |
| Cadmium | 10.081 | 0.50 | 10.00 | 0 | 101 | 80 | 120 | | | | |
| Cobalt | 9.073 | 0.50 | 10.00 | 0.1959 | 88.8 | 80 | 120 | | | | |
| Copper | 8.707 | 1.0 | 10.00 | 0 | 87.1 | 80 | 120 | | | | |
| Lead | 11.085 | 1.0 | 10.00 | 0 | 111 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043348-016C-PS | SampType: | PS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042146 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 96.293 | 0.50 | 100.0 | 0.5458 | 95.7 | 80 | 120 | | | | |
| Molybdenum | 15.652 | 0.50 | 10.00 | 5.926 | 97.3 | 80 | 120 | | | | |
| Nickel | 8.602 | 1.0 | 10.00 | 0 | 86.0 | 80 | 120 | | | | |
| Selenium | 16.602 | 0.50 | 10.00 | 6.669 | 99.3 | 80 | 120 | | | | |
| Silver | 8.657 | 0.50 | 10.00 | 0 | 86.6 | 80 | 120 | | | | |
| Thallium | 9.804 | 0.50 | 10.00 | 0 | 98.0 | 80 | 120 | | | | |
| Vanadium | 16.279 | 1.0 | 10.00 | 7.246 | 90.3 | 80 | 120 | | | | |
| Zinc | 99.121 | 10 | 100.0 | 2.597 | 96.5 | 80 | 120 | | | | |

| Sample ID | N043348-020C-PS | SampType: | PS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4042157 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.007 | 0.50 | 10.00 | 0 | 110 | 80 | 120 | | | | |
| Arsenic | 10.211 | 0.10 | 10.00 | 0 | 102 | 80 | 120 | | | | |
| Barium | 41.555 | 1.0 | 10.00 | 34.91 | 66.4 | 80 | 120 | | | | S |
| Beryllium | 6.715 | 0.50 | 10.00 | 0 | 67.2 | 80 | 120 | | | | S |
| Cadmium | 9.613 | 0.50 | 10.00 | 0 | 96.1 | 80 | 120 | | | | |
| Cobalt | 8.617 | 0.50 | 10.00 | 0.3183 | 83.0 | 80 | 120 | | | | |
| Copper | 12.142 | 1.0 | 10.00 | 4.082 | 80.6 | 80 | 120 | | | | |
| Lead | 10.570 | 1.0 | 10.00 | 0 | 106 | 80 | 120 | | | | |
| Manganese | 93.163 | 0.50 | 100.0 | 1.425 | 91.7 | 80 | 120 | | | | |
| Molybdenum | 25.574 | 0.50 | 10.00 | 16.19 | 93.8 | 80 | 120 | | | | |
| Nickel | ND | 1.0 | 10.00 | 0 | 0 | 80 | 120 | | | | S |
| Selenium | 10.514 | 0.50 | 10.00 | 1.240 | 92.7 | 80 | 120 | | | | |
| Silver | 8.773 | 0.50 | 10.00 | 0 | 87.7 | 80 | 120 | | | | |
| Thallium | 8.931 | 0.50 | 10.00 | 0.3993 | 85.3 | 80 | 120 | | | | |
| Vanadium | 10.057 | 1.0 | 10.00 | 0.5477 | 95.1 | 80 | 120 | | | | |
| Zinc | 91.145 | 10 | 100.0 | 0 | 91.1 | 80 | 120 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043348-013C-PS | SampType: | PS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | | RunNo: | 149389 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83358 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/12/2020 | SeqNo: | 4051931 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.212 | 0.10 | 10.00 | 0.5349 | 107 | 80 | 120 | | | | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-50-200-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 03:49 PM |

**Qualifiers:**

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

**ASSET Laboratories**

# ANALYTICAL RESULTS

**Print Date:** *24-Dec-20*

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-915-Q420 |
| **Lab Order:** | N043348 | **Collection Date:** | 12/7/2020 2:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043348-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 04:06 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043348
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID | MB-83427 | SampType: | MBLK | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/11/2020 | RunNo: | 149361 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83427 | TestNo: | EPA 7470A | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040228 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.142 | 0.20 | | | | | | | | | |

| Sample ID | LCS-83427 | SampType: | LCS | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/11/2020 | RunNo: | 149361 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83427 | TestNo: | EPA 7470A | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040229 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.620 | 0.20 | 5.000 | 0 | 92.4 | 85 | 115 | | | | |

| Sample ID | N043348-010C-MS | SampType: | MS | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/11/2020 | RunNo: | 149361 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83427 | TestNo: | EPA 7470A | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040233 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.620 | 0.20 | 5.000 | 0.1830 | 88.7 | 75 | 125 | | | | |

| Sample ID | N043348-010C-MSD | SampType: | MSD | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/11/2020 | RunNo: | 149361 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83427 | TestNo: | EPA 7470A | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040234 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.610 | 0.20 | 5.000 | 0.1830 | 88.5 | 75 | 125 | 4.620 | 0.217 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

N043348


ASSET LABORATORIES
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# CHAIN OF CUSTODY RECORD

Page 1 of 2

| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Others ✓ (Specify: RWQCB) |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RWQCB ✓ |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 |
| Submitted By: Ressie Tep | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Field Tech | Sampled By: Nara Tep | Global ID: | Specify State: |
| Signature: Date: 12/7/20 | | | |

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

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

Signature: Date: 12/7/20

Project Name: PG&E Topock - GMP

Project Number: 30035275

Matrix: Ground x | Sediment | Potable | Soil | NPDES | Other Solid | Surface

Sample Receipt Condition

| | Y | N |
|---|---|---|
| 1. Chilled | ✓ | |
| 2. Headspace | | |
| 3. Container Intact | ✓ | |
| 4. Seal Present | ✓ | |
| 5. IR number | 2 | |
| 6. Method of Cooling: ICE | | |

Sample Temp: 1.0c/3.3c/4.4c

Courier: ASSET

Tracking No.:

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CRIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 125 mL poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOAs | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 Cu, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | VOCs (8260) 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043348-01 | MW-30-030-Q420 | 12/7/2020 | 13:21 | | | | X | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 5 | PV | BNS | |
| 2 | -02 | MW-30-030-EB-Q420 | 12/7/2020 | 12:53 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | PV | B | |
| 3 | -03 | MW-30-050-Q420 | 12/7/2020 | 12:36 | | X | X | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 5 | PV | BNS | |
| 4 | -04 | MW-32-020-Q420 | 12/7/2020 | 15:10 | | | | X | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 3 | P | BNS | 4 |
| 5 | -05 | MW-32-020-EB-Q420 | 12/7/2020 | 14:44 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 6 | -06 | MW-32-035-Q420 | 12/7/2020 | 14:19 | | | X | X | X | X | | X | X | X | | | X | X | X | | | | | | | | | E | 6 | P | BNS | |
| 7 | -07 | MW-910-Q420 | 12/7/2020 | 14:29 | | | X | X | X | X | | X | X | X | | | X | X | X | | | | | | | | | E | 6 | P | BNS | |
| 8 | -08 | MW-32-035-EB-Q420 | 12/7/2020 | 14:34 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 9 | -09 | MW-50-095-Q420 | 12/7/2020 | 14:10 | | X | | | X | X | | X | X | | | | | X | | | | X | | | | | | E | 3 | P | BN | |
| 10 | -10 | MW-50-200-Q420 | 12/7/2020 | 14:48 | | X | | | X | X | | X | X | | | X | | | | X | X | | | | | | | E | 3 | P | BN | |
| 11 | -11 | MW-915-Q420 | 12/7/2020 | 14:58 | | X | | | X | X | | X | X | | | X | | | | X | X | | | | | | | E | 3 | P | BN | |
| 12 | -12 | TW-05-Q420 | 12/7/2020 | 12:28 | | | | X | X | X | | X | X | | | | | X | | | | X | | | | | | E | 4 | P | BN | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nara Tep | 12/7/20 1640 | ROMEO KLCANTARA | 12-7-20 16:40 |
| ROMEO KLCANTARA | 12-7-20 19:12 | ROMEO KLCANTARA | 12-7-20 19:12 |
| | | | |

**Turn Around Time (TAT)**

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

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

**Special Instruction:**

Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

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

**Preservatives:**

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

**Container Type:**

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

White=Laboratory Copy

Yellow=Customer's Copy

ASSET LABORATORIES
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# CHAIN OF CUSTODY RECORD



| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.#: SWA-ASSET-C9817-057 | Labspec | CalTrans | 2. Headspace |
| Submitted By: Reggie Tep | | | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: RT Date: 12/07/20 | Sampled By: Nara Tep | | Global ID: | Regulatory | 5. IR number NA |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample, I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/7/20 | | | Sample Temp: 1.0°C / 3.3°C / 4.4°C |
| Project Number: 30035275 | | | | | Courier: Asset's Tracking No.: |

Matrix: Ground | Potable | NPDES | Surface | x Sediment | Soil | Other Solid

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Oxygen and Deuterium Isotopes (CFIRM), Ice (250 mL poly) | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly) | Bromide, Sulfate, Chloride (EPA 300.0) (1 liter poly) | Fluoride (EPA 300.0) (1 liter poly) | Specific Conductance (EPA 120.1) (1 liter poly) | Total Dissolved Solids (SM92540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 (125 mL poly) | Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOAs) | Metals Dissolved (EPA7470A FF) Hg; HNO3 (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Potassium (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni (500 mL poly) | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se (500 mL poly) | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 (500 mL poly) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043348-13 | MW-31-060-Q420 | 12/7/2020 | 13:19 | | X | X | | X | X | | X | X | X | | | X | X | X | | | | | E | 5 | P | BNS | MSMSD |
| 2 | -14 | MW-31-135-Q420 | 12/7/2020 | 12:27 | | X | X | | X | X | | X | X | | | | | X | X | | | | | E | 4 | P | BN | |
| 3 | -15 | MW-19-Q420 | 12/7/2020 | 14:01 | | X | | | X | X | | X | X | | | | | X | | | | | X | E | 3 | P | BN | |
| 4 | -16 | MW-25-Q420 | 12/7/2020 | 14:57 | | X | X | | X | X | | X | X | X | | | X | X | X | | | | | E | 5 | P | BNS | MSMSD |
| 5 | -17 | EB-711-Q420 | 12/7/2020 | 15:30 | | X | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 6 | -18 | EB-712-Q420 | 12/7/2020 | 15:15 | | X | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 7 | -19 | EB-713-Q420 | 12/7/2020 | 15:30 | | X | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 8 | -20 | ~~WM-63-065-Q420~~ MW-63-065-0120 | 12/7/2020 | 13:20 | | X | | | X | X | | X | X | X | | | | X | X | | | | | E | 4 | P | BNS | MSMSD |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nara Tep | 12/7/20 1640 | ROMEO ALCANTARA | 12-7-20 1640 |
| ROMEO ALCANTARA | 12-7/20 19:12 | ROMEO ALCANTARA | 12-7-20 19:12 |
| | | | |

**Turn Around Time (TAT)**

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

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

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

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

**Preservatives:**

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

**Container Type:**

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

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

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

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

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/7/2020 | Workorder: | N043348 |
| Rep sample Temp (Deg C): | 1.0/3.3/4.4 | IR Gun ID: | 2 |

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

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

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

### Sample Receipt Checklist

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

Comments:

Checklist Completed By: BHN BHdez 12/10/2020

Reviewed By: MBC 12/15/2020

## Mary Ann Balilu (maryann.balilu@assetlaboratoriesph.com)

**From:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Sent:** Tuesday, December 08, 2020 1:08 PM
**To:** Yoandra Rodriguez
**Cc:** Tina Rice; maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com
**Subject:** RE: PG&E Topock - GMP, 30035275 (ASSET Labs No. N043348)

Hi Yoandra,
The COC was inadvertently marked for nitrate on the COC for Sample 4 (MW-32-020-Q420): Nitrate/Nitrite is NOT required for this sample.

Thanks,
Laura

---

**From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**Sent:** Tuesday, December 8, 2020 2:54 PM
**To:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Cc:** Tina Rice <Tina.Rice@critigen.com>; maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com
**Subject:** PG&E Topock - GMP, 30035275 (ASSET Labs No. N043348)

Hi Laura,

Please advise on the following issue for the attached COC:

- Sample 4 (MW-32-020-Q420): Bottle for Nitrate/Nitrite is missing.

**Thanks,**

**Yoandra Rodriguez**
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-001A | MW-30-030-Q420 | 12/7/2020 1:21:00 PM | 12/21/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-001B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-001C | | | 12/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043348-001D | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-002A | MW-30-030-EB-Q420 | 12/7/2020 12:53:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-003A | MW-30-050-Q420 | 12/7/2020 12:36:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-003B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-003B | MW-30-050-Q420 | 12/7/2020 12:36:00 PM | 12/21/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-003C | | | 12/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043348-003D | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-003E | | | 12/21/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043348-004A | MW-32-020-Q420 | 12/7/2020 3:10:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-004B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-004C | | | 12/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☑ | ☐ | ☑ | SUB |
| N043348-004D | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-004D | MW-32-020-Q420 | 12/7/2020 3:10:00 PM | 12/21/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-005A | MW-32-020-EB-Q420 | 12/7/2020 2:44:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-006A | MW-32-035-Q420 | 12/7/2020 2:19:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-006B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-006C | | | 12/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043348-006D | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-006E | | | 12/21/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043348-007A | MW-910-Q420 | 12/7/2020 2:29:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-007B | MW-910-Q420 | 12/7/2020 2:29:00 PM | 12/21/2020 | Groundwater | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-007C | | | 12/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043348-007D | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-007E | | | 12/21/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043348-008A | MW-32-035-EB-Q420 | 12/7/2020 2:34:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-009A | MW-50-095-Q420 | 12/7/2020 2:10:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-009B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-009B | MW-50-095-Q420 | 12/7/2020 2:10:00 PM | 12/21/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-009C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-010A | MW-50-200-Q420 | 12/7/2020 2:48:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-010B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-010C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-010C | MW-50-200-Q420 | 12/7/2020 2:48:00 PM | 12/21/2020 | Groundwater | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043348-011A | MW-915-Q420 | 12/7/2020 2:58:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-011B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-011C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043348-012A | TW-05-Q420 | 12/7/2020 12:28:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-012B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-012B | TW-05-Q420 | 12/7/2020 12:28:00 PM | 12/21/2020 | Groundwater | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-012C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-013A | MW-31-060-Q420 | 12/7/2020 1:19:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043348-013B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | LSR |
| N043348-013C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |

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## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-013C | MW-31-060-Q420 | 12/7/2020 1:19:00 PM | 12/21/2020 | Groundwater | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043348-013D | | | 12/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☑ | SUB |
| N043348-013E | | | 12/21/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☑ | ☑ | SUB |
| N043348-014A | MW-31-135-Q420 | 12/7/2020 12:27:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-014B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-014C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-014D | | | 12/21/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043348-015A | MW-19-Q420 | 12/7/2020 2:01:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-015B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-015B | MW-19-Q420 | 12/7/2020 2:01:00 PM | 12/21/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043348-015C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043348-016A | MW-25-Q420 | 12/7/2020 2:57:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043348-016B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | LSR |
| N043348-016C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-016C | MW-25-Q420 | 12/7/2020 2:57:00 PM | 12/21/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043348-016D | | | 12/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☑ | SUB |
| N043348-016E | | | 12/21/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☑ | ☑ | SUB |
| N043348-017A | EB-711-Q420 | 12/7/2020 3:30:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-018A | EB-712-Q420 | 12/7/2020 3:15:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-019A | EB-713-Q420 | 12/7/2020 3:30:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043348-020A | MW-63-065-Q420 | 12/7/2020 1:20:00 PM | 12/21/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043348-020B | | | 12/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/21/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | LSR |
| N043348-020C | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/21/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043348

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/7/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043348-020C | MW-63-065-Q420 | 12/7/2020 1:20:00 PM | 12/21/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043348-020D | | | 12/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☑ | SUB |
| N043348-021A | FOLDER | 12/21/2020 | 12/21/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/21/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/21/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/21/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Nara Tep

**10-Dec-20**

| Sample ID | Matrix | Date Collected | Bottle Type | Requested Tests | | |
|---|---|---|---|---|---|---|
| | | | | SM4500-NO3F | | |
| N043348-001C / MW-30-030-Q420 | Groundwater | 12/7/2020 1:21:00 PM | 8OZP | 1 | | |
| N043348-003C / MW-30-050-Q420 | Groundwater | 12/7/2020 12:36:00 PM | 8OZP | 1 | | |
| N043348-006C / MW-32-035-Q420 | Groundwater | 12/7/2020 2:19:00 PM | 8OZP | 1 | | |
| N043348-007C / MW-910-Q420 | Groundwater | 12/7/2020 2:29:00 PM | 8OZP | 1 | | |
| N043348-013D / MW-31-060-Q420 | Groundwater | 12/7/2020 1:19:00 PM | 8OZP | 1 | (MS/MSD) | |
| N043348-016D / MW-25-Q420 | Groundwater | 12/7/2020 2:57:00 PM | 8OZP | 1 | (MS/MSD) | |
| N043348-020D / MW-63-065-Q420 | Groundwater | 12/7/2020 1:20:00 PM | 8OZP | 1 | (MS/MSD) | |

Please run MS/MSD on samples N043348-013D, N043348-014D and N043348-020D

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43348A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/Nitrite by SM4500NO3F. EDD Requirement Labspec7 edata.

GSO #: 5514866844/ 551486685

| | | Date/Time | | Date/Time |
|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/9/2020 1630 | **Received by:** | |
| **Relinquished by:** | | | **Received by:** | |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: Nara Tep

**10-Dec-20**

| Sample ID | Matrix | Date Collected | Bottle Type | Requested Tests | | |
|---|---|---|---|---|---|---|
| | | | | OXY_DEUT | | |
| N043348-003E / MW-30-050-Q420 | Groundwater | 12/7/2020 12:36:00 PM | 8OZP | 1 | | |
| N043348-006E / MW-32-035-Q420 | Groundwater | 12/7/2020 2:19:00 PM | 8OZP | 1 | | |
| N043348-007E / MW-910-Q420 | Groundwater | 12/7/2020 2:29:00 PM | 8OZP | 1 | | |
| N043348-013E / MW-31-060-Q420 | Groundwater | 12/7/2020 1:19:00 PM | 8OZP | 1 | (MS/MSD) | |
| N043348-014D / MW-31-135-Q420 | Groundwater | 12/7/2020 12:27:00 PM | 8OZP | 1 | | |
| N043348-016E / MW-25-Q420 | Groundwater | 12/7/2020 2:57:00 PM | 8OZP | 1 | (MS/MSD) | |

Please run MS/MSD on samples N043348-013E and N043348-016E

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43348B Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium by CFIRMS. EDD requirement Labspec7 edata.

Fedex #: 772329590280

| | | Date/Time | | Date/Time |
|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/10/2020 1600 | **Received by:** | |
| **Relinquished by:** | | | **Received by:** | |

December 30, 2020

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

TEL: (916) 786-3302
FAX:

Workorder No.: N043369

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 08, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Nancy Sibucao
Laboratory Director

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

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

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

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

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

Samples were analyzed within method holding time.

Subcontracted Analyses:

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300.0:

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

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for some samples due to matrix. Samples have high TDS concentration.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043369-001C-MS1, N043369-001C-MSD1, N043369-002C-MS2 and N043369-002C-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 7470A_Dissolved:

Method Blank has hit greater than 1/2 the reporting limit however, samples were none detect (ND) therefore reanalysis of the samples was not necessary.

Analytical Comments for SM 2320B:

Method Blank MB-R149421 has detect greater than 1/2 the reporting limit. However, affected sample result was greater than 5x the Method Blank detection therefore reanalysis of the sample was not necessary.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043369
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043369-001A | MW-52D-Q420 | Groundwater | 12/8/2020 9:43:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-001B | MW-52D-Q420 | Groundwater | 12/8/2020 9:43:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-001C | MW-52D-Q420 | Groundwater | 12/8/2020 9:43:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-002A | MW-52M-Q420 | Groundwater | 12/8/2020 9:02:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-002B | MW-52M-Q420 | Groundwater | 12/8/2020 9:02:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-002C | MW-52M-Q420 | Groundwater | 12/8/2020 9:02:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-003A | MW-52S-Q420 | Groundwater | 12/8/2020 11:25:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-003B | MW-52S-Q420 | Groundwater | 12/8/2020 11:25:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-003C | MW-52S-Q420 | Groundwater | 12/8/2020 11:25:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-004A | MW-53D-Q420 | Groundwater | 12/8/2020 10:32:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-004B | MW-53D-Q420 | Groundwater | 12/8/2020 10:32:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-004C | MW-53D-Q420 | Groundwater | 12/8/2020 10:32:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-005A | MW-53M-Q420 | Groundwater | 12/8/2020 12:16:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-005B | MW-53M-Q420 | Groundwater | 12/8/2020 12:16:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-005C | MW-53M-Q420 | Groundwater | 12/8/2020 12:16:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-006A | MW-22-Q420 | Groundwater | 12/8/2020 7:55:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-006B | MW-22-Q420 | Groundwater | 12/8/2020 7:55:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-006C | MW-22-Q420 | Groundwater | 12/8/2020 7:55:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-006D | MW-22-Q420 | Groundwater | 12/8/2020 7:55:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-007A | MW-907-Q420 | Groundwater | 12/8/2020 8:05:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-007B | MW-907-Q420 | Groundwater | 12/8/2020 8:05:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-007C | MW-907-Q420 | Groundwater | 12/8/2020 8:05:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-007D | MW-907-Q420 | Groundwater | 12/8/2020 8:05:00 AM | 12/8/2020 | 12/30/2020 |
| N043369-008A | MW-43-025-Q420 | Groundwater | 12/8/2020 2:22:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-008B | MW-43-025-Q420 | Groundwater | 12/8/2020 2:22:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-008C | MW-43-025-Q420 | Groundwater | 12/8/2020 2:22:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-009A | MW-43-025-EB-Q420 | Groundwater | 12/8/2020 1:58:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-010A | MW-43-075-Q420 | Groundwater | 12/8/2020 1:45:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-010B | MW-43-075-Q420 | Groundwater | 12/8/2020 1:45:00 PM | 12/8/2020 | 12/30/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043369
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043369-010C | MW-43-075-Q420 | Groundwater | 12/8/2020 1:45:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-011A | MW-43-075-EB-Q420 | Groundwater | 12/8/2020 1:20:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-012A | MW-43-090-Q420 | Groundwater | 12/8/2020 1:13:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-012B | MW-43-090-Q420 | Groundwater | 12/8/2020 1:13:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-012C | MW-43-090-Q420 | Groundwater | 12/8/2020 1:13:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-013A | MW-43-090-EB-Q420 | Groundwater | 12/8/2020 12:42:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-014A | MW-35-060-Q420 | Groundwater | 12/8/2020 1:07:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-014B | MW-35-060-Q420 | Groundwater | 12/8/2020 1:07:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-014C | MW-35-060-Q420 | Groundwater | 12/8/2020 1:07:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-014D | MW-35-060-Q420 | Groundwater | 12/8/2020 1:07:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-014E | MW-35-060-Q420 | Groundwater | 12/8/2020 1:07:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-015A | MW-913-Q420 | Groundwater | 12/8/2020 1:17:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-015B | MW-913-Q420 | Groundwater | 12/8/2020 1:17:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-015C | MW-913-Q420 | Groundwater | 12/8/2020 1:17:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-015D | MW-913-Q420 | Groundwater | 12/8/2020 1:17:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-015E | MW-913-Q420 | Groundwater | 12/8/2020 1:17:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-016A | MW-35-135-Q420 | Groundwater | 12/8/2020 12:26:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-016B | MW-35-135-Q420 | Groundwater | 12/8/2020 12:26:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-016C | MW-35-135-Q420 | Groundwater | 12/8/2020 12:26:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-016D | MW-35-135-Q420 | Groundwater | 12/8/2020 12:26:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-016E | MW-35-135-Q420 | Groundwater | 12/8/2020 12:26:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-017A | MW-914-Q420 | Groundwater | 12/8/2020 12:36:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-017B | MW-914-Q420 | Groundwater | 12/8/2020 12:36:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-017C | MW-914-Q420 | Groundwater | 12/8/2020 12:36:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-017D | MW-914-Q420 | Groundwater | 12/8/2020 12:36:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-017E | MW-914-Q420 | Groundwater | 12/8/2020 12:36:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-018A | MW-23-060-Q420 | Groundwater | 12/8/2020 1:20:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-018B | MW-23-060-Q420 | Groundwater | 12/8/2020 1:20:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-018C | MW-23-060-Q420 | Groundwater | 12/8/2020 1:20:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-019A | MW-23-080-Q420 | Groundwater | 12/8/2020 12:31:00 PM | 12/8/2020 | 12/30/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043369
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043369-019B | MW-23-080-Q420 | Groundwater | 12/8/2020 12:31:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-019C | MW-23-080-Q420 | Groundwater | 12/8/2020 12:31:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-020A | EB-714-Q420 | Groundwater | 12/8/2020 2:00:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-021A | EB-715-Q420 | Groundwater | 12/8/2020 2:30:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-022A | EB-716-Q420 | Groundwater | 12/8/2020 3:20:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-023A | MW-59-100-Q420 | Groundwater | 12/8/2020 2:50:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-023B | MW-59-100-Q420 | Groundwater | 12/8/2020 2:50:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-023C | MW-59-100-Q420 | Groundwater | 12/8/2020 2:50:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-023D | MW-59-100-Q420 | Groundwater | 12/8/2020 2:50:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-024A | MW-917-Q420 | Groundwater | 12/8/2020 3:00:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-024B | MW-917-Q420 | Groundwater | 12/8/2020 3:00:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-024C | MW-917-Q420 | Groundwater | 12/8/2020 3:00:00 PM | 12/8/2020 | 12/30/2020 |
| N043369-024D | MW-917-Q420 | Groundwater | 12/8/2020 3:00:00 PM | 12/8/2020 | 12/30/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:43:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 22000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 16000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52S-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 11:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 15000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 10:32:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 27000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 21000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-22-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 7:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 24000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-907-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 8:05:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 23000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-025-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-075-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:45:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 11000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-090-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:13:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 18000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-913-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:17:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6800 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-135-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:26:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 11000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-914-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 11000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 16000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-080-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 16000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-59-100-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-023 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 9300 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-917-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-024 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201209B** | QC Batch: **R149260** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 9500 | 0.10 | 0.10 | | umhos/cm | 1 | 12/9/2020 01:15 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043369-006BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149260**
Client ID: **ZZZZZZ** Batch ID: **R149260** TestNo: **EPA 120.1** Analysis Date: **12/9/2020** SeqNo: **4032797**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 23600.000 | 0.10 | | | | | | 23900 | 1.26 | 2 | |

Sample ID: **N043369-018BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149260**
Client ID: **ZZZZZZ** Batch ID: **R149260** TestNo: **EPA 120.1** Analysis Date: **12/9/2020** SeqNo: **4032880**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 15750.000 | 0.10 | | | | | | 15760 | 0.0635 | 2 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:43:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 200 | 200 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 10000 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52S-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 11:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 10:32:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 15000 | 200 | 200 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | PrepDate: | **12/11/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 200 | 200 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-22-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 7:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | PrepDate: | **12/11/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 15000 | 200 | 200 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-907-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 8:05:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | PrepDate: | **12/11/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 15000 | 200 | 200 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-025-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | PrepDate: | **12/11/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1200 | 13 | 13 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-075-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:45:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | PrepDate: | **12/11/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 7300 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-090-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:13:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211G** | QC Batch: **83455** | | | PrepDate: | **12/11/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4100 | 50 | 50 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-913-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:17:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4100 | 50 | 50 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-135-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:26:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 7500 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-914-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 7400 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-080-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-59-100-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-023 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6700 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-917-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-024 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | PrepDate: | **12/11/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 7200 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83455** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/11/2020** | RunNo: **149351** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83455** | TestNo: **SM2540C** | | Analysis Date: **12/11/2020** | SeqNo: **4038825** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 965.000 | 10 | 1000 | 0 | 96.5 | 80 | 120 | | | | |

| Sample ID: **MB-83455** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/11/2020** | RunNo: **149351** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83455** | TestNo: **SM2540C** | | Analysis Date: **12/11/2020** | SeqNo: **4038826** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | ND | 10 | | | | | | | | | |

| Sample ID: **N043369-004BDUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/11/2020** | RunNo: **149351** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83455** | TestNo: **SM2540C** | | Analysis Date: **12/11/2020** | SeqNo: **4038831** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 14600.000 | 200 | | | | | | 15160 | 3.76 | 5 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

Sample ID: **LCS-83456** SampType: **LCS** TestCode: **160.1_2540C_** Units: **mg/L** Prep Date: **12/11/2020** RunNo: **149352**
Client ID: **LCSW** Batch ID: **83456** TestNo: **SM2540C** Analysis Date: **12/11/2020** SeqNo: **4038838**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 972.000 | 10 | 1000 | 0 | 97.2 | 80 | 120 | | | | |

Sample ID: **MB-83456** SampType: **MBLK** TestCode: **160.1_2540C_** Units: **mg/L** Prep Date: **12/11/2020** RunNo: **149352**
Client ID: **PBW** Batch ID: **83456** TestNo: **SM2540C** Analysis Date: **12/11/2020** SeqNo: **4038839**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | ND | 10 | | | | | | | | | |

Sample ID: **N043369-019BDUP** SampType: **DUP** TestCode: **160.1_2540C_** Units: **mg/L** Prep Date: **12/11/2020** RunNo: **149352**
Client ID: **ZZZZZZ** Batch ID: **83456** TestNo: **SM2540C** Analysis Date: **12/11/2020** SeqNo: **4038847**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 11630.000 | 100 | | | | | | 11950 | 2.71 | 5 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:43:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 05:00 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 09:52 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 05:39 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 10:43 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52S-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 11:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 05:58 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 10:53 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 10:32:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 06:17 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 11:02 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 06:36 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 11:11 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-22-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 7:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 06:55 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 11:21 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-907-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 8:05:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 07:33 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 11:40 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-025-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/10/2020 02:21 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 11:49 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-025-EB-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/10/2020 07:51 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-075-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:45:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/10/2020 03:55 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 11:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-075-EB-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/10/2020 08:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-090-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:13:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 08:48 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201214C** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 12:08 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-090-EB-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:42:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** | QC Batch: **R149355** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/10/2020 08:29 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** QC Batch: **R149355** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 21 | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 09:38 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201214C** QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | 21 | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 12:17 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-913-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:17:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** QC Batch: **R149355** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 20 | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 10:17 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201214C** QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | 21 | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 12:45 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-135-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:26:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** QC Batch: **R149355** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 27 | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 09:59 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201214C** QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | 27 | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 12:55 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-914-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** QC Batch: **R149355** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 28 | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 10:36 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201214C** QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | 27 | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 01:04 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201210A** QC Batch: **R149355** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 42 | 0.17 | 1.0 | | µg/L | 5 | 12/10/2020 03:36 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201214C** QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | 40 | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 01:13 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-080-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201211A** QC Batch: **R149356** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/11/2020 11:48 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201214C** QC Batch: **83436** | | | | PrepDate: **12/11/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 01:23 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-714-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201211A** | QC Batch: **R149356** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/11/2020 09:10 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-715-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-021 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201211A** | QC Batch: **R149356** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/11/2020 09:29 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-716-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-022 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201211A** | QC Batch: **R149356** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/11/2020 09:48 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-59-100-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-023 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201211A** | QC Batch: **R149356** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2700 | 17 | 100 | | µg/L | 500 | 12/11/2020 10:25 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | 2900 | 3.2 | 25 | | µg/L | 25 | 12/16/2020 06:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-917-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-024 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201211A** | QC Batch: **R149356** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2700 | 17 | 100 | | µg/L | 500 | 12/11/2020 10:44 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Chromium | 2800 | 3.2 | 25 | | µg/L | 25 | 12/16/2020 07:10 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149355** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039251** |

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

| Sample ID: **LCS-R149355** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039252** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.025 | 0.20 | 5.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N043369-014AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039254** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 46.546 | 1.0 | 25.00 | 20.58 | 104 | 90 | 110 | | | | |

| Sample ID: **N043369-016AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039256** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 53.688 | 1.0 | 25.00 | 27.02 | 107 | 90 | 110 | | | | |

| Sample ID: **N043369-015AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039258** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 46.180 | 1.0 | 25.00 | 19.72 | 106 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043369-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039260**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 53.610 | 1.0 | 25.00 | 28.13 | 102 | 90 | 110 | | | | |

Sample ID: **N043369-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039266**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.002 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N043368-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039268**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.004 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N043369-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039272**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 68.106 | 1.0 | 25.00 | 42.28 | 103 | 90 | 110 | | | | |

Sample ID: **N043369-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039274**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.902 | 0.20 | 1.000 | 0 | 90.2 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043369-016ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039275** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 26.777 | 1.0 | | | | | | 27.02 | 0.918 | 20 | |

| Sample ID: **N043369-014AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039276** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 45.707 | 1.0 | 25.00 | 20.58 | 100 | 90 | 110 | 46.55 | 1.82 | 20 | |

| Sample ID: **N043369-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039278** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.600 | 1.0 | 5.000 | 0 | 92.0 | 90 | 110 | | | | |

| Sample ID: **N043369-002AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039282** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.987 | 1.0 | 5.000 | 0 | 99.7 | 90 | 110 | | | | |

| Sample ID: **N043369-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149355** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149355** | TestNo: **EPA 218.6** | | Analysis Date: **12/10/2020** | SeqNo: **4039284** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.061 | 1.0 | 5.000 | 0 | 101 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043369-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039286**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.948 | 1.0 | 5.000 | 0 | 99.0 | 90 | 110 | | | | |

Sample ID: **N043369-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039288**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.623 | 1.0 | 5.000 | 0 | 92.5 | 90 | 110 | | | | |

Sample ID: **N043369-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039290**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.808 | 1.0 | 5.000 | 0 | 96.2 | 90 | 110 | | | | |

Sample ID: **N043369-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039294**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.937 | 1.0 | 5.000 | 0 | 98.7 | 90 | 110 | | | | |

Sample ID: **N043369-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039296**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.014 | 0.20 | 1.000 | 0.03460 | 98.0 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043369-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039298**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.014 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043369-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039300**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.029 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043369-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149355**
Client ID: **ZZZZZZ** Batch ID: **R149355** TestNo: **EPA 218.6** Analysis Date: **12/10/2020** SeqNo: **4039302**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.762 | 1.0 | 5.000 | 0 | 95.2 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **MB-R149356** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **PBW** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039311**

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

Sample ID: **LCS-R149356** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **LCSW** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039312**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.897 | 0.20 | 5.000 | 0 | 97.9 | 90 | 110 | | | | |

Sample ID: **N043369-020AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039314**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.016 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043369-021AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039316**

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

Sample ID: **N043369-022AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039318**

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

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043369-023AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5273.600 | 100 | 2500 | 2749 | 101 | 90 | 110 | | | | |

Sample ID: **N043369-024AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039324**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5219.500 | 100 | 2500 | 2713 | 100 | 90 | 110 | | | | |

Sample ID: **N043369-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039325**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.288 | 1.0 | 5.000 | 0.3755 | 98.3 | 90 | 110 | | | | |

Sample ID: **N043385-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039334**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 238.566 | 4.0 | 100.0 | 136.1 | 102 | 90 | 110 | | | | |

Sample ID: **N043385-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039335**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1513.120 | 20 | 500.0 | 1001 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043385-002AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039336**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1491.060 | 20 | 500.0 | 1001 | 98.0 | 90 | 110 | 1513 | 1.47 | 20 | |

Sample ID: **N043385-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039337**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 106.350 | 2.0 | 50.00 | 53.95 | 105 | 90 | 110 | | | | |

Sample ID: **N043385-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039338**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 105.819 | 2.0 | 50.00 | 52.72 | 106 | 90 | 110 | | | | |

Sample ID: **N043385-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039339**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4589.650 | 100 | 2500 | 2064 | 101 | 90 | 110 | | | | |

Sample ID: **N043385-001ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039340**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 137.428 | 4.0 | | | | | | 136.1 | 0.955 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043385-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039345**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 13.301 | 0.20 | 5.000 | 7.889 | 108 | 90 | 110 | | | | |

Sample ID: **N043385-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039349**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 14.315 | 1.0 | 5.000 | 9.575 | 94.8 | 90 | 110 | | | | |

Sample ID: **N043385-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039351**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 24.407 | 1.0 | 5.000 | 18.98 | 109 | 90 | 110 | | | | |

Sample ID: **N043385-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039355**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 13.562 | 1.0 | 5.000 | 8.257 | 106 | 90 | 110 | | | | |

Sample ID: **N043387-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039357**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.682 | 1.0 | 5.000 | 0 | 93.6 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043385-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039360**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 685.990 | 10 | 250.0 | 423.2 | 105 | 90 | 110 | | | | |

Sample ID: **N043385-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039362**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043385-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039364**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.035 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043305-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039366**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1128.600 | 20 | 500.0 | 619.2 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83436** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149578** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4054344** |

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

| Sample ID: **LCS-83436** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149578** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4054345** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.561 | 1.0 | 10.00 | 0 | 95.6 | 85 | 115 | | | | |

| Sample ID: **N043369-001C-MS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149578** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4054351** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.012 | 1.0 | 10.00 | 0.2735 | 87.4 | 75 | 125 | | | | |

| Sample ID: **N043369-001C-MSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149578** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4054353** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 8.947 | 1.0 | 10.00 | 0.2735 | 86.7 | 75 | 125 | 9.012 | 0.727 | 20 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:43:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 62 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 85 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52S-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 11:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215B** | QC Batch: **R149421** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 1500 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 09:25 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 10:32:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 36 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 46 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-22-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 7:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 690 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-907-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 8:05:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 690 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-025-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 390 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-075-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:45:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 700 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-090-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:13:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 170 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 84 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-913-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:17:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 88 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-135-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:26:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 45 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-914-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 46 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 16 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-080-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 50 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-59-100-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-023 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-917-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-024 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211E** | QC Batch: **R149340** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 02:45 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149340** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149340** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149340** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4037413** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 95.766 | 5.0 | 100.0 | 0 | 95.8 | 85 | 115 | | | | |

| Sample ID: **MB-R149340** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149340** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149340** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4037414** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043369-001BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149340** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149340** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4037416** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 63.508 | 5.0 | | | | | | 62.50 | 1.60 | 30 | |

| Sample ID: **N043369-001BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149340** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149340** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4037417** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 155.242 | 5.0 | 100.0 | 62.50 | 92.7 | 75 | 125 | | | | |

| Sample ID: **N043369-001BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149340** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149340** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4037418** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 154.234 | 5.0 | 100.0 | 62.50 | 91.7 | 75 | 125 | 155.2 | 0.651 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149421** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149421** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149421** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4044902** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 494.792 | 5.0 | 500.0 | 0 | 99.0 | 85 | 115 | | | | |

| Sample ID: **MB-R149421** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149421** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149421** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4044903** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 2.604 | 5.0 | | | | | | | | | |

| Sample ID: **N043369-003BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149421** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149421** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4044905** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 1453.125 | 5.0 | | | | | | 1458 | 0.358 | 30 | |

| Sample ID: **N043369-003BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149421** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149421** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4044906** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 1927.083 | 5.0 | 500.0 | 1458 | 93.8 | 75 | 125 | | | | |

| Sample ID: **N043369-003BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149421** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149421** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4044907** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 1927.083 | 5.0 | 500.0 | 1458 | 93.8 | 75 | 125 | 1927 | 0 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-001

**Client Sample ID:** MW-52D-Q420
**Collection Date:** 12/8/2020 9:43:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 10:24 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 7100 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 06:59 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 960 | 4.0 | 50 | | mg/L | 100 | 12/9/2020 11:45 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-002

**Client Sample ID:** MW-52M-Q420
**Collection Date:** 12/8/2020 9:02:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 10:39 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5300 | 35 | 500 | | mg/L | 1000 | 12/9/2020 07:13 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 630 | 4.0 | 50 | | mg/L | 100 | 12/10/2020 12:28 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-003

**Client Sample ID:** MW-52S-Q420
**Collection Date:** 12/8/2020 11:25:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 10:53 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3100 | 35 | 500 | | mg/L | 1000 | 12/9/2020 05:48 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 4500 | 40 | 500 | | mg/L | 1000 | 12/9/2020 05:48 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-004

**Client Sample ID:** MW-53D-Q420
**Collection Date:** 12/8/2020 10:32:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 11:07 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 8800 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 07:28 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1200 | 8.0 | 100 | | mg/L | 200 | 12/10/2020 12:42 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-005

**Client Sample ID:** MW-53M-Q420
**Collection Date:** 12/8/2020 12:16:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 11:21 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6700 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 07:42 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 740 | 4.0 | 50 | | mg/L | 100 | 12/10/2020 04:31 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-006

**Client Sample ID:** MW-22-Q420
**Collection Date:** 12/8/2020 7:55:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 11:36 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 7700 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 07:56 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 2000 | 8.0 | 100 | | mg/L | 200 | 12/10/2020 12:57 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-007

**Client Sample ID:** MW-907-Q420
**Collection Date:** 12/8/2020 8:05:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 11:50 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 8000 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 08:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 2000 | 8.0 | 100 | | mg/L | 200 | 12/10/2020 01:11 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-008

**Client Sample ID:** MW-43-025-Q420
**Collection Date:** 12/8/2020 2:22:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 12:04 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 200 | 1.7 | 25 | | mg/L | 50 | 12/9/2020 05:05 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 370 | 2.0 | 25 | | mg/L | 50 | 12/9/2020 05:05 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-010

**Client Sample ID:** MW-43-075-Q420
**Collection Date:** 12/8/2020 1:45:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 12:47 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2700 | 17 | 250 | | mg/L | 500 | 12/9/2020 08:25 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1400 | 8.0 | 100 | | mg/L | 200 | 12/10/2020 01:25 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-012

**Client Sample ID:** MW-43-090-Q420
**Collection Date:** 12/8/2020 1:13:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 01:02 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5700 | 70 | 1000 | | mg/L | 2000 | 12/9/2020 08:39 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 950 | 4.0 | 50 | | mg/L | 100 | 12/10/2020 01:40 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-014

**Client Sample ID:** MW-35-060-Q420
**Collection Date:** 12/8/2020 1:07:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 01:16 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2000 | 17 | 250 | | mg/L | 500 | 12/9/2020 08:54 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 310 | 2.0 | 25 | | mg/L | 50 | 12/10/2020 01:54 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-015

**Client Sample ID:** MW-913-Q420
**Collection Date:** 12/8/2020 1:17:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/9/2020 01:30 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2000 | 17 | 250 | | mg/L | 500 | 12/9/2020 09:36 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201209A** QC Batch: **R149297** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 320 | 2.0 | 25 | | mg/L | 50 | 12/10/2020 02:08 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-135-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:26:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/10/2020 07:33 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3400 | 35 | 500 | | mg/L | 1000 | 12/10/2020 06:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 850 | 4.0 | 50 | | mg/L | 100 | 12/10/2020 05:28 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-017

**Client Sample ID:** MW-914-Q420
**Collection Date:** 12/8/2020 12:36:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/10/2020 07:47 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3300 | 35 | 500 | | mg/L | 1000 | 12/10/2020 08:06 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 840 | 4.0 | 50 | | mg/L | 100 | 12/11/2020 12:23 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-018

**Client Sample ID:** MW-23-060-Q420
**Collection Date:** 12/8/2020 1:20:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/10/2020 08:02 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5800 | 70 | 1000 | | mg/L | 2000 | 12/10/2020 08:20 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 670 | 4.0 | 50 | | mg/L | 100 | 12/11/2020 01:06 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-080-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/10/2020 08:16 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5700 | 70 | 1000 | | mg/L | 2000 | 12/10/2020 08:34 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1000 | 4.0 | 50 | | mg/L | 100 | 12/11/2020 01:20 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-023

**Client Sample ID:** MW-59-100-Q420
**Collection Date:** 12/8/2020 2:50:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/10/2020 08:30 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3100 | 35 | 500 | | mg/L | 1000 | 12/10/2020 08:49 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 570 | 4.0 | 50 | | mg/L | 100 | 12/11/2020 01:35 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-024

**Client Sample ID:** MW-917-Q420
**Collection Date:** 12/8/2020 3:00:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/10/2020 08:44 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3100 | 35 | 500 | | mg/L | 1000 | 12/10/2020 09:03 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 580 | 4.0 | 50 | | mg/L | 100 | 12/11/2020 01:49 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149297_BR** | SampType: **MBLK** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035053** |

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

| Sample ID: **LCS-R149297_BR** | SampType: **LCS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035054** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.239 | 0.50 | 1.250 | 0 | 99.1 | 90 | 110 | | | | |

| Sample ID: **N043367-001AMS** | SampType: **MS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035079** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.675 | 5.0 | 12.50 | 0 | 101 | 80 | 120 | | | | |

| Sample ID: **N043367-001AMSD** | SampType: **MSD** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035080** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.551 | 5.0 | 12.50 | 0 | 100 | 80 | 120 | 12.68 | 0.983 | 20 | |

| Sample ID: **N043367-002ADUP** | SampType: **DUP** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035081** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 2.5 | | | | | | 0.1930 | 0 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **N043369-005BMS** | SampType: **MS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035082** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 5.334 | 2.5 | 6.250 | 0 | 85.3 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

Sample ID: **MB-R149364_BR** SampType: **MBLK** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **PBW** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040597**

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

Sample ID: **LCS-R149364_BR** SampType: **LCS** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **LCSW** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040598**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.248 | 0.50 | 1.250 | 0 | 99.9 | 90 | 110 | | | | |

Sample ID: **N043386-004AMS** SampType: **MS** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040620**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.757 | 5.0 | 12.50 | 0 | 102 | 80 | 120 | | | | |

Sample ID: **N043386-004AMSD** SampType: **MSD** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040621**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.774 | 5.0 | 12.50 | 0 | 102 | 80 | 120 | 12.76 | 0.133 | 20 | |

Sample ID: **N043386-001AMS** SampType: **MS** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040622**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.728 | 2.5 | 6.250 | 0.4310 | 101 | 80 | 120 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

Sample ID: **N043386-001ADUP** SampType: **DUP** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040625**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.478 | 2.5 | | | | | | 0.4310 | 0 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **MB-R149297_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035011** |

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

| Sample ID: **LCS-R149297_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035012** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.121 | 0.50 | 2.000 | 0 | 106 | 90 | 110 | | | | |

| Sample ID: **N043369-008BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035018** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 302.855 | 25 | 100.0 | 203.5 | 99.3 | 80 | 120 | | | | |

| Sample ID: **N043369-008BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035019** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 303.065 | 25 | 100.0 | 203.5 | 99.5 | 80 | 120 | 302.9 | 0.0693 | 20 | |

| Sample ID: **N043369-003BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035021** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5184.700 | 500 | 2000 | 3093 | 105 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043369-003BDUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149297** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149297** | TestNo: **EPA 300.0** | | Analysis Date: **12/9/2020** | SeqNo: **4035024** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3125.500 | 500 | | | | | | 3093 | 1.04 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149364_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **PBW** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040554**

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

Sample ID: **LCS-R149364_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **LCSW** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040555**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.038 | 0.50 | 2.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043386-001AMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040563**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 607.040 | 50 | 200.0 | 399.0 | 104 | 80 | 120 | | | | |

Sample ID: **N043386-001AMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040564**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 604.410 | 50 | 200.0 | 399.0 | 103 | 80 | 120 | 607.0 | 0.434 | 20 | |

Sample ID: **N043369-016BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040566**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3365.300 | 500 | | | | | | 3357 | 0.235 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043369-016BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040567** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5465.800 | 500 | 2000 | 3357 | 105 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149297_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149297**
Client ID: **PBW** Batch ID: **R149297** TestNo: **EPA 300.0** Analysis Date: **12/9/2020** SeqNo: **4035095**

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

Sample ID: **LCS-R149297_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149297**
Client ID: **LCSW** Batch ID: **R149297** TestNo: **EPA 300.0** Analysis Date: **12/9/2020** SeqNo: **4035096**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.027 | 0.50 | 4.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043369-008BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149297**
Client ID: **ZZZZZZ** Batch ID: **R149297** TestNo: **EPA 300.0** Analysis Date: **12/9/2020** SeqNo: **4035103**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 568.815 | 25 | 200.0 | 370.5 | 99.2 | 80 | 120 | | | | |

Sample ID: **N043369-008BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149297**
Client ID: **ZZZZZZ** Batch ID: **R149297** TestNo: **EPA 300.0** Analysis Date: **12/9/2020** SeqNo: **4035104**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 571.675 | 25 | 200.0 | 370.5 | 101 | 80 | 120 | 568.8 | 0.502 | 20 | |

Sample ID: **N043369-003BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149297**
Client ID: **ZZZZZZ** Batch ID: **R149297** TestNo: **EPA 300.0** Analysis Date: **12/9/2020** SeqNo: **4035106**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 8560.000 | 500 | 4000 | 4451 | 103 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043369-003BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149297**
Client ID: **ZZZZZZ** Batch ID: **R149297** TestNo: **EPA 300.0** Analysis Date: **12/9/2020** SeqNo: **4035109**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4526.100 | 500 | | | | | | 4451 | 1.67 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149364_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **PBW** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040640**

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

Sample ID: **LCS-R149364_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **LCSW** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040641**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.107 | 0.50 | 4.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043369-016BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040649**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1258.640 | 50 | 400.0 | 845.2 | 103 | 80 | 120 | | | | |

Sample ID: **N043369-016BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040650**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1260.000 | 50 | 400.0 | 845.2 | 104 | 80 | 120 | 1259 | 0.108 | 20 | |

Sample ID: **N043386-001ADUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040654**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 227.210 | 10 | | | | | | 227.3 | 0.0352 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043386-001AMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040655** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 310.618 | 10 | 80.00 | 227.3 | 104 | 80 | 120 | | | | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201218B** | QC Batch: **R149538** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.0 | 0.063 | 0.10 | | mg/L | 2 | 12/18/2020 07:21 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-913-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:17:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201218B** | QC Batch: **R149538** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.1 | 0.063 | 0.10 | | mg/L | 2 | 12/18/2020 07:25 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-135-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:26:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201218B** | QC Batch: **R149538** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.6 | 0.063 | 0.10 | | mg/L | 2 | 12/18/2020 07:30 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-914-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201218B** | QC Batch: **R149538** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.6 | 0.063 | 0.10 | | mg/L | 2 | 12/18/2020 07:34 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-59-100-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-023 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201219A** | QC Batch: **R149539** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 3.4 | 0.063 | 0.10 | | mg/L | 2 | 12/19/2020 03:18 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-917-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-024 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201219A** | QC Batch: **R149539** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 3.5 | 0.063 | 0.10 | | mg/L | 2 | 12/19/2020 03:22 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149538** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149538** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149538** | TestNo: **SM4500-NO3** | | Analysis Date: **12/18/2020** | SeqNo: **4051885** |

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

| Sample ID: **LCS-R149538** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149538** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149538** | TestNo: **SM4500-NO3** | | Analysis Date: **12/18/2020** | SeqNo: **4051886** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.495 | 0.050 | 0.5000 | 0 | 99.0 | 85 | 115 | | | | |

| Sample ID: **N043367-002BDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149538** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149538** | TestNo: **SM4500-NO3** | | Analysis Date: **12/18/2020** | SeqNo: **4051888** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.791 | 0.050 | | | | | | 0.7724 | 2.39 | 20 | |

| Sample ID: **N043367-002BMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149538** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149538** | TestNo: **SM4500-NO3** | | Analysis Date: **12/18/2020** | SeqNo: **4051889** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.276 | 0.050 | 0.5000 | 0.7724 | 101 | 75 | 125 | | | | |

| Sample ID: **N043367-002BMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149538** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149538** | TestNo: **SM4500-NO3** | | Analysis Date: **12/18/2020** | SeqNo: **4051890** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.391 | 0.050 | 0.5000 | 0.7724 | 124 | 75 | 125 | 1.276 | 8.62 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149539** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051910** |

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

| Sample ID: **LCS-R149539** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051911** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.502 | 0.050 | 0.5000 | 0 | 100 | 85 | 115 | | | | |

| Sample ID: **N043386-007BDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051913** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.565 | 0.050 | | | | | | 0.5708 | 0.968 | 20 | |

| Sample ID: **N043386-007BMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051914** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.134 | 0.050 | 0.5000 | 0.5708 | 113 | 75 | 125 | | | | |

| Sample ID: **N043386-007BMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051915** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.075 | 0.050 | 0.5000 | 0.5708 | 101 | 75 | 125 | 1.134 | 5.31 | 20 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:43:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83461** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 2700 | 370 | 500 | | ug/L | 5 | 12/18/2020 12:26 AM |
| Calcium | 260000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 04:05 PM |
| Iron | 950 | 89 | 100 | | ug/L | 5 | 12/16/2020 04:05 PM |
| Magnesium | 24000 | 240 | 500 | | ug/L | 5 | 12/16/2020 04:05 PM |
| Sodium | 4500000 | 48000 | 250000 | | ug/L | 500 | 12/20/2020 09:27 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83461** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 2900 | 370 | 500 | | ug/L | 5 | 12/18/2020 01:12 AM |
| Calcium | 350000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 05:02 PM |
| Iron | 1600 | 89 | 100 | | ug/L | 5 | 12/16/2020 05:02 PM |
| Magnesium | 40000 | 240 | 500 | | ug/L | 5 | 12/16/2020 05:02 PM |
| Sodium | 3100000 | 48000 | 250000 | | ug/L | 500 | 12/20/2020 07:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52S-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 11:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83461** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 2800 | 370 | 500 | | ug/L | 5 | 12/18/2020 01:17 AM |
| Calcium | 730000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 05:06 PM |
| Iron | 27000 | 89 | 100 | | ug/L | 5 | 12/16/2020 05:06 PM |
| Magnesium | 860000 | 240 | 500 | | ug/L | 5 | 12/16/2020 05:06 PM |
| Sodium | 2900000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 07:14 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 10:32:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83461** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 4100 | 370 | 500 | | ug/L | 5 | 12/18/2020 01:21 AM |
| Calcium | 280000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 05:12 PM |
| Iron | 460 | 89 | 100 | | ug/L | 5 | 12/16/2020 05:12 PM |
| Magnesium | 19000 | 240 | 500 | | ug/L | 5 | 12/16/2020 05:12 PM |
| Sodium | 5500000 | 48000 | 250000 | | ug/L | 500 | 12/20/2020 10:01 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 3200 | 370 | 500 | | ug/L | 5 | 12/18/2020 01:25 AM |
| Calcium | 370000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 05:17 PM |
| Iron | 550 | 89 | 100 | | ug/L | 5 | 12/16/2020 05:17 PM |
| Magnesium | 37000 | 240 | 500 | | ug/L | 5 | 12/16/2020 05:17 PM |
| Sodium | 4400000 | 48000 | 250000 | | ug/L | 500 | 12/20/2020 10:04 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-22-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 7:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-006 | | |

**DISSOLVED METALS BY ICP**

**EPA 3010A** **EPA 6010B**

RunID: **NV00922-ICP2_201217B** QC Batch: **83461** PrepDate: **12/12/2020** Analyst: **DJ**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Boron | 3900 | 370 | 500 | | ug/L | 5 | 12/18/2020 01:29 AM |
| Calcium | 560000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 05:22 PM |
| Iron | 8800 | 89 | 100 | | ug/L | 5 | 12/16/2020 05:22 PM |
| Magnesium | 280000 | 240 | 500 | | ug/L | 5 | 12/16/2020 05:22 PM |
| Sodium | 4500000 | 48000 | 250000 | | ug/L | 500 | 12/20/2020 10:08 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-907-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 8:05:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83461** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 4100 | 370 | 500 | | ug/L | 5 | 12/18/2020 01:34 AM |
| Calcium | 550000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 05:26 PM |
| Iron | 9100 | 89 | 100 | | ug/L | 5 | 12/16/2020 05:26 PM |
| Magnesium | 290000 | 240 | 500 | | ug/L | 5 | 12/16/2020 05:26 PM |
| Sodium | 4600000 | 48000 | 250000 | | ug/L | 500 | 12/20/2020 10:11 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-025-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-008 | | |

**DISSOLVED METALS BY ICP**

**EPA 3010A** **EPA 6010B**

RunID: **NV00922-ICP2_201217B** QC Batch: **83461** PrepDate: **12/12/2020** Analyst: **DJ**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Boron | 560 | 74 | 100 | | ug/L | 1 | 12/18/2020 01:38 AM |
| Calcium | 140000 | 85 | 500 | | ug/L | 1 | 12/16/2020 05:31 PM |
| Iron | 5400 | 18 | 20 | | ug/L | 1 | 12/16/2020 05:31 PM |
| Magnesium | 55000 | 48 | 100 | | ug/L | 1 | 12/16/2020 05:31 PM |
| Sodium | 150000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 07:43 PM |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-010

**Client Sample ID:** MW-43-075-Q420
**Collection Date:** 12/8/2020 1:45:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 1300 | 74 | 100 | | ug/L | 1 | 12/22/2020 08:49 AM |
| Calcium | 170000 | 85 | 500 | | ug/L | 1 | 12/16/2020 05:37 PM |
| Iron | 4500 | 18 | 20 | | ug/L | 1 | 12/16/2020 05:37 PM |
| Magnesium | 160000 | 48 | 100 | | ug/L | 1 | 12/16/2020 05:37 PM |
| Sodium | 1800000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 07:46 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-012

**Client Sample ID:** MW-43-090-Q420
**Collection Date:** 12/8/2020 1:13:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 920 | 74 | 100 | | ug/L | 1 | 12/22/2020 09:43 AM |
| Calcium | 390000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 05:56 PM |
| Iron | 1400 | 89 | 100 | | ug/L | 5 | 12/16/2020 05:56 PM |
| Magnesium | 110000 | 240 | 500 | | ug/L | 5 | 12/16/2020 05:56 PM |
| Sodium | 3600000 | 48000 | 250000 | | ug/L | 500 | 12/20/2020 10:14 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 830 | 74 | 100 | | ug/L | 1 | 12/22/2020 08:57 AM |
| Calcium | 190000 | 85 | 500 | | ug/L | 1 | 12/16/2020 06:00 PM |
| Iron | 44 | 18 | 20 | | ug/L | 1 | 12/16/2020 06:00 PM |
| Magnesium | 32000 | 48 | 100 | | ug/L | 1 | 12/16/2020 06:00 PM |
| Sodium | 990000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 07:53 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-913-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:17:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 2100 | 370 | 500 | | ug/L | 5 | 12/22/2020 09:00 AM |
| Calcium | 230000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 06:06 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/16/2020 06:06 PM |
| Magnesium | 33000 | 240 | 500 | | ug/L | 5 | 12/16/2020 06:06 PM |
| Sodium | 1100000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 08:12 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-135-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:26:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 1800 | 370 | 500 | | ug/L | 5 | 12/22/2020 09:04 AM |
| Calcium | 260000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 06:10 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/16/2020 06:10 PM |
| Magnesium | 42000 | 240 | 500 | | ug/L | 5 | 12/16/2020 06:10 PM |
| Sodium | 2000000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 08:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-914-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 820 | 74 | 100 | | ug/L | 1 | 12/22/2020 09:08 AM |
| Calcium | 220000 | 85 | 500 | | ug/L | 1 | 12/16/2020 06:14 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/16/2020 06:14 PM |
| Magnesium | 38000 | 48 | 100 | | ug/L | 1 | 12/16/2020 06:14 PM |
| Sodium | 1900000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 08:18 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 1600 | 370 | 500 | | ug/L | 5 | 12/22/2020 09:11 AM |
| Calcium | 810000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 06:20 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/16/2020 06:20 PM |
| Magnesium | 5200 | 240 | 500 | | ug/L | 5 | 12/16/2020 06:20 PM |
| Sodium | 3000000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 08:22 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-080-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 1900 | 370 | 500 | | ug/L | 5 | 12/22/2020 09:25 AM |
| Calcium | 770000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 06:26 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/16/2020 06:26 PM |
| Magnesium | ND | 240 | 500 | | ug/L | 5 | 12/16/2020 06:26 PM |
| Sodium | 3500000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 08:25 PM |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-023

**Client Sample ID:** MW-59-100-Q420
**Collection Date:** 12/8/2020 2:50:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Boron | 1500 | 74 | 100 | | ug/L | 1 | 12/22/2020 09:29 AM |
| Calcium | 550000 | 85 | 500 | | ug/L | 1 | 12/16/2020 06:31 PM |
| Iron | 42 | 18 | 20 | | ug/L | 1 | 12/16/2020 06:31 PM |
| Magnesium | 25000 | 48 | 100 | | ug/L | 1 | 12/16/2020 06:31 PM |
| Sodium | 1500000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 08:28 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-917-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-024 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | PrepDate: | **12/12/2020** | Analyst: **DJ** | |
| Boron | 3400 | 370 | 500 | | ug/L | 5 | 12/22/2020 09:34 AM |
| Calcium | 670000 | 420 | 2500 | | ug/L | 5 | 12/16/2020 06:37 PM |
| Iron | 270 | 89 | 100 | | ug/L | 5 | 12/16/2020 06:37 PM |
| Magnesium | 27000 | 240 | 500 | | ug/L | 5 | 12/16/2020 06:37 PM |
| Sodium | 1400000 | 9600 | 50000 | | ug/L | 100 | 12/20/2020 08:31 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83461** SampType: **MBLK** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149472**
Client ID: **PBW** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047750**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83461** SampType: **LCS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149472**
Client ID: **LCSW** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047751**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 11168.991 | 500 | 10000 | 0 | 112 | 85 | 115 | | | | |
| Iron | 94.275 | 20 | 100.0 | 0 | 94.3 | 85 | 115 | | | | |
| Magnesium | 9653.513 | 100 | 10000 | 0 | 96.5 | 85 | 115 | | | | |

Sample ID: **N043369-001C-MS1** SampType: **MS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149472**
Client ID: **ZZZZZZ** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047759**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 264813.540 | 2500 | 10000 | 260200 | 46.5 | 75 | 125 | | | | S |
| Iron | 1071.900 | 100 | 100.0 | 954.5 | 117 | 75 | 125 | | | | |
| Magnesium | 38031.828 | 500 | 10000 | 23580 | 145 | 75 | 125 | | | | S |

Sample ID: **N043369-001C-MSD1** SampType: **MSD** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149472**
Client ID: **ZZZZZZ** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047760**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 306019.197 | 2500 | 10000 | 260200 | 459 | 75 | 125 | 264800 | 14.4 | 20 | S |
| Iron | 1178.162 | 100 | 100.0 | 954.5 | 224 | 75 | 125 | 1072 | 9.45 | 20 | S |
| Magnesium | 43969.806 | 500 | 10000 | 23580 | 204 | 75 | 125 | 38030 | 14.5 | 20 | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **MB-83461** | SampType: **MBLK** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050328** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

| Sample ID: **LCS1-83461** | SampType: **LCS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050329** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4616.076 | 100 | 5000 | 0 | 92.3 | 85 | 115 | | | | |

| Sample ID: **N043369-001C-MS1** | SampType: **MS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050337** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8811.449 | 500 | 5000 | 2657 | 123 | 75 | 125 | | | | |

| Sample ID: **N043369-001C-MSD1** | SampType: **MSD** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050338** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8528.002 | 500 | 5000 | 2657 | 117 | 75 | 125 | 8811 | 3.27 | 20 | |

| Sample ID: **MB-83461** | SampType: **MBLK** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052707** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS2-83461** | SampType: **LCS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052708** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18698.843 | 500 | 20000 | 0 | 93.5 | 85 | 115 | | | | |

| Sample ID: **N043369-002C-MS2** | SampType: **MS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052752** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2832431.950 | 250000 | 20000 | 3073000 | -1200 | 75 | 125 | | | | S |

| Sample ID: **N043369-002C-MSD2** | SampType: **MSD** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052753** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2979238.743 | 250000 | 20000 | 3073000 | -469 | 75 | 125 | 2832000 | 5.05 | 20 | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043369-001C-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149472**
Client ID: **ZZZZZZ** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047754**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 272726.734 | 2500 | 10000 | 260200 | 126 | 80 | 120 | | | | S |
| Iron | 1003.788 | 100 | 100.0 | 954.5 | 49.3 | 80 | 120 | | | | S |
| Magnesium | 37117.877 | 500 | 10000 | 23580 | 135 | 80 | 120 | | | | S |

Sample ID: **N043369-001C-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149497**
Client ID: **ZZZZZZ** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/18/2020** SeqNo: **4050336**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8357.105 | 500 | 5000 | 2657 | 114 | 80 | 120 | | | | |

Sample ID: **N043369-002C-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149556**
Client ID: **ZZZZZZ** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/20/2020** SeqNo: **4052751**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2658840.199 | 250000 | 20000 | 3073000 | -2070 | 80 | 120 | | | | S |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:43:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | Analyst: **CEI** |
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 02:28 PM |
| Manganese | 230 | 1.3 | 2.5 | | µg/L | 5 | 12/16/2020 02:33 PM |
| Molybdenum | 67 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 09:52 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 02:28 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Arsenic | 1.2 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 03:20 PM |
| Manganese | 160 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 03:20 PM |
| Molybdenum | 34 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 10:43 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/14/2020 10:43 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-52S-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 11:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | | PrepDate: **12/11/2020** | | Analyst: **CEI** |
| Arsenic | 1.7 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 03:29 PM |
| Manganese | 1200 | 6.4 | 12 | | µg/L | 25 | 12/16/2020 03:39 PM |
| Molybdenum | 25 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 10:53 PM |
| Selenium | 1.9 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 03:29 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53D-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 10:32:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | Analyst: **CEI** |
| Arsenic | 3.3 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 03:43 PM |
| Manganese | 1100 | 6.4 | 12 | | µg/L | 25 | 12/16/2020 03:53 PM |
| Molybdenum | 160 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 11:02 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/14/2020 11:02 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-53M-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Arsenic | 0.77 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 03:57 PM |
| Manganese | 410 | 1.3 | 2.5 | | µg/L | 5 | 12/16/2020 04:11 PM |
| Molybdenum | 61 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 11:11 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/14/2020 11:11 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-22-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 7:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-006 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201214C** QC Batch: **83436** PrepDate: **12/11/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Arsenic | 14 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 04:16 PM |
| Barium | 120 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 04:16 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Cobalt | 3.0 | 0.042 | 0.50 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 04:40 PM |
| Lead | 1.4 | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Manganese | 4000 | 6.4 | 12 | | µg/L | 25 | 12/16/2020 04:26 PM |
| Molybdenum | 32 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Nickel | 4.4 | 0.26 | 1.0 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Vanadium | 1.1 | 0.28 | 1.0 | | µg/L | 1 | 12/14/2020 11:21 PM |
| Zinc | 12 | 2.3 | 10 | | µg/L | 1 | 12/14/2020 11:21 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-007

**Client Sample ID:** MW-907-Q420
**Collection Date:** 12/8/2020 8:05:00 AM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201214C** QC Batch: **83436** PrepDate: **12/11/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Arsenic | 15 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 04:30 PM |
| Barium | 130 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 04:30 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Cobalt | 3.2 | 0.042 | 0.50 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 04:45 PM |
| Lead | 1.5 | 0.13 | 1.0 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Manganese | 4100 | 6.4 | 12 | | µg/L | 25 | 12/16/2020 04:40 PM |
| Molybdenum | 33 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Nickel | 4.6 | 0.26 | 1.0 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Vanadium | 1.1 | 0.28 | 1.0 | | µg/L | 1 | 12/14/2020 11:40 PM |
| Zinc | 12 | 2.3 | 10 | | µg/L | 1 | 12/14/2020 11:40 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-025-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | Analyst: **CEI** |
| Arsenic | 32 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 04:44 PM |
| Manganese | 360 | 1.3 | 2.5 | | µg/L | 5 | 12/16/2020 04:49 PM |
| Molybdenum | 6.7 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 11:49 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/14/2020 11:49 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-075-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:45:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | Analyst: **CEI** |
| Arsenic | 13 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 04:54 PM |
| Manganese | 580 | 1.3 | 2.5 | | µg/L | 5 | 12/16/2020 05:17 PM |
| Molybdenum | 16 | 0.21 | 0.50 | | µg/L | 1 | 12/14/2020 11:58 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/14/2020 11:58 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-43-090-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:13:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | Analyst: **CEI** |
| Arsenic | 3.1 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 05:22 PM |
| Manganese | 420 | 1.3 | 2.5 | | µg/L | 5 | 12/16/2020 05:27 PM |
| Molybdenum | 30 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 12:08 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/15/2020 12:08 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-014 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201214C** QC Batch: **83436** PrepDate: **12/11/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Arsenic | 1.3 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 05:31 PM |
| Barium | 72 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 05:31 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Copper | 1.7 | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 04:50 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Manganese | 1.0 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 05:31 PM |
| Molybdenum | 10 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Nickel | 1.3 | 0.26 | 1.0 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Selenium | 1.3 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 05:31 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Vanadium | 2.9 | 0.28 | 1.0 | | µg/L | 1 | 12/15/2020 12:17 AM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/15/2020 12:17 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-015

**Client Sample ID:** MW-913-Q420
**Collection Date:** 12/8/2020 1:17:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201214C** QC Batch: **83436** PrepDate: **12/11/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Arsenic | 1.2 | 0.081 | 0.10 | | µg/L | 1 | 12/21/2020 05:04 PM |
| Barium | 72 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 05:41 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Copper | 1.5 | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 05:04 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Manganese | 0.81 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 05:41 PM |
| Molybdenum | 9.8 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Nickel | 1.2 | 0.26 | 1.0 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Selenium | 0.99 | 0.36 | 0.50 | | µg/L | 1 | 12/28/2020 02:21 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Vanadium | 3.0 | 0.28 | 1.0 | | µg/L | 1 | 12/15/2020 12:45 AM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/15/2020 12:45 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-016

**Client Sample ID:** MW-35-135-Q420
**Collection Date:** 12/8/2020 12:26:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201214C** QC Batch: **83436** PrepDate: **12/11/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Arsenic | 0.97 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 05:50 PM |
| Barium | 38 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 05:50 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Copper | 2.6 | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 05:08 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Manganese | 0.72 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 05:50 PM |
| Molybdenum | 21 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Nickel | 1.7 | 0.26 | 1.0 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Selenium | 1.0 | 0.36 | 0.50 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Vanadium | 1.5 | 0.28 | 1.0 | | µg/L | 1 | 12/15/2020 12:55 AM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/15/2020 12:55 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-017

**Client Sample ID:** MW-914-Q420
**Collection Date:** 12/8/2020 12:36:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201214C** QC Batch: **83436** PrepDate: **12/11/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Arsenic | 1.0 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 06:00 PM |
| Barium | 38 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 06:00 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Copper | 2.6 | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 05:13 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Manganese | 0.69 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 06:00 PM |
| Molybdenum | 21 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Nickel | 1.7 | 0.26 | 1.0 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Selenium | 1.1 | 0.36 | 0.50 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Vanadium | 1.6 | 0.28 | 1.0 | | µg/L | 1 | 12/15/2020 01:04 AM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/15/2020 01:04 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | PrepDate: | **12/11/2020** | | Analyst: **CEI** |
| Arsenic | 4.5 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 06:18 PM |
| Manganese | 0.95 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 06:18 PM |
| Molybdenum | 21 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 01:13 AM |
| Selenium | 4.8 | 0.36 | 0.50 | | µg/L | 1 | 12/15/2020 01:13 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-23-080-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83436** | | | | PrepDate: | **12/11/2020** | Analyst: **CEI** |
| Arsenic | 5.9 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 06:28 PM |
| Manganese | 1.0 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 06:28 PM |
| Molybdenum | 45 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 01:23 AM |
| Selenium | 5.0 | 0.36 | 0.50 | | µg/L | 1 | 12/15/2020 01:23 AM |

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043369
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043369-023

**Client Sample ID:** MW-59-100-Q420
**Collection Date:** 12/8/2020 2:50:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201214C** QC Batch: **83436** PrepDate: **12/11/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 06:37 PM |
| Barium | 69 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 06:37 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 05:18 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Manganese | 1.5 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 06:37 PM |
| Molybdenum | 4.8 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Nickel | 2.1 | 0.26 | 1.0 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Selenium | 3.2 | 0.36 | 0.50 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Vanadium | ND | 0.28 | 1.0 | | µg/L | 1 | 12/15/2020 01:42 AM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/15/2020 01:42 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-917-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-024 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201214C** QC Batch: **83436** PrepDate: **12/11/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 06:51 PM |
| Barium | 70 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 06:51 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 05:23 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Manganese | 1.3 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 06:51 PM |
| Molybdenum | 4.7 | 0.21 | 0.50 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Nickel | 2.2 | 0.26 | 1.0 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Selenium | 4.1 | 0.36 | 0.50 | | µg/L | 1 | 12/28/2020 02:12 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Vanadium | ND | 0.28 | 1.0 | | µg/L | 1 | 12/15/2020 01:51 AM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/15/2020 01:51 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83436** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149578**
Client ID: **PBW** Batch ID: **83436** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4054490**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

Sample ID: **LCS-83436** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149578**
Client ID: **LCSW** Batch ID: **83436** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4054491**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.049 | 0.50 | 10.00 | 0 | 100 | 85 | 115 | | | | |
| Beryllium | 9.679 | 0.50 | 10.00 | 0 | 96.8 | 85 | 115 | | | | |
| Cadmium | 9.281 | 0.50 | 10.00 | 0 | 92.8 | 85 | 115 | | | | |
| Cobalt | 9.541 | 0.50 | 10.00 | 0 | 95.4 | 85 | 115 | | | | |
| Lead | 10.085 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Molybdenum | 9.766 | 0.50 | 10.00 | 0 | 97.7 | 85 | 115 | | | | |
| Nickel | 9.682 | 1.0 | 10.00 | 0 | 96.8 | 85 | 115 | | | | |
| Selenium | 8.715 | 0.50 | 10.00 | 0 | 87.2 | 85 | 115 | | | | |
| Silver | 10.147 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Thallium | 9.667 | 0.50 | 10.00 | 0 | 96.7 | 85 | 115 | | | | |
| Vanadium | 9.652 | 1.0 | 10.00 | 0 | 96.5 | 85 | 115 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **LCS-83436** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149578**
Client ID: **LCSW** Batch ID: **83436** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4054491**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Zinc | 100.465 | 10 | 100.0 | 0 | 100 | 85 | 115 | | | | |

Sample ID: **N043369-001C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149578**
Client ID: **ZZZZZZ** Batch ID: **83436** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4054497**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.042 | 0.50 | 10.00 | 0 | 100 | 75 | 125 | | | | |
| Cadmium | 9.360 | 0.50 | 10.00 | 0.06680 | 92.9 | 75 | 125 | | | | |
| Cobalt | 8.224 | 0.50 | 10.00 | 0.05482 | 81.7 | 75 | 125 | | | | |
| Lead | 10.285 | 1.0 | 10.00 | 0 | 103 | 75 | 125 | | | | |
| Molybdenum | 77.668 | 0.50 | 10.00 | 66.69 | 110 | 75 | 125 | | | | |
| Nickel | 9.273 | 1.0 | 10.00 | 0 | 92.7 | 75 | 125 | | | | |
| Silver | 9.644 | 0.50 | 10.00 | 0 | 96.4 | 75 | 125 | | | | |
| Thallium | 7.640 | 0.50 | 10.00 | 0 | 76.4 | 75 | 125 | | | | |
| Vanadium | 9.578 | 1.0 | 10.00 | 0 | 95.8 | 75 | 125 | | | | |
| Zinc | 93.177 | 10 | 100.0 | 2.415 | 90.8 | 75 | 125 | | | | |

Sample ID: **N043369-001C-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149578**
Client ID: **ZZZZZZ** Batch ID: **83436** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4054498**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 7.760 | 2.5 | 10.00 | 0 | 77.6 | 75 | 125 | | | | |

Sample ID: **N043369-001C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149578**
Client ID: **ZZZZZZ** Batch ID: **83436** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4054499**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.060 | 0.50 | 10.00 | 0 | 101 | 75 | 125 | 10.04 | 0.184 | 20 | |
| Cadmium | 9.188 | 0.50 | 10.00 | 0.06680 | 91.2 | 75 | 125 | 9.360 | 1.85 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **N043369-001C-MSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149578** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4054499** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Cobalt | 8.355 | 0.50 | 10.00 | 0.05482 | 83.0 | 75 | 125 | 8.224 | 1.57 | 20 | |
| Lead | 10.319 | 1.0 | 10.00 | 0 | 103 | 75 | 125 | 10.28 | 0.326 | 20 | |
| Molybdenum | 77.494 | 0.50 | 10.00 | 66.69 | 108 | 75 | 125 | 77.67 | 0.225 | 20 | |
| Nickel | 9.402 | 1.0 | 10.00 | 0 | 94.0 | 75 | 125 | 9.273 | 1.39 | 20 | |
| Silver | 9.503 | 0.50 | 10.00 | 0 | 95.0 | 75 | 125 | 9.644 | 1.48 | 20 | |
| Thallium | 7.657 | 0.50 | 10.00 | 0 | 76.6 | 75 | 125 | 7.640 | 0.222 | 20 | |
| Vanadium | 9.733 | 1.0 | 10.00 | 0 | 97.3 | 75 | 125 | 9.578 | 1.61 | 20 | |
| Zinc | 92.758 | 10 | 100.0 | 2.415 | 90.3 | 75 | 125 | 93.18 | 0.451 | 20 | |

| Sample ID: **N043369-001C-MSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149578** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4054502** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 7.822 | 2.5 | 10.00 | 0 | 78.2 | 75 | 125 | 7.760 | 0.796 | 20 | |

| Sample ID: **MB-83436** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055152** |

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

| Sample ID: **LCS-83436** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055153** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.180 | 0.10 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Barium | 10.328 | 1.0 | 10.00 | 0 | 103 | 85 | 115 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: LCS-83436 | SampType: LCS | TestCode: 6020_DIS_TP | Units: µg/L | Prep Date: 12/11/2020 | RunNo: 149586 |
|---|---|---|---|---|---|
| Client ID: LCSW | Batch ID: 83436 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 12/16/2020 | SeqNo: 4055153 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 99.963 | 0.50 | 100.0 | 0 | 100 | 85 | 115 | | | | |

| Sample ID: N043369-001C-MS | SampType: MS | TestCode: 6020_DIS_TP | Units: µg/L | Prep Date: 12/11/2020 | RunNo: 149586 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: 83436 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 12/16/2020 | SeqNo: 4055159 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12.844 | 0.10 | 10.00 | 2.269 | 106 | 75 | 125 | | | | |
| Barium | 47.755 | 1.0 | 10.00 | 38.24 | 95.1 | 75 | 125 | | | | |

| Sample ID: N043369-001C-MS | SampType: MS | TestCode: 6020_DIS_TP | Units: µg/L | Prep Date: 12/11/2020 | RunNo: 149586 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: 83436 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 12/16/2020 | SeqNo: 4055160 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 322.587 | 2.5 | 100.0 | 228.9 | 93.7 | 75 | 125 | | | | |

| Sample ID: N043369-001C-MSD | SampType: MSD | TestCode: 6020_DIS_TP | Units: µg/L | Prep Date: 12/11/2020 | RunNo: 149586 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: 83436 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 12/16/2020 | SeqNo: 4055161 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12.453 | 0.10 | 10.00 | 2.269 | 102 | 75 | 125 | 12.84 | 3.09 | 20 | |
| Barium | 47.822 | 1.0 | 10.00 | 38.24 | 95.8 | 75 | 125 | 47.75 | 0.140 | 20 | |

| Sample ID: N043369-001C-MSD | SampType: MSD | TestCode: 6020_DIS_TP | Units: µg/L | Prep Date: 12/11/2020 | RunNo: 149586 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: 83436 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 12/16/2020 | SeqNo: 4055164 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 324.027 | 2.5 | 100.0 | 228.9 | 95.2 | 75 | 125 | 322.6 | 0.445 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **MB-83436** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4057310** |

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

| Sample ID: **LCS-83436** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4057311** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 10.396 | 1.0 | 10.00 | 0 | 104 | 85 | 115 | | | | |

| Sample ID: **N043369-001C-MS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4057315** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 8.768 | 1.0 | 10.00 | 0 | 87.7 | 75 | 125 | | | | |

| Sample ID: **N043369-001C-MSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4057316** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 8.680 | 1.0 | 10.00 | 0 | 86.8 | 75 | 125 | 8.768 | 1.02 | 20 | |

| Sample ID: **N043369-001C-MS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149578** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83436** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4058222** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 8.686 | 0.50 | 10.00 | 0.3836 | 83.0 | 75 | 125 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043369-001C-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149578**
Client ID: **ZZZZZZ** Batch ID: **83436** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4058223**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 9.361 | 0.50 | 10.00 | 0.3836 | 89.8 | 75 | 125 | 8.686 | 7.48 | 20 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-22-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 7:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 04:40 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-907-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 8:05:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 04:43 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-060-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** QC Batch: **83427** | | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 04:46 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-913-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 1:17:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 04:50 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-35-135-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:26:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 05:04 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-914-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 12:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 05:07 PM |

**Qualifiers:**

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

**ASSET Laboratories**

# ANALYTICAL RESULTS

**Print Date:** *30-Dec-20*

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-59-100-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-023 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 05:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-917-Q420 |
| **Lab Order:** | N043369 | **Collection Date:** | 12/8/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043369-024 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201211B** | QC Batch: **83427** | | | PrepDate: | **12/11/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/11/2020 05:14 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043369
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **MB-83427** | SampType: **MBLK** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149361** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83427** | TestNo: **EPA 7470A** | | Analysis Date: **12/11/2020** | SeqNo: **4040228** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 0.142 | 0.20 | | | | | | | | | |

| Sample ID: **LCS-83427** | SampType: **LCS** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149361** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83427** | TestNo: **EPA 7470A** | | Analysis Date: **12/11/2020** | SeqNo: **4040229** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.620 | 0.20 | 5.000 | 0 | 92.4 | 85 | 115 | | | | |

| Sample ID: **N043348-010C-MS** | SampType: **MS** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149361** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83427** | TestNo: **EPA 7470A** | | Analysis Date: **12/11/2020** | SeqNo: **4040233** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.620 | 0.20 | 5.000 | 0.1830 | 88.7 | 75 | 125 | | | | |

| Sample ID: **N043348-010C-MSD** | SampType: **MSD** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149361** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83427** | TestNo: **EPA 7470A** | | Analysis Date: **12/11/2020** | SeqNo: **4040234** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.610 | 0.20 | 5.000 | 0.1830 | 88.5 | 75 | 125 | 4.620 | 0.217 | 20 | |

**Qualifiers:**

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

N043369


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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


# CHAIN OF CUSTODY RECORD



| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-788-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# SWA-ASSET-C9817-057 | Labspec | CalTrans | 2. Headspace |
| Submitted By: Reggie Tep | Phone: 916-788-3302 Fax: | Phone: 949-727-1400, ext 200 Fax | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | | | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: RT Date: 12/8/20 | Sampled By: Reggie D Berg | | Global ID: | Regulatory | 5. IR number NL |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE 1.9°C/3.2°C / Sample Temp: 2.1°C / 4.2°C / 4.9°C |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/8/20 | | | Courier: Xpress |
| Project Number: 30035275 | | | | | Tracking No.: |

Matrix: Ground x | Sediment; Potable | Soil; NPDES | Other Solid; Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CFIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH [illegible] mL poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOAs | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 600 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 600 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 Cu, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn [illegible] | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | VOCs (8260) 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043369-01 | MW-52D-Q420 | 12/8/2020 | 9:43 | | | | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 4 | PV | BN | |
| 2 | -02 | MW-52M-Q420 | 12/8/2020 | 9:02 | | | | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 4 | PV | BN | |
| 3 | -03 | MW-52S-Q420 | 12/8/2020 | 11:25 | | | | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 4 | PV | BN | |
| 4 | -04 | MW-53D-Q420 | 12/8/2020 | 10:32 | | | | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 4 | P | BN | |
| 5 | -05 | MW-53M-Q420 | 12/8/2020 | 12:16 | | | | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 4 | P | BN | |
| 6 | -06 | MW-22-Q420 | 12/8/2020 | 7:55 | | X | X | | X | X | | X | X | | | X | | | | X | X | | | | | | E | 4 | P | BN | |
| 7 | -07 | MW-907-Q420 | 12/8/2020 | 8:05 | | X | X | | X | X | | X | X | | | X | | | | X | X | | | | | | E | 4 | P | BN | |
| 8 | -08 | MW-43-025-Q420 | 12/8/2020 | 14:22 | | | | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 4 | P | BN | |
| 9 | -09 | MW-43-025-EB-Q420 | 12/8/2020 | 13:58 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 10 | -10 | MW-43-075-Q420 | 12/8/2020 | 13:45 | | | | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 4 | P | BN | |
| 11 | -11 | MW-43-075-EB-Q420 | 12/8/2020 | 13:20 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 12 | -12 | MW-43-090-Q420 | 12/8/2020 | 13:13 | | | | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 4 | P | BN | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Reggie Tep 12/8/20 | 1650 | RA Romeo Alcantara | 12-8-20 16:50 |
| RA Romeo Alcantara 12-8-20 | 19:27 | RA Romeo Alcantara | 12-8-20 1927 |
| | | | |

**Turn Around Time (TAT)**

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

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

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

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

**Preservatives:**

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

**Container Type:**

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

White=Laboratory Copy
Yellow=Customer's Copy

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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
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# CHAIN OF CUSTODY RECORD



| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# SWA-ASSET-C9617-057 | Labspec | CalTrans | 2. Headspace |
| Submitted By: Reggie Tep | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | | | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12/18/20 | Sampled By: Jackie D. Byrd | | Global ID: | Regulatory | 5. IR number 2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE 1.9°C/3.2°C |
| Project Name: PG&E Topock - GMP | Signature: Date: 12-8-20 | Matrix: Ground x Sediment; Potable Soil; NPDES Other Solid; Surface | | | Sample Temp: 2.1°C / 4.2°C / 4.9°C |
| Project Number: 30035275 | | | | | Courier: FEDEX |
| | | | | | Tracking No.: |

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | 250 mL poly | 250 mL poly | 250 mL poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 125 mL poly | 3x40 mL VOAs | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Oxygen and Deuterium Isotopes (CFIRM), Ice | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Alkalinity, Total as CaCO3 (SM2320B) | Bromide, Sulfate, Chloride (EPA 300.0) | Fluoride (EPA 300.0) | Specific Conductance (EPA 120.1) | Total Dissolved Solids (SM92540) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 | Total Organic Carbon (SM5310C); H2SO4 | Metals Dissolved (EPA7470A FF) Hg; HNO3 | Dissolved Metals (SW 6010B); HNO3 Potassium | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 | | | | | | |
| 1 | N043369-13 | MW-43-090-EB-Q420 | 12/8/2020 | 12:42 | | X | | | X | X | | X | X | X | | X | | | | | X | X | | | | E | 1 | P | B | |
| 2 | -14 | MW-35-060-Q420 | 12/8/2020 | 13:07 | | X | X | | X | X | | X | X | X | | X | | | | | X | X | | | | E | 5 | P | BNS | |
| 3 | -15 | MW-913-Q420 | 12/8/2020 | 13:17 | | X | X | | X | X | | X | X | X | | X | | | | | X | X | | | | E | 5 | P | BNS | |
| 4 | -16 | MW-35-135-Q420 | 12/8/2020 | 12:26 | | X | X | | X | X | | X | X | X | | X | | | | | X | X | | | | E | 5 | P | BNS | |
| 5 | -17 | MW-914-Q420 | 12/8/2020 | 12:36 | | X | X | | X | X | | X | X | X | | X | | | | | X | X | | | | E | 5 | P | BNS | |
| 6 | -18 | MW-23-060-Q420 | 12/8/2020 | 13:20 | | X | | | X | X | | X | X | | | | | X | X | | | | | | | E | 3 | P | BN | |
| 7 | -19 | MW-23-080-Q420 | 12/8/2020 | 12:31 | | X | | | X | X | | X | X | | | | | X | X | | | | | | | E | 3 | P | BN | |
| 8 | -20 | EB-714-Q420 | 12/8/2020 | 14:00 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 9 | -21 | EB-715-Q420 | 12/8/2020 | 14:30 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 10 | -22 | EB-716-Q420 | 12/8/2020 | 15:20 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 11 | -23 | MW-59-100-Q420 | 12/8/2020 | 14:50 | | X | | | X | X | | X | X | X | | X | | | | | X | X | | | | E | 4 | P | BNS | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Reggie Tep | 12/18/20 1650 | Romeo Alcantara | 12-8-20 16:50 |
| Romeo Alcantara | 12-8-20 19:27 | Romeo Alcantara | 12-8-20 19:27 |
| | | | |

**Turn Around Time (TAT)**

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

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

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

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

**Preservatives:**

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

**Container Type:**

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

White=Laboratory Copy
Yellow=Customer's Copy

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P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD



| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Others ✓ (Specify: RWQCB) |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RWQCB ✓ |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Sample Receipt Condition: 1. Chilled ✓; 3. Container Intact ✓; 4. Seal Present ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 |
| Submitted By: Reggie Tay | | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Field Tech | Phone: 916-786-3302 Fax: | | Global ID: |
| Signature: Date: 12/8/20 | Sampled By: Reggie Bush | | Specify State: |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | 6. Method of Cooling: ICE 1.9°C/3.2°C/ Sample Temp: 2.1°C/4.2°C/4.9°C |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12-8-20 | Courier: Fedex Tracking No.: |
| Project Number: 30035275 | | | |

Matrix: Ground x; Sediment; Potable; Soil; NPDES; Other Solid; Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | 250 mL poly | 250 mL poly | 250 mL poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 125 mL poly | 3x40 mL VOAs | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Oxygen and Deuterium Isotopes (CFIRM), Ice | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Alkalinity, Total as CaCO3 (SM2320B) | Bromide, Sulfate, Chloride (EPA 300.0) | Fluoride (EPA 300.0) | Specific Conductance (EPA 120.1) | Total Dissolved Solids (SM92540) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 | Total Organic Carbon (SM5310C); H2SO4 | Metals Dissolved (EPA7470A FF) Hg; HNO3 | Dissolved Metals (SW 6010B); HNO3 Potassium | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, B9, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 Cu, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 | VOCs (8260) | | | | | |
| 1 | N043369-24 | MW-917-Q420 | 12/8/2020 | 15:00 | | X | | | X | X | | X | X | X | | X | | | X | X | | | | | | | E | 4 | P | BNS | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Reggie Tay | 12/8/20 1650 | ROMEO KUCAKSTARA | 12-8-20 16:50 |
| ROMEO KUCAKSTARA HD | 12-8-20 19:27 | ROMEO KUCAKSTARA | 12-8-20 19:27 |
| | | | |

**Turn Around Time (TAT)**

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

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

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

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

**Preservatives:**

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

**Container Type:**

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

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

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

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

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/8/2020 | Workorder: | N043369 |
| Rep sample Temp (Deg C): | 1.9/3.2/2.1/4.2/4.9 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

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

Comments:

Checklist Completed By: BHN BHdez 12/10/2020

Reviewed By: MBC 12/17/2020

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-001A | MW-52D-Q420 | 12/8/2020 9:43:00 AM | 12/22/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-001B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-001C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-002A | MW-52M-Q420 | 12/8/2020 9:02:00 AM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-002B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-002B | MW-52M-Q420 | 12/8/2020 9:02:00 AM | 12/22/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-002C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-003A | MW-52S-Q420 | 12/8/2020 11:25:00 AM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-003B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-003C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-004A | MW-53D-Q420 | 12/8/2020 10:32:00 AM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-004B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-004B | MW-53D-Q420 | 12/8/2020 10:32:00 AM | 12/22/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-004C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-005A | MW-53M-Q420 | 12/8/2020 12:16:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-005B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-005C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-005C | MW-53M-Q420 | 12/8/2020 12:16:00 PM | 12/22/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-006A | MW-22-Q420 | 12/8/2020 7:55:00 AM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-006B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-006C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043369-006D | | | 12/22/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043369-007A | MW-907-Q420 | 12/8/2020 8:05:00 AM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-007B | MW-907-Q420 | 12/8/2020 8:05:00 AM | 12/22/2020 | Groundwater | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-007C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043369-007D | | | 12/22/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043369-008A | MW-43-025-Q420 | 12/8/2020 2:22:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-008B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-008B | MW-43-025-Q420 | 12/8/2020 2:22:00 PM | 12/22/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-008C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-009A | MW-43-025-EB-Q420 | 12/8/2020 1:58:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-010A | MW-43-075-Q420 | 12/8/2020 1:45:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-010B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-010C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-010C | MW-43-075-Q420 | 12/8/2020 1:45:00 PM | 12/22/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-011A | MW-43-075-EB-Q420 | 12/8/2020 1:20:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-012A | MW-43-090-Q420 | 12/8/2020 1:13:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-012B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-012C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-013A | MW-43-090-EB-Q420 | 12/8/2020 12:42:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-014A | MW-35-060-Q420 | 12/8/2020 1:07:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-014B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-014B | MW-35-060-Q420 | 12/8/2020 1:07:00 PM | 12/22/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-014C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043369-014D | | | 12/22/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043369-014E | | | 12/22/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043369-015A | MW-913-Q420 | 12/8/2020 1:17:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-015B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-015B | MW-913-Q420 | 12/8/2020 1:17:00 PM | 12/22/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-015C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043369-015D | | | 12/22/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043369-015E | | | 12/22/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043369-016A | MW-35-135-Q420 | 12/8/2020 12:26:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-016B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-016C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-016C | MW-35-135-Q420 | 12/8/2020 12:26:00 PM | 12/22/2020 | Groundwater | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043369-016D | | | 12/22/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043369-016E | | | 12/22/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043369-017A | MW-914-Q420 | 12/8/2020 12:36:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-017B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-017C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-017C | MW-914-Q420 | 12/8/2020 12:36:00 PM | 12/22/2020 | Groundwater | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043369-017D | | | 12/22/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043369-017E | | | 12/22/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043369-018A | MW-23-060-Q420 | 12/8/2020 1:20:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-018B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-018C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-019A | MW-23-080-Q420 | 12/8/2020 12:31:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-019B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-019B | MW-23-080-Q420 | 12/8/2020 12:31:00 PM | 12/22/2020 | Groundwater | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-019C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043369-020A | EB-714-Q420 | 12/8/2020 2:00:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-021A | EB-715-Q420 | 12/8/2020 2:30:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-022A | EB-716-Q420 | 12/8/2020 3:20:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-023A | MW-59-100-Q420 | 12/8/2020 2:50:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-023B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-023B | MW-59-100-Q420 | 12/8/2020 2:50:00 PM | 12/22/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-023C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043369-023D | | | 12/22/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043369-024A | MW-917-Q420 | 12/8/2020 3:00:00 PM | 12/22/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043369-024B | | | 12/22/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/22/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043369-024C | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043369

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/8/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043369-024C | MW-917-Q420 | 12/8/2020 3:00:00 PM | 12/22/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/22/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043369-024D | | | 12/22/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043369-025A | FOLDER | 12/22/2020 | 12/22/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/22/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/22/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/22/2020 | | | QA Review | ☐ | ☐ | ☐ | LAB |
| | | | 12/22/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: SIGNED

**10-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043369-006D / MW-22-Q420 | Groundwater | 12/8/2020 7:55:00 AM | 8OZP | 1 | | |
| N043369-007D / MW-907-Q420 | Groundwater | 12/8/2020 8:05:00 AM | 8OZP | 1 | | |
| N043369-014E / MW-35-060-Q420 | Groundwater | 12/8/2020 1:07:00 PM | 8OZP | 1 | | |
| N043369-015E / MW-913-Q420 | Groundwater | 12/8/2020 1:17:00 PM | 8OZP | 1 | | |
| N043369-016E / MW-35-135-Q420 | Groundwater | 12/8/2020 12:26:00 PM | 8OZP | 1 | | |
| N043369-017E / MW-914-Q420 | Groundwater | 12/8/2020 12:36:00 PM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N 43369A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium by CFIRMS. EDD requirement Labspec7 edata.

Fedex #: 772329590280

| | **Date/Time** | | **Date/Time** |
|---|---|---|---|
| **Relinquished by:** YRJ | 12/10/2020 1600 | **Received by:** | |
| **Relinquished by:** | | **Received by:** | |

December 24, 2020

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

TEL: (916) 786-3302
FAX:

Workorder No.: N043387

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 09, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Nancy Sibucao
Laboratory Director

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

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

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

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

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

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary due to matrix interference. Sample was analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Sample was reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300.0:

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

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043369-001C-MS1, N043369-001C-MSD1, N043369-002C-MS2 and N043369-002C-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043387
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043387-001A | PGE-08-Q420 | Groundwater | 12/9/2020 4:04:00 PM | 12/9/2020 | 12/24/2020 |
| N043387-001B | PGE-08-Q420 | Groundwater | 12/9/2020 4:04:00 PM | 12/9/2020 | 12/24/2020 |
| N043387-001C | PGE-08-Q420 | Groundwater | 12/9/2020 4:04:00 PM | 12/9/2020 | 12/24/2020 |
| N043387-001D | PGE-08-Q420 | Groundwater | 12/9/2020 4:04:00 PM | 12/9/2020 | 12/24/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043387
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043387-001

**Client Sample ID:** PGE-08-Q420
**Collection Date:** 12/9/2020 4:04:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201210E** | QC Batch: **R149312** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 18000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/10/2020 09:40 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043387-001BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149312**
Client ID: **ZZZZZZ** Batch ID: **R149312** TestNo: **EPA 120.1** Analysis Date: **12/10/2020** SeqNo: **4035746**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 18400.000 | 0.10 | | | | | | 18450 | 0.271 | 2 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PGE-08-Q420 |
| **Lab Order:** | N043387 | **Collection Date:** | 12/9/2020 4:04:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043387-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201211H** | QC Batch: **83456** | | | | PrepDate: | **12/11/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 14000 | 100 | 100 | | mg/L | 1 | 12/11/2020 05:09 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83456** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/11/2020** | RunNo: **149352** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83456** | TestNo: **SM2540C** | | Analysis Date: **12/11/2020** | SeqNo: **4038838** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 972.000 | 10 | 1000 | 0 | 97.2 | 80 | 120 | | | | |

| Sample ID: **MB-83456** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/11/2020** | RunNo: **149352** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83456** | TestNo: **SM2540C** | | Analysis Date: **12/11/2020** | SeqNo: **4038839** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043369-019BDUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/11/2020** | RunNo: **149352** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83456** | TestNo: **SM2540C** | | Analysis Date: **12/11/2020** | SeqNo: **4038847** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 11630.000 | 100 | | | | | | 11950 | 2.71 | 5 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PGE-08-Q420 |
| **Lab Order:** | N043387 | **Collection Date:** | 12/9/2020 4:04:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043387-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201211A** QC Batch: **R149356** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/11/2020 05:59 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201213B** QC Batch: **83439** | | | | PrepDate: **12/11/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/13/2020 01:42 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149356** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039311** |

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

| Sample ID: **LCS-R149356** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039312** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.897 | 0.20 | 5.000 | 0 | 97.9 | 90 | 110 | | | | |

| Sample ID: **N043369-020AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039314** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.016 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID: **N043369-021AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039316** |

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

| Sample ID: **N043369-022AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039318** |

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

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043369-023AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039322** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5273.600 | 100 | 2500 | 2749 | 101 | 90 | 110 | | | | |

| Sample ID: **N043369-024AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039324** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5219.500 | 100 | 2500 | 2713 | 100 | 90 | 110 | | | | |

| Sample ID: **N043369-019AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039325** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.288 | 1.0 | 5.000 | 0.3755 | 98.3 | 90 | 110 | | | | |

| Sample ID: **N043385-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039334** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 238.566 | 4.0 | 100.0 | 136.1 | 102 | 90 | 110 | | | | |

| Sample ID: **N043385-002AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039335** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1513.120 | 20 | 500.0 | 1001 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043385-002AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039336**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1491.060 | 20 | 500.0 | 1001 | 98.0 | 90 | 110 | 1513 | 1.47 | 20 | |

Sample ID: **N043385-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039337**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 106.350 | 2.0 | 50.00 | 53.95 | 105 | 90 | 110 | | | | |

Sample ID: **N043385-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039338**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 105.819 | 2.0 | 50.00 | 52.72 | 106 | 90 | 110 | | | | |

Sample ID: **N043385-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039339**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4589.650 | 100 | 2500 | 2064 | 101 | 90 | 110 | | | | |

Sample ID: **N043385-001ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039340**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 137.428 | 4.0 | | | | | | 136.1 | 0.955 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043385-010AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039345** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 13.301 | 0.20 | 5.000 | 7.889 | 108 | 90 | 110 | | | | |

| Sample ID: **N043385-006AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039349** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 14.315 | 1.0 | 5.000 | 9.575 | 94.8 | 90 | 110 | | | | |

| Sample ID: **N043385-008AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039351** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 24.407 | 1.0 | 5.000 | 18.98 | 109 | 90 | 110 | | | | |

| Sample ID: **N043385-011AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039355** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 13.562 | 1.0 | 5.000 | 8.257 | 106 | 90 | 110 | | | | |

| Sample ID: **N043387-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149356** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149356** | TestNo: **EPA 218.6** | | Analysis Date: **12/11/2020** | SeqNo: **4039357** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.682 | 1.0 | 5.000 | 0 | 93.6 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043385-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039360**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 685.990 | 10 | 250.0 | 423.2 | 105 | 90 | 110 | | | | |

Sample ID: **N043385-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039362**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043385-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039364**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.035 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043305-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149356**
Client ID: **ZZZZZZ** Batch ID: **R149356** TestNo: **EPA 218.6** Analysis Date: **12/11/2020** SeqNo: **4039366**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1128.600 | 20 | 500.0 | 619.2 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83439** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149390** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83439** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4042208** |

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

| Sample ID: **LCS-83439** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149390** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83439** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4042209** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.775 | 1.0 | 10.00 | 0 | 97.7 | 85 | 115 | | | | |

| Sample ID: **N043367-001D-MS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149390** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83439** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4042215** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.302 | 1.0 | 10.00 | 0.1535 | 91.5 | 75 | 125 | | | | |

| Sample ID: **N043367-001D-MSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/11/2020** | RunNo: **149390** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83439** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4042220** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.314 | 1.0 | 10.00 | 0.1535 | 91.6 | 75 | 125 | 9.302 | 0.135 | 20 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PGE-08-Q420 |
| **Lab Order:** | N043387 | **Collection Date:** | 12/9/2020 4:04:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043387-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201211A** | QC Batch: **R149327** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 52 | 1.2 | 5.0 | | mg/L | 1 | 12/11/2020 09:50 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149327** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149327** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149327** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4036696** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 97.782 | 5.0 | 100.0 | 0 | 97.8 | 85 | 115 | | | | |

| Sample ID: **MB-R149327** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149327** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149327** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4036697** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043386-006AMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149327** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149327** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4036713** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 131.048 | 5.0 | 100.0 | 34.27 | 96.8 | 75 | 125 | | | | |

| Sample ID: **N043386-006AMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149327** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149327** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4036714** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 131.048 | 5.0 | 100.0 | 34.27 | 96.8 | 75 | 125 | 131.0 | 0 | 20 | |

| Sample ID: **N043387-001BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149327** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149327** | TestNo: **SM 2320 B** | | Analysis Date: **12/11/2020** | SeqNo: **4036720** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 51.411 | 5.0 | | | | | | 52.42 | 1.94 | 30 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043387
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043387-001

**Client Sample ID:** PGE-08-Q420
**Collection Date:** 12/9/2020 4:04:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/10/2020 03:05 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6000 | 70 | 1000 | | mg/L | 2000 | 12/10/2020 11:55 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201210A** QC Batch: **R149364** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 2000 | 8.0 | 100 | | mg/L | 200 | 12/11/2020 04:26 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149364_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040597** |

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

| Sample ID: **LCS-R149364_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040598** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.248 | 0.50 | 1.250 | 0 | 99.9 | 90 | 110 | | | | |

| Sample ID: **N043386-004AMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040620** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.757 | 5.0 | 12.50 | 0 | 102 | 80 | 120 | | | | |

| Sample ID: **N043386-004AMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040621** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.774 | 5.0 | 12.50 | 0 | 102 | 80 | 120 | 12.76 | 0.133 | 20 | |

| Sample ID: **N043386-001AMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040622** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.728 | 2.5 | 6.250 | 0.4310 | 101 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **N043386-001ADUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | | | | RunNo: **149364** | | | |
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | | | | SeqNo: **4040625** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Bromide | 0.478 | 2.5 | | | | | | 0.4310 | 0 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **MB-R149364_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040554** |

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

| Sample ID: **LCS-R149364_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040555** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.038 | 0.50 | 2.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID: **N043386-001AMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040563** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 607.040 | 50 | 200.0 | 399.0 | 104 | 80 | 120 | | | | |

| Sample ID: **N043386-001AMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040564** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 604.410 | 50 | 200.0 | 399.0 | 103 | 80 | 120 | 607.0 | 0.434 | 20 | |

| Sample ID: **N043369-016BDUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040566** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3365.300 | 500 | | | | | | 3357 | 0.235 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043369-016BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149364** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149364** | TestNo: **EPA 300.0** | | Analysis Date: **12/10/2020** | SeqNo: **4040567** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5465.800 | 500 | 2000 | 3357 | 105 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149364_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **PBW** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040640**

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

Sample ID: **LCS-R149364_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **LCSW** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040641**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.107 | 0.50 | 4.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043369-016BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040649**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1258.640 | 50 | 400.0 | 845.2 | 103 | 80 | 120 | | | | |

Sample ID: **N043369-016BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040650**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1260.000 | 50 | 400.0 | 845.2 | 104 | 80 | 120 | 1259 | 0.108 | 20 | |

Sample ID: **N043386-001ADUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040654**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 227.210 | 10 | | | | | | 227.3 | 0.0352 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043386-001AMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149364**
Client ID: **ZZZZZZ** Batch ID: **R149364** TestNo: **EPA 300.0** Analysis Date: **12/10/2020** SeqNo: **4040655**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 310.618 | 10 | 80.00 | 227.3 | 104 | 80 | 120 | | | | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PGE-08-Q420 |
| **Lab Order:** | N043387 | **Collection Date:** | 12/9/2020 4:04:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043387-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201219A** | QC Batch: **R149539** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/19/2020 01:54 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149539** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051910** |

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

| Sample ID: **LCS-R149539** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051911** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.502 | 0.050 | 0.5000 | 0 | 100 | 85 | 115 | | | | |

| Sample ID: **N043386-007BDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051913** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.565 | 0.050 | | | | | | 0.5708 | 0.968 | 20 | |

| Sample ID: **N043386-007BMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051914** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.134 | 0.050 | 0.5000 | 0.5708 | 113 | 75 | 125 | | | | |

| Sample ID: **N043386-007BMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149539** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149539** | TestNo: **SM4500-NO3** | | Analysis Date: **12/19/2020** | SeqNo: **4051915** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.075 | 0.050 | 0.5000 | 0.5708 | 101 | 75 | 125 | 1.134 | 5.31 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043387
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043387-001

**Client Sample ID:** PGE-08-Q420
**Collection Date:** 12/9/2020 4:04:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201222A** | QC Batch: **83461** | | | | PrepDate: | **12/12/2020** | Analyst: **DJ** |
| Boron | 3200 | 74 | 100 | | ug/L | 1 | 12/22/2020 09:38 AM |
| Calcium | 150000 | 85 | 500 | | ug/L | 1 | 12/16/2020 06:43 PM |
| Iron | 80 | 18 | 20 | | ug/L | 1 | 12/16/2020 06:43 PM |
| Magnesium | 3800 | 48 | 100 | | ug/L | 1 | 12/16/2020 06:43 PM |
| Sodium | 3600000 | 48000 | 250000 | | ug/L | 500 | 12/20/2020 10:17 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83461** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149472**
Client ID: **PBW** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047750**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83461** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149472**
Client ID: **LCSW** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047751**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 11168.991 | 500 | 10000 | 0 | 112 | 85 | 115 | | | | |
| Iron | 94.275 | 20 | 100.0 | 0 | 94.3 | 85 | 115 | | | | |
| Magnesium | 9653.513 | 100 | 10000 | 0 | 96.5 | 85 | 115 | | | | |

Sample ID: **N043369-001C-MS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149472**
Client ID: **ZZZZZZ** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047759**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 264813.540 | 2500 | 10000 | 260200 | 46.5 | 75 | 125 | | | | S |
| Iron | 1071.900 | 100 | 100.0 | 954.5 | 117 | 75 | 125 | | | | |
| Magnesium | 38031.828 | 500 | 10000 | 23580 | 145 | 75 | 125 | | | | S |

Sample ID: **N043369-001C-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/12/2020** RunNo: **149472**
Client ID: **ZZZZZZ** Batch ID: **83461** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4047760**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 306019.197 | 2500 | 10000 | 260200 | 459 | 75 | 125 | 264800 | 14.4 | 20 | S |
| Iron | 1178.162 | 100 | 100.0 | 954.5 | 224 | 75 | 125 | 1072 | 9.45 | 20 | S |
| Magnesium | 43969.806 | 500 | 10000 | 23580 | 204 | 75 | 125 | 38030 | 14.5 | 20 | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **MB-83461** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050328** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

| Sample ID: **LCS1-83461** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050329** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4616.076 | 100 | 5000 | 0 | 92.3 | 85 | 115 | | | | |

| Sample ID: **N043369-001C-MS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050337** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8811.449 | 500 | 5000 | 2657 | 123 | 75 | 125 | | | | |

| Sample ID: **N043369-001C-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050338** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8528.002 | 500 | 5000 | 2657 | 117 | 75 | 125 | 8811 | 3.27 | 20 | |

| Sample ID: **MB-83461** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052707** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS2-83461** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052708** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18698.843 | 500 | 20000 | 0 | 93.5 | 85 | 115 | | | | |

| Sample ID: **N043369-002C-MS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052752** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2832431.950 | 250000 | 20000 | 3073000 | -1200 | 75 | 125 | | | | S |

| Sample ID: **N043369-002C-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/12/2020** | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052753** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2979238.743 | 250000 | 20000 | 3073000 | -469 | 75 | 125 | 2832000 | 5.05 | 20 | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043369-001C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149472** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4047754** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 272726.734 | 2500 | 10000 | 260200 | 126 | 80 | 120 | | | | S |
| Iron | 1003.788 | 100 | 100.0 | 954.5 | 49.3 | 80 | 120 | | | | S |
| Magnesium | 37117.877 | 500 | 10000 | 23580 | 135 | 80 | 120 | | | | S |

| Sample ID: **N043369-001C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149497** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/18/2020** | SeqNo: **4050336** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8357.105 | 500 | 5000 | 2657 | 114 | 80 | 120 | | | | |

| Sample ID: **N043369-002C-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149556** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83461** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/20/2020** | SeqNo: **4052751** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2658840.199 | 250000 | 20000 | 3073000 | -2070 | 80 | 120 | | | | S |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043387
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043387-001

**Client Sample ID:** PGE-08-Q420
**Collection Date:** 12/9/2020 4:04:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201213B** | QC Batch: **83439** | | | PrepDate: | | **12/11/2020** | Analyst: **CEI** |
| Manganese | 450 | 1.3 | 2.5 | | µg/L | 5 | 12/13/2020 01:47 PM |
| Molybdenum | 110 | 0.21 | 0.50 | | µg/L | 1 | 12/13/2020 01:42 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/13/2020 01:42 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043387
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83439** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149390**
Client ID: **PBW** Batch ID: **83439** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4042289**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-83439** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149390**
Client ID: **LCSW** Batch ID: **83439** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4042290**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 98.897 | 0.50 | 100.0 | 0 | 98.9 | 85 | 115 | | | | |
| Molybdenum | 9.878 | 0.50 | 10.00 | 0 | 98.8 | 85 | 115 | | | | |
| Selenium | 9.789 | 0.50 | 10.00 | 0 | 97.9 | 85 | 115 | | | | |

Sample ID: **N043367-001D-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149390**
Client ID: **ZZZZZZ** Batch ID: **83439** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4042296**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 115.895 | 0.50 | 100.0 | 20.36 | 95.5 | 75 | 125 | | | | |
| Molybdenum | 26.398 | 0.50 | 10.00 | 15.63 | 108 | 75 | 125 | | | | |
| Selenium | 9.409 | 0.50 | 10.00 | 0 | 94.1 | 75 | 125 | | | | |

Sample ID: **N043367-001D-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/11/2020** RunNo: **149390**
Client ID: **ZZZZZZ** Batch ID: **83439** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4042301**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 115.781 | 0.50 | 100.0 | 20.36 | 95.4 | 75 | 125 | 115.9 | 0.0983 | 20 | |
| Molybdenum | 26.340 | 0.50 | 10.00 | 15.63 | 107 | 75 | 125 | 26.40 | 0.219 | 20 | |
| Selenium | 9.532 | 0.50 | 10.00 | 0 | 95.3 | 75 | 125 | 9.409 | 1.30 | 20 | |

**Qualifiers:**

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

N043387

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


Page 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Jacked Boyd | | P.O.# SWA-ASSET-C9817-057 | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12/09/20 | Sampled By: Nana Tay | | Global ID: | Regulatory | 5. IR number 21 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/9/20 | | | Sample Temp: 3.6°C |
| Project Number: 30035275 | | | | | Courier: ASSET Tracking No.: |

Matrix: Ground x | Sediment | Potable | Soil | NPDES | Other Solid | Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium isotopes (CFIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH [illegible] poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500NO3) Nitrate: H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOAs | Metals Dissolved (EPA7470A FF) Hg: HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 Cu, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | VOCs (8260) 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043387-01 | PGE-08-Q420 | 12/9/2020 | 16:04 | | X | | | X | X | | X | X | X | | | | X | | | | | X | | | | | E | 4 | P | BNS | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nana Tay | 12/9/20 16:30 | RA ROMEO ALCANTARA | 12-9-20 16:30 |
| RA ROMEO ALCANTARA | 12-9-20 19:37 | RA ROMEO ALCANTARA | 12-9-20 1937 |
| | | | |

**Turn Around Time (TAT)**

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

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

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

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

**Preservatives:**

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

**Container Type:**

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

White=Laboratory Copy

Yellow=Customer's Copy

## ASSET Laboratories

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

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

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/9/2020 | Workorder: | N043387 |
| Rep sample Temp (Deg C): | 3.6 | IR Gun ID: | 2 |

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

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

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

### Sample Receipt Checklist

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

Comments:

Checklist Completed By: BHN BHdez 12/10/2020

Reviewed By: MBC 12/17/2020

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043387

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/9/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043387-001A | PGE-08-Q420 | 12/9/2020 4:04:00 PM | 12/23/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043387-001B | | | 12/23/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043387-001C | | | 12/23/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043387-001D | | | 12/23/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/23/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043387-002A | FOLDER | 12/23/2020 | 12/23/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/23/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/23/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/23/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

January 04, 2021

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

TEL: (916) 786-3302
FAX:

Workorder No.: N043399

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 10, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Nancy Sibucao
Laboratory Director

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

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

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

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

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

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (29 ug/L) and hexavalent chromium (5.9 ug/L) for sample N043399-002 (MW-40S-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (5.7 ug/L) and hexavalent chromium (4.5 ug/L) for sample N043399-008 (MW-37D-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

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

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for some samples due to matrix. Samples have high TDS concentration.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043399-004DMS1, N043399-004DMSD1, N043399-004D-MS2 and N043399-004D-MSD2, N043417-003DMS1, N043417-003DMSD1, N043417-003D-MS2 and N043417-003D-MSD2

since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike Duplicate (MSD) is outside recovery criteria for Iron in QC sample N043399-004DMSD1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for Iron; however, the associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (29 ug/L) and hexavalent chromium (5.9 ug/L) for sample N043399-002 (MW-40S-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 17 and 7.6 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (5.7 ug/L) and hexavalent chromium (4.5 ug/L) for sample N043399-008 (MW-37D-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 6.2 and 4.7 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Nickel in QC samples N043399-004DMS and N043399-004DMSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Beryllium and Thallium in QC samples N043417-003DMS and N043417-003DMSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Barium in QC samples N043399-004DMS and N043399-004DMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043399
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043399-001A | MW-40D-Q420 | Groundwater | 12/10/2020 10:28:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-001B | MW-40D-Q420 | Groundwater | 12/10/2020 10:28:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-001C | MW-40D-Q420 | Groundwater | 12/10/2020 10:28:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-001D | MW-40D-Q420 | Groundwater | 12/10/2020 10:28:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-002A | MW-40S-Q420 | Groundwater | 12/10/2020 9:30:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-002B | MW-40S-Q420 | Groundwater | 12/10/2020 9:30:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-002C | MW-40S-Q420 | Groundwater | 12/10/2020 9:30:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-002D | MW-40S-Q420 | Groundwater | 12/10/2020 9:30:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-003A | MW-15-Q420 | Groundwater | 12/10/2020 8:24:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-003B | MW-15-Q420 | Groundwater | 12/10/2020 8:24:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-003C | MW-15-Q420 | Groundwater | 12/10/2020 8:24:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-004A | MW-14-Q420 | Groundwater | 12/10/2020 11:28:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-004B | MW-14-Q420 | Groundwater | 12/10/2020 11:28:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-004C | MW-14-Q420 | Groundwater | 12/10/2020 11:28:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-004D | MW-14-Q420 | Groundwater | 12/10/2020 11:28:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-005A | MW-16-Q420 | Groundwater | 12/10/2020 2:30:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-005B | MW-16-Q420 | Groundwater | 12/10/2020 2:30:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-005C | MW-16-Q420 | Groundwater | 12/10/2020 2:30:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-006A | MW-17-Q420 | Groundwater | 12/10/2020 1:18:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-006B | MW-17-Q420 | Groundwater | 12/10/2020 1:18:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-006C | MW-17-Q420 | Groundwater | 12/10/2020 1:18:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-007A | MW-18-Q420 | Groundwater | 12/10/2020 12:22:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-007B | MW-18-Q420 | Groundwater | 12/10/2020 12:22:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-007C | MW-18-Q420 | Groundwater | 12/10/2020 12:22:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-008A | MW-37D-Q420 | Groundwater | 12/10/2020 10:25:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-008B | MW-37D-Q420 | Groundwater | 12/10/2020 10:25:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-008C | MW-37D-Q420 | Groundwater | 12/10/2020 10:25:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-008D | MW-37D-Q420 | Groundwater | 12/10/2020 10:25:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-009A | MW-37S-Q420 | Groundwater | 12/10/2020 11:06:00 AM | 12/10/2020 | 1/4/2021 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043399
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043399-009B | MW-37S-Q420 | Groundwater | 12/10/2020 11:06:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-009C | MW-37S-Q420 | Groundwater | 12/10/2020 11:06:00 AM | 12/10/2020 | 1/4/2021 |
| N043399-010A | MW-11-Q420 | Groundwater | 12/10/2020 1:01:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-010B | MW-11-Q420 | Groundwater | 12/10/2020 1:01:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-010C | MW-11-Q420 | Groundwater | 12/10/2020 1:01:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-010D | MW-11-Q420 | Groundwater | 12/10/2020 1:01:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-011A | EB-717-Q420 | Groundwater | 12/10/2020 3:00:00 PM | 12/10/2020 | 1/4/2021 |
| N043399-012A | EB-718-Q420 | Groundwater | 12/10/2020 2:20:00 PM | 12/10/2020 | 1/4/2021 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 16000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3300 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-15-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2300 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-14-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-16-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1100 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-17-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-18-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 12:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 12000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-11-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201211B** | QC Batch: **R149331** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2400 | 0.10 | 0.10 | | umhos/cm | 1 | 12/11/2020 02:10 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

| Sample ID | N043399-001BDUP | SampType: | DUP | TestCode: | 120.1_WPGE | Units: | umhos/cm | Prep Date: | | RunNo: | 149331 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149331 | TestNo: | EPA 120.1 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4036812 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 15750.000 | 0.10 | | | | | | 15710 | 0.254 | 2 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201215H** | QC Batch: **83502** | | | | PrepDate: | **12/15/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/15/2020 12:56 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-15-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201215H** | QC Batch: **83502** | | | | PrepDate: | **12/15/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1400 | 17 | 17 | | mg/L | 1 | 12/15/2020 12:56 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-14-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201215H** | QC Batch: **83502** | | | PrepDate: | **12/15/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1900 | 25 | 25 | | mg/L | 1 | 12/15/2020 12:56 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-16-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201215H** | QC Batch: **83502** | | | PrepDate: | **12/15/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 630 | 10 | 10 | | mg/L | 1 | 12/15/2020 12:56 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-17-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 710 | 10 | 10 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-18-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 12:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 850 | 13 | 13 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | | PrepDate: | **12/16/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 7100 | 100 | 100 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | | PrepDate: | **12/16/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4200 | 50 | 50 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-11-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | | PrepDate: | **12/16/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1300 | 17 | 17 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID | LCS-83502 | SampType: | LCS | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/15/2020 | RunNo: | 149462 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83502 | TestNo: | SM2540C | | | Analysis Date: | 12/15/2020 | SeqNo: | 4047105 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 979.000 | 10 | 1000 | 0 | 97.9 | 80 | 120 | | | | |

| Sample ID | MB-83502 | SampType: | MBLK | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/15/2020 | RunNo: | 149462 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83502 | TestNo: | SM2540C | | | Analysis Date: | 12/15/2020 | SeqNo: | 4047106 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID | N043399-001BDUP | SampType: | DUP | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/15/2020 | RunNo: | 149462 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83502 | TestNo: | SM2540C | | | Analysis Date: | 12/15/2020 | SeqNo: | 4047110 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 10160.000 | 100 | | | | | | 10580 | 4.05 | 5 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID | LCS-83525 | SampType: | LCS | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/16/2020 | RunNo: | 149493 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83525 | TestNo: | SM2540C | | | Analysis Date: | 12/16/2020 | SeqNo: | 4048879 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 970.000 | 10 | 1000 | 0 | 97.0 | 80 | 120 | | | | |

| Sample ID | MB-83525 | SampType: | MBLK | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/16/2020 | RunNo: | 149493 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83525 | TestNo: | SM2540C | | | Analysis Date: | 12/16/2020 | SeqNo: | 4048880 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID | N043399-008BDUP | SampType: | DUP | TestCode: | 160.1_2540C | Units: | mg/L | Prep Date: | 12/16/2020 | RunNo: | 149493 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83525 | TestNo: | SM2540C | | | Analysis Date: | 12/16/2020 | SeqNo: | 4048884 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 7110.000 | 100 | | | | | | 7130 | 0.281 | 5 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 31 | 0.17 | 1.0 | | µg/L | 5 | 12/14/2020 11:24 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201216B** QC Batch: **83485** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 29 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 08:16 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201212A** | QC Batch: **R149357** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 5.9 | 0.17 | 1.0 | | µg/L | 5 | 12/12/2020 06:07 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 29 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 08:28 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-15-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201212A** QC Batch: **R149357** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 15 | 0.066 | 0.40 | | µg/L | 2 | 12/12/2020 06:26 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201216B** QC Batch: **83485** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 14 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 09:03 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-14-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 13 | 0.17 | 1.0 | | µg/L | 5 | 12/14/2020 11:43 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201216B** QC Batch: **83485** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 13 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 09:15 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-16-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201212A** QC Batch: **R149357** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 10 | 0.066 | 0.40 | | µg/L | 2 | 12/12/2020 06:45 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201216B** QC Batch: **83485** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 10 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 10:42 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-17-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201212A** QC Batch: **R149357** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 10 | 0.066 | 0.40 | | µg/L | 2 | 12/12/2020 07:22 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201216B** QC Batch: **83485** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 12 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 10:54 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-18-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 12:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201212A** QC Batch: **R149357** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 19 | 0.17 | 1.0 | | µg/L | 5 | 12/12/2020 07:41 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201216B** QC Batch: **83485** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 20 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 11:05 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** | QC Batch: **R149467** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 4.5 | 0.17 | 1.0 | | µg/L | 5 | 12/14/2020 01:50 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 5.7 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 11:28 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 12 | 0.17 | 1.0 | | µg/L | 5 | 12/14/2020 12:49 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 13 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 07:24 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-11-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201212A** QC Batch: **R149357** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 33 | 0.33 | 2.0 | | µg/L | 10 | 12/12/2020 08:00 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 33 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 07:33 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-717-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** | QC Batch: **R149467** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 01:12 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-718-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** | QC Batch: **R149467** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 01:31 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | MB-R149357 | SampType: | MBLK | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149357 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149357 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4039375 |

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

| Sample ID | LCS-R149357 | SampType: | LCS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149357 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149357 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4039376 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.018 | 0.20 | 5.000 | 0 | 100 | 90 | 110 | | | | |

| Sample ID | N043397-002ADUP | SampType: | DUP | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149357 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149357 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4039382 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.586 | 0.20 | | | | | | 3.390 | 5.61 | 20 | |

| Sample ID | N043397-005AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149357 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149357 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4039383 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 125.227 | 2.0 | 50.00 | 73.89 | 103 | 90 | 110 | | | | |

| Sample ID | N043397-005AMSD | SampType: | MSD | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149357 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149357 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4039384 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 125.722 | 2.0 | 50.00 | 73.89 | 104 | 90 | 110 | 125.2 | 0.395 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043397-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039387**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.763 | 0.20 | 5.000 | 3.390 | 107 | 90 | 110 | | | | |

Sample ID **N043397-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.129 | 0.20 | 1.000 | 0.07770 | 105 | 90 | 110 | | | | |

Sample ID **N043397-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039389**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 56.971 | 1.0 | 25.00 | 31.46 | 102 | 90 | 110 | | | | |

Sample ID **N043397-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039391**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.808 | 0.20 | 5.000 | 3.388 | 108 | 90 | 110 | | | | |

Sample ID **N043397-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039392**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.057 | 0.20 | 1.000 | 2.011 | 105 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043397-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039394**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.799 | 1.0 | 5.000 | 0 | 96.0 | 90 | 110 | | | | |

Sample ID **N043397-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039398**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.729 | 0.20 | 1.000 | 0.7189 | 101 | 90 | 110 | | | | |

Sample ID **N043397-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039400**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.532 | 0.20 | 1.000 | 0.4700 | 106 | 90 | 110 | | | | |

Sample ID **N043397-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039402**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 139.629 | 2.0 | 50.00 | 89.07 | 101 | 90 | 110 | | | | |

Sample ID **N043397-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039404**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 670.225 | 10 | 250.0 | 415.2 | 102 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N043397-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039406**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 783.080 | 10 | 250.0 | 533.0 | 100 | 90 | 110 | | | | |

Sample ID **N043397-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039410**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.012 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID **N043399-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039412**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 31.269 | 1.0 | 25.00 | 5.870 | 102 | 90 | 110 | | | | |

Sample ID **N043399-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039414**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 25.504 | 0.40 | 10.00 | 15.21 | 103 | 90 | 110 | | | | |

Sample ID **N043399-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149357**
Client ID: **ZZZZZZ** Batch ID: **R149357** TestNo: **EPA 218.6** Analysis Date: **12/12/2020** SeqNo: **4039416**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 20.017 | 0.40 | 10.00 | 10.09 | 99.2 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N043399-006AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149357** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149357** | TestNo: **EPA 218.6** | | Analysis Date: **12/12/2020** | SeqNo: **4039420** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 20.760 | 0.40 | 10.00 | 10.46 | 103 | 90 | 110 | | | | |

| Sample ID **N043399-007AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149357** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149357** | TestNo: **EPA 218.6** | | Analysis Date: **12/12/2020** | SeqNo: **4039422** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 44.376 | 1.0 | 25.00 | 19.06 | 101 | 90 | 110 | | | | |

| Sample ID **N043399-010AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149357** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149357** | TestNo: **EPA 218.6** | | Analysis Date: **12/12/2020** | SeqNo: **4039424** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 84.084 | 2.0 | 50.00 | 32.59 | 103 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | MB-R149467 | SampType: | MBLK | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047478 |

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

| Sample ID | LCS-R149467 | SampType: | LCS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047479 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.027 | 0.20 | 5.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID | N043368-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047481 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 7.048 | 1.0 | 5.000 | 2.074 | 99.5 | 90 | 110 | | | | |

| Sample ID | N043399-001AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047484 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 55.842 | 1.0 | 25.00 | 30.98 | 99.5 | 90 | 110 | | | | |

| Sample ID | N043399-004AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047486 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 37.782 | 1.0 | 25.00 | 12.79 | 100 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N043399-004AMSD | SampType: | MSD | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047487 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Hexavalent Chromium | 38.187 | 1.0 | 25.00 | 12.79 | 102 | 90 | 110 | 37.78 | 1.07 | 20 | | | |

| Sample ID | N043399-009AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047491 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Hexavalent Chromium | 36.488 | 1.0 | 25.00 | 11.88 | 98.4 | 90 | 110 | | | | | | |

| Sample ID | N043399-011AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047493 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Hexavalent Chromium | 0.979 | 0.20 | 1.000 | 0 | 97.9 | 90 | 110 | | | | | | |

| Sample ID | N043399-012AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047495 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Hexavalent Chromium | 1.017 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | | | |

| Sample ID | N043399-008AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047497 | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | | |
| Hexavalent Chromium | 9.377 | 1.0 | 5.000 | 4.503 | 97.5 | 90 | 110 | | | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N043399-009ADUP | SampType: | DUP | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047500 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 11.557 | 1.0 | | | | | | 11.88 | 2.73 | 20 | |

| Sample ID | N043417-001AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047502 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.997 | 0.20 | 1.000 | 0 | 99.7 | 90 | 110 | | | | |

| Sample ID | N043417-004AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047504 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.076 | 0.20 | 1.000 | 0 | 108 | 90 | 110 | | | | |

| Sample ID | N043417-006AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047506 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.049 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

| Sample ID | N043417-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047508 |

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

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N043417-008AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047512** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.013 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID **N043417-009AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047514** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.011 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID **N043417-010AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047516** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.507 | 0.20 | 1.000 | 0.4747 | 103 | 90 | 110 | | | | |

| Sample ID **N043417-011AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047518** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 37.384 | 1.0 | 25.00 | 11.83 | 102 | 90 | 110 | | | | |

| Sample ID **N043417-012AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047520** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 42.144 | 1.0 | 25.00 | 17.20 | 99.8 | 90 | 110 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N043417-013AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047524 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 44.154 | 1.0 | 25.00 | 19.06 | 100 | 90 | 110 | | | | |

| Sample ID | N043417-002AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047526 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.000 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

| Sample ID | N043417-005AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047528 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.019 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID | N043417-003AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 149467 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149467 | TestNo: | EPA 218.6 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4047530 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 7.455 | 1.0 | 5.000 | 2.725 | 94.6 | 90 | 110 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-83485 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4052952 |

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

| Sample ID | LCS-83485 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4052953 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.722 | 1.0 | 10.00 | 0 | 97.2 | 85 | 115 | | | | |

| Sample ID | N043399-004DMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4052999 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 22.242 | 1.0 | 10.00 | 13.24 | 90.1 | 75 | 125 | | | | |

| Sample ID | N043399-004DMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4053004 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 22.669 | 1.0 | 10.00 | 13.24 | 94.3 | 75 | 125 | 22.24 | 1.90 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-83486 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055045 |

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

| Sample ID | LCS-83486 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055046 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.824 | 1.0 | 10.00 | 0 | 98.2 | 85 | 115 | | | | |

| Sample ID | N043417-003DMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055064 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 13.698 | 1.0 | 10.00 | 4.450 | 92.5 | 75 | 125 | | | | |

| Sample ID | N043417-003DMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055069 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 13.641 | 1.0 | 10.00 | 4.450 | 91.9 | 75 | 125 | 13.70 | 0.417 | 20 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215C** | QC Batch: **R149433** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 47 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 03:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-15-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215C** | QC Batch: **R149433** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 67 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 03:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-14-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215C** | QC Batch: **R149433** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 60 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 03:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-16-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215C** | QC Batch: **R149433** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 100 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 03:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-17-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215C** | QC Batch: **R149433** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 60 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 03:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-18-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 12:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215C** | QC Batch: **R149433** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 89 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 03:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215C** | QC Batch: **R149433** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 32 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 03:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215C** | QC Batch: **R149433** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 44 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 03:10 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-11-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 87 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID **LCS-R149433** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149433** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149433** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045801** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 95.766 | 5.0 | 100.0 | 0 | 95.8 | 85 | 115 | | | | |

| Sample ID **MB-R149433** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149433** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149433** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045802** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID **N043399-004BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149433** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149433** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045818** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 58.468 | 5.0 | | | | | | 60.48 | 3.39 | 30 | |

| Sample ID **N043399-004BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149433** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149433** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045819** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 154.234 | 5.0 | 100.0 | 60.48 | 93.8 | 75 | 125 | | | | |

| Sample ID **N043399-004BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149433** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149433** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045820** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 154.234 | 5.0 | 100.0 | 60.48 | 93.8 | 75 | 125 | 154.2 | 0 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID | LCS-R149434 | SampType: | LCS | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149434 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149434 | TestNo: | SM 2320 B | | | Analysis Date: | 12/15/2020 | SeqNo: | 4045826 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 96.774 | 5.0 | 100.0 | 0 | 96.8 | 85 | 115 | | | | |

| Sample ID | MB-R149434 | SampType: | MBLK | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149434 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149434 | TestNo: | SM 2320 B | | | Analysis Date: | 12/15/2020 | SeqNo: | 4045827 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID | N043399-010BDUP | SampType: | DUP | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149434 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149434 | TestNo: | SM 2320 B | | | Analysis Date: | 12/15/2020 | SeqNo: | 4045829 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 88.710 | 5.0 | | | | | | 86.69 | 2.30 | 30 | |

| Sample ID | N043417-003BMS | SampType: | MS | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149434 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149434 | TestNo: | SM 2320 B | | | Analysis Date: | 12/15/2020 | SeqNo: | 4045832 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 210.685 | 5.0 | 100.0 | 121.0 | 89.7 | 75 | 125 | | | | |

| Sample ID | N043417-003BMSD | SampType: | MSD | TestCode: | 2320_W_SP | Units: | mg/L | Prep Date: | | RunNo: | 149434 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149434 | TestNo: | SM 2320 B | | | Analysis Date: | 12/15/2020 | SeqNo: | 4045833 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 213.710 | 5.0 | 100.0 | 121.0 | 92.7 | 75 | 125 | 210.7 | 1.43 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-001

**Client Sample ID:** MW-40D-Q420
**Collection Date:** 12/10/2020 10:28:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/11/2020 01:58 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5100 | 35 | 500 | | mg/L | 1000 | 12/12/2020 03:31 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 690 | 4.0 | 50 | | mg/L | 100 | 12/12/2020 07:06 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-003

**Client Sample ID:** MW-15-Q420
**Collection Date:** 12/10/2020 8:24:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/11/2020 02:13 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 590 | 7.0 | 100 | | mg/L | 200 | 12/12/2020 03:46 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 170 | 0.80 | 10 | | mg/L | 20 | 12/12/2020 07:20 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-004

**Client Sample ID:** MW-14-Q420
**Collection Date:** 12/10/2020 11:28:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/11/2020 07:54 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 940 | 7.0 | 100 | | mg/L | 200 | 12/11/2020 08:37 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 150 | 0.80 | 10 | | mg/L | 20 | 12/11/2020 09:48 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-005

**Client Sample ID:** MW-16-Q420
**Collection Date:** 12/10/2020 2:30:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/11/2020 02:27 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 180 | 1.7 | 25 | | mg/L | 50 | 12/14/2020 03:34 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 130 | 0.40 | 5.0 | | mg/L | 10 | 12/14/2020 07:23 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-17-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/11/2020 02:41 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 170 | 1.7 | 25 | | mg/L | 50 | 12/11/2020 10:31 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201211A** QC Batch: **R149369** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 270 | 2.0 | 25 | | mg/L | 50 | 12/11/2020 10:31 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-007

**Client Sample ID:** MW-18-Q420
**Collection Date:** 12/10/2020 12:22:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 12:58 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 360 | 3.5 | 50 | | mg/L | 100 | 12/14/2020 03:51 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 99 | 0.40 | 5.0 | | mg/L | 10 | 12/14/2020 07:39 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-008

**Client Sample ID:** MW-37D-Q420
**Collection Date:** 12/10/2020 10:25:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/12/2020 01:12 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3800 | 35 | 500 | | mg/L | 1000 | 12/14/2020 04:07 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 650 | 4.0 | 50 | | mg/L | 100 | 12/14/2020 07:55 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-009

**Client Sample ID:** MW-37S-Q420
**Collection Date:** 12/10/2020 11:06:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/12/2020 01:26 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2200 | 17 | 250 | | mg/L | 500 | 12/14/2020 04:23 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 330 | 2.0 | 25 | | mg/L | 50 | 12/14/2020 08:12 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-11-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/12/2020 01:41 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 590 | 7.0 | 100 | | mg/L | 200 | 12/14/2020 04:40 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 170 | 0.80 | 10 | | mg/L | 20 | 12/14/2020 09:00 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID | MB-R149369_BR | SampType: | MBLK | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040852 |

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

| Sample ID | LCS-R149369_BR | SampType: | LCS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040853 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.242 | 0.50 | 1.250 | 0 | 99.4 | 90 | 110 | | | | |

| Sample ID | N043398-008AMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040876 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.539 | 5.0 | 12.50 | 0.3710 | 97.3 | 80 | 120 | | | | |

| Sample ID | N043398-008AMSD | SampType: | MSD | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040877 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.550 | 5.0 | 12.50 | 0.3710 | 97.4 | 80 | 120 | 12.54 | 0.0877 | 20 | |

| Sample ID | N043398-006ADUP | SampType: | DUP | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040878 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.257 | 2.5 | | | | | | 0.2375 | 0 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID | N043398-006AMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040879 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.345 | 2.5 | 6.250 | 0.2375 | 97.7 | 80 | 120 | | | | |

| Sample ID | N043399-004BMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040881 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.268 | 2.5 | 6.250 | 0.2530 | 96.2 | 80 | 120 | | | | |

| Sample ID | N043399-004BMSD | SampType: | MSD | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040882 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.390 | 2.5 | 6.250 | 0.2530 | 98.2 | 80 | 120 | 6.268 | 1.93 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID | MB-R149370_BR | SampType: | MBLK | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149370 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149370 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4040957 |

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

| Sample ID | LCS-R149370_BR | SampType: | LCS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149370 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149370 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4040958 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.233 | 0.50 | 1.250 | 0 | 98.7 | 90 | 110 | | | | |

| Sample ID | N043417-003BMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149370 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149370 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4040965 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 2.703 | 1.0 | 2.500 | 0.4396 | 90.5 | 80 | 120 | | | | |

| Sample ID | N043417-003BMSD | SampType: | MSD | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149370 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149370 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4040968 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 2.630 | 1.0 | 2.500 | 0.4396 | 87.6 | 80 | 120 | 2.703 | 2.75 | 20 | |

| Sample ID | N043399-010BDUP | SampType: | DUP | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149370 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149370 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4040969 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.575 | 2.5 | | | | | | 0.5035 | 0 | 20 | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID | N043399-010BMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 149370 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149370 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/12/2020 | SeqNo: | 4040970 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.847 | 2.5 | 6.250 | 0.5035 | 101 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | MB-R149369_CL | SampType: | MBLK | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040810 |

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

| Sample ID | LCS-R149369_CL | SampType: | LCS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040811 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.045 | 0.50 | 2.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID | N043399-004BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040819 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1346.420 | 100 | 400.0 | 938.3 | 102 | 80 | 120 | | | | |

| Sample ID | N043399-004BMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040820 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1345.340 | 100 | 400.0 | 938.3 | 102 | 80 | 120 | 1346 | 0.0802 | 20 | |

| Sample ID | N043399-006BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040824 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 267.980 | 25 | 100.0 | 170.9 | 97.1 | 80 | 120 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID **N043398-001ADUP** | SampType: **DUP** | TestCode: **300_W_CLP** | Units: **mg/L** | Prep Date: | | | | | RunNo: **149369** | | | |
| Client ID: **ZZZZZZ** | Batch ID: **R149369** | TestNo: **EPA 300.0** | | Analysis Date: **12/11/2020** | | | | | SeqNo: **4040826** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Chloride | 477.480 | 50 | | | | | | 475.9 | 0.325 | 20 | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | MB-R149407_CL | SampType: | MBLK | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044207 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.158 | 0.50 | | | | | | | | | |

| Sample ID | LCS-R149407_CL | SampType: | LCS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044208 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.983 | 0.50 | 2.000 | 0 | 99.1 | 90 | 110 | | | | |

| Sample ID | N043417-003BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044210 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4898.500 | 500 | 2000 | 2948 | 97.5 | 80 | 120 | | | | |

| Sample ID | N043417-003BMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044211 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4912.200 | 500 | 2000 | 2948 | 98.2 | 80 | 120 | 4898 | 0.279 | 20 | |

| Sample ID | N043417-007BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044215 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 127.022 | 10 | 40.00 | 86.80 | 101 | 80 | 120 | | | | |

**Qualifiers:**

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

Calculations are based on raw values

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID **N043417-008BDUP** | SampType: **DUP** | TestCode: **300_W_CLP** | Units: **mg/L** | Prep Date: | | | RunNo: **149407** | | | | |
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | | | SeqNo: **4044217** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloride | 92.900 | 10 | | | | | | 93.10 | 0.217 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | MB-R149369_SO4 | SampType: | MBLK | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040897 |

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

| Sample ID | LCS-R149369_SO4 | SampType: | LCS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040898 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.013 | 0.50 | 4.000 | 0 | 100 | 90 | 110 | | | | |

| Sample ID | N043399-004BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040908 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 232.738 | 10 | 80.00 | 149.0 | 105 | 80 | 120 | | | | |

| Sample ID | N043399-004BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040909 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 232.418 | 10 | 80.00 | 149.0 | 104 | 80 | 120 | 232.7 | 0.138 | 20 | |

| Sample ID | N043399-006BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149369 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149369 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/11/2020 | SeqNo: | 4040911 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 468.165 | 25 | 200.0 | 269.1 | 99.6 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID **N043398-001ADUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | | | RunNo: **149369** | | | | |
| Client ID: **ZZZZZZ** | Batch ID: **R149369** | TestNo: **EPA 300.0** | | Analysis Date: **12/11/2020** | | | SeqNo: **4040913** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Sulfate | 254.568 | 10 | | | | | | 255.2 | 0.234 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | MB-R149407_SO4 | SampType: | MBLK | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044240 |

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

| Sample ID | LCS-R149407_SO4 | SampType: | LCS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044241 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.934 | 0.50 | 4.000 | 0 | 98.4 | 90 | 110 | | | | |

| Sample ID | N043417-003BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044243 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1318.400 | 50 | 400.0 | 908.7 | 102 | 80 | 120 | | | | |

| Sample ID | N043417-003BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044244 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1321.500 | 50 | 400.0 | 908.7 | 103 | 80 | 120 | 1318 | 0.235 | 20 | |

| Sample ID | N043417-007BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 149407 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149407 | TestNo: | EPA 300.0 | | | Analysis Date: | 12/14/2020 | SeqNo: | 4044248 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 285.636 | 10 | 80.00 | 201.8 | 105 | 80 | 120 | | | | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID **N043417-008BDUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | | | RunNo: **149407** | | | | |
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | | | SeqNo: **4044250** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Sulfate | 202.638 | 10 | | | | | | 205.3 | 1.32 | 20 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201221B** | QC Batch: **R149583** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.0 | 0.063 | 0.10 | | mg/L | 2 | 12/21/2020 04:19 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201221B** | QC Batch: **R149583** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 3.5 | 0.063 | 0.10 | | mg/L | 2 | 12/21/2020 04:23 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-14-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201221B** | QC Batch: **R149583** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.8 | 0.16 | 0.25 | | mg/L | 5 | 12/21/2020 02:32 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201221B** | QC Batch: **R149583** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.98 | 0.032 | 0.050 | | mg/L | 1 | 12/21/2020 02:50 PM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-11-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201221B** | QC Batch: **R149583** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 4.4 | 0.16 | 0.25 | | mg/L | 5 | 12/21/2020 04:37 PM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID | MB-R149583 | SampType: | MBLK | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 149583 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R149583 | TestNo: | SM4500-NO3 | | | Analysis Date: | 12/21/2020 | SeqNo: | 4054772 |

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

| Sample ID | LCS-R149583 | SampType: | LCS | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 149583 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R149583 | TestNo: | SM4500-NO3 | | | Analysis Date: | 12/21/2020 | SeqNo: | 4054773 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.498 | 0.050 | 0.5000 | 0 | 99.6 | 85 | 115 | | | | |

| Sample ID | N043399-004CDUP | SampType: | DUP | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 149583 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149583 | TestNo: | SM4500-NO3 | | | Analysis Date: | 12/21/2020 | SeqNo: | 4054775 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 2.800 | 0.25 | | | | | | 2.804 | 0.125 | 20 | |

| Sample ID | N043399-004CMS | SampType: | MS | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 149583 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149583 | TestNo: | SM4500-NO3 | | | Analysis Date: | 12/21/2020 | SeqNo: | 4054776 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.453 | 0.25 | 2.500 | 2.804 | 106 | 75 | 125 | | | | |

| Sample ID | N043399-004CMSD | SampType: | MSD | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 149583 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R149583 | TestNo: | SM4500-NO3 | | | Analysis Date: | 12/21/2020 | SeqNo: | 4054777 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.576 | 0.25 | 2.500 | 2.804 | 111 | 75 | 125 | 5.453 | 2.22 | 20 | |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83497** | | | | PrepDate: | **12/15/2020** | Analyst: **DJ** |
| Boron | 1700 | 370 | 500 | | ug/L | 5 | 12/26/2020 01:47 PM |
| Calcium | 300000 | 420 | 2500 | | ug/L | 5 | 12/22/2020 11:37 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/22/2020 11:37 PM |
| Magnesium | 49000 | 240 | 500 | | ug/L | 5 | 12/22/2020 11:37 PM |
| Sodium | 3000000 | 24000 | 120000 | | ug/L | 250 | 12/29/2020 09:11 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-15-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83497** | | | PrepDate: | **12/15/2020** | Analyst: **DJ** | |
| Boron | 200 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:01 PM |
| Calcium | 130000 | 85 | 500 | | ug/L | 1 | 12/22/2020 11:41 PM |
| Iron | 69 | 18 | 20 | | ug/L | 1 | 12/22/2020 11:41 PM |
| Magnesium | 36000 | 48 | 100 | | ug/L | 1 | 12/22/2020 11:41 PM |
| Sodium | 220000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 09:14 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-004

**Client Sample ID:** MW-14-Q420
**Collection Date:** 12/10/2020 11:28:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83497** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 250 | 74 | 100 | | ug/L | 1 | 12/26/2020 12:22 PM |
| Calcium | 160000 | 85 | 500 | | ug/L | 1 | 12/22/2020 09:43 PM |
| Iron | 67 | 18 | 20 | | ug/L | 1 | 12/22/2020 09:43 PM |
| Magnesium | 30000 | 48 | 100 | | ug/L | 1 | 12/22/2020 09:43 PM |
| Sodium | 370000 | 4800 | 25000 | | ug/L | 50 | 12/29/2020 06:44 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-005

**Client Sample ID:** MW-16-Q420
**Collection Date:** 12/10/2020 2:30:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83497** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 210 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:05 PM |
| Calcium | 22000 | 85 | 500 | | ug/L | 1 | 12/22/2020 11:46 PM |
| Iron | 29 | 18 | 20 | | ug/L | 1 | 12/22/2020 11:46 PM |
| Magnesium | 4400 | 48 | 100 | | ug/L | 1 | 12/22/2020 11:46 PM |
| Sodium | 180000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 09:17 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-006

**Client Sample ID:** MW-17-Q420
**Collection Date:** 12/10/2020 1:18:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83497** | | | | PrepDate: | **12/15/2020** | Analyst: **DJ** |
| Boron | ND | 74 | 100 | | ug/L | 1 | 12/26/2020 02:09 PM |
| Calcium | 48000 | 85 | 500 | | ug/L | 1 | 12/22/2020 11:51 PM |
| Iron | 29 | 18 | 20 | | ug/L | 1 | 12/22/2020 11:51 PM |
| Magnesium | 8000 | 48 | 100 | | ug/L | 1 | 12/22/2020 11:51 PM |
| Sodium | 170000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 09:20 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-007

**Client Sample ID:** MW-18-Q420
**Collection Date:** 12/10/2020 12:22:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83497** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | ND | 74 | 100 | | ug/L | 1 | 12/26/2020 02:14 PM |
| Calcium | 79000 | 85 | 500 | | ug/L | 1 | 12/22/2020 11:55 PM |
| Iron | 41 | 18 | 20 | | ug/L | 1 | 12/22/2020 11:55 PM |
| Magnesium | 13000 | 48 | 100 | | ug/L | 1 | 12/22/2020 11:55 PM |
| Sodium | 190000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 09:24 AM |

**Qualifiers:**

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

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83497** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 1300 | 370 | 500 | | ug/L | 5 | 12/26/2020 02:18 PM |
| Calcium | 220000 | 420 | 2500 | | ug/L | 5 | 12/23/2020 11:59 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/23/2020 11:59 PM |
| Magnesium | 15000 | 240 | 500 | | ug/L | 5 | 12/23/2020 11:59 PM |
| Sodium | 2400000 | 24000 | 120000 | | ug/L | 250 | 12/29/2020 09:34 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-009

**Client Sample ID:** MW-37S-Q420
**Collection Date:** 12/10/2020 11:06:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83497** | | | PrepDate: | **12/15/2020** | Analyst: **DJ** | |
| Boron | 730 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:22 PM |
| Calcium | 190000 | 85 | 500 | | ug/L | 1 | 12/23/2020 12:03 AM |
| Iron | 130 | 18 | 20 | | ug/L | 1 | 12/23/2020 12:03 AM |
| Magnesium | 34000 | 48 | 100 | | ug/L | 1 | 12/23/2020 12:03 AM |
| Sodium | 1300000 | 12000 | 62000 | | ug/L | 125 | 12/29/2020 09:37 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-010

**Client Sample ID:** MW-11-Q420
**Collection Date:** 12/10/2020 1:01:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 680 | 74 | 100 | | ug/L | 1 | 12/23/2020 11:29 AM |
| Calcium | 120000 | 85 | 500 | | ug/L | 1 | 12/23/2020 11:29 AM |
| Iron | 100 | 18 | 20 | | ug/L | 1 | 12/23/2020 11:29 AM |
| Magnesium | 26000 | 48 | 100 | | ug/L | 1 | 12/23/2020 11:29 AM |
| Sodium | 270000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 10:38 AM |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **MB-83497** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149635** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83497** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4057175** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

| Sample ID **LCS1-83497** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149635** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83497** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4057176** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 10213.207 | 500 | 10000 | 0 | 102 | 85 | 115 | | | | |
| Iron | 100.388 | 20 | 100.0 | 0 | 100 | 85 | 115 | | | | |
| Magnesium | 10001.870 | 100 | 10000 | 0 | 100 | 85 | 115 | | | | |

| Sample ID **N043399-004DMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149635** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83497** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4057180** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 173366.644 | 500 | 10000 | 158500 | 148 | 75 | 125 | | | | S |
| Iron | 155.620 | 20 | 100.0 | 67.13 | 88.5 | 75 | 125 | | | | |
| Magnesium | 41464.075 | 100 | 10000 | 30070 | 114 | 75 | 125 | | | | |

| Sample ID **N043399-004DMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149635** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83497** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4057181** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 174760.309 | 500 | 10000 | 158500 | 162 | 75 | 125 | 173400 | 0.801 | 20 | S |
| Iron | 132.295 | 20 | 100.0 | 67.13 | 65.2 | 75 | 125 | 155.6 | 16.2 | 20 | S |
| Magnesium | 41839.555 | 100 | 10000 | 30070 | 118 | 75 | 125 | 41460 | 0.901 | 20 | |

**Qualifiers:**

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

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | MB-83497 | SampType: | MBLK | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/15/2020 | RunNo: | 149683 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/26/2020 | SeqNo: | 4059170 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

| Sample ID | LCS1-83497 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/15/2020 | RunNo: | 149683 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/26/2020 | SeqNo: | 4059171 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4869.314 | 100 | 5000 | 0 | 97.4 | 85 | 115 | | | | |

| Sample ID | N043399-004DMS1 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/15/2020 | RunNo: | 149683 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/26/2020 | SeqNo: | 4059175 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5153.920 | 100 | 5000 | 249.7 | 98.1 | 75 | 125 | | | | |

| Sample ID | N043399-004DMSD1 | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/15/2020 | RunNo: | 149683 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/26/2020 | SeqNo: | 4059176 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5215.119 | 100 | 5000 | 249.7 | 99.3 | 75 | 125 | 5154 | 1.18 | 20 | |

| Sample ID | MB-83497 | SampType: | MBLK | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/15/2020 | RunNo: | 149729 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/29/2020 | SeqNo: | 4061262 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

**Qualifiers:**

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

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | LCS2-83497 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/15/2020 | RunNo: | 149729 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/29/2020 | SeqNo: | 4061263 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 19173.735 | 500 | 20000 | 0 | 95.9 | 85 | 115 | | | | |

| Sample ID | N043399-004D-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/15/2020 | RunNo: | 149729 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/29/2020 | SeqNo: | 4061270 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 414138.271 | 25000 | 20000 | 371400 | 214 | 75 | 125 | | | | S |

| Sample ID | N043399-004D-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 12/15/2020 | RunNo: | 149729 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/29/2020 | SeqNo: | 4061274 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 410754.056 | 25000 | 20000 | 371400 | 197 | 75 | 125 | 414100 | 0.821 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID **N043417-003DMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057785**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6692.047 | 100 | 5000 | 1526 | 103 | 75 | 125 | | | | |
| Calcium | 88549.533 | 500 | 10000 | 80190 | 83.6 | 75 | 125 | | | | |
| Iron | 165.709 | 20 | 100.0 | 231.5 | -65.8 | 75 | 125 | | | | S |
| Magnesium | 21090.193 | 100 | 10000 | 10770 | 103 | 75 | 125 | | | | |

Sample ID **N043417-003DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057786**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6754.691 | 100 | 5000 | 1526 | 105 | 75 | 125 | 6692 | 0.932 | 20 | |
| Calcium | 87077.571 | 500 | 10000 | 80190 | 68.9 | 75 | 125 | 88550 | 1.68 | 20 | S |
| Iron | 256.349 | 20 | 100.0 | 231.5 | 24.9 | 75 | 125 | 165.7 | 43.0 | 20 | SR |
| Magnesium | 20636.249 | 100 | 10000 | 10770 | 98.6 | 75 | 125 | 21090 | 2.18 | 20 | |

Sample ID **MB-83498** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **PBW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057809**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID **LCS1-83498** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **LCSW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057810**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5458.078 | 100 | 5000 | 0 | 109 | 85 | 115 | | | | |
| Calcium | 11471.634 | 500 | 10000 | 0 | 115 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID **LCS1-83498** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **LCSW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057810**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 109.219 | 20 | 100.0 | 0 | 109 | 85 | 115 | | | | |
| Magnesium | 11438.046 | 100 | 10000 | 0 | 114 | 85 | 115 | | | | |

Sample ID **MB-83498** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149729**
Client ID: **PBW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061314**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

Sample ID **LCS2-83498** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149729**
Client ID: **LCSW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061315**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18571.179 | 500 | 20000 | 0 | 92.9 | 85 | 115 | | | | |

Sample ID **N043417-003D-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2255618.813 | 120000 | 20000 | 2320000 | -324 | 75 | 125 | | | | S |

Sample ID **N043417-003D-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2237924.989 | 120000 | 20000 | 2320000 | -412 | 75 | 125 | 2256000 | 0.788 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N043399-004D-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149635 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/22/2020 | SeqNo: | 4057179 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 171790.992 | 500 | 10000 | 158500 | 133 | 80 | 120 | | | | S |
| Iron | 141.830 | 20 | 100.0 | 67.13 | 74.7 | 80 | 120 | | | | S |
| Magnesium | 41418.602 | 100 | 10000 | 30070 | 113 | 80 | 120 | | | | |

| Sample ID | N043399-004D-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149683 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/26/2020 | SeqNo: | 4059174 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5139.954 | 100 | 5000 | 249.7 | 97.8 | 80 | 120 | | | | |

| Sample ID | N043399-004D-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149729 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83497 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/29/2020 | SeqNo: | 4061268 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 398735.528 | 25000 | 20000 | 371400 | 137 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N043417-003D-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149642 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83498 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/23/2020 | SeqNo: | 4057784 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6435.461 | 100 | 5000 | 1526 | 98.2 | 80 | 120 | | | | |
| Calcium | 86175.870 | 500 | 10000 | 80190 | 59.9 | 80 | 120 | | | | S |
| Iron | 218.484 | 20 | 100.0 | 231.5 | -13.0 | 80 | 120 | | | | S |
| Magnesium | 20978.297 | 100 | 10000 | 10770 | 102 | 80 | 120 | | | | |

| Sample ID | N043417-003D-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 149729 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83498 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 12/29/2020 | SeqNo: | 4061324 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2197040.002 | 120000 | 20000 | 2320000 | -617 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Arsenic | 4.7 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Manganese | 6.4 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Molybdenum | 41 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Selenium | 1.0 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-40S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Arsenic | 0.55 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 08:28 PM |
| Manganese | 8.2 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 08:28 PM |
| Molybdenum | 5.2 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 08:28 PM |
| Selenium | 1.8 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 08:28 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-15-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | | PrepDate: | **12/15/2020** | Analyst: **CEI** |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 09:03 PM |
| Molybdenum | 3.1 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 09:03 PM |
| Selenium | 3.5 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 09:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043399
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043399-004

**Client Sample ID:** MW-14-Q420
**Collection Date:** 12/10/2020 11:28:00 AM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201216B** QC Batch: **83485** PrepDate: **12/15/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Barium | 190 | 0.75 | 5.0 | | µg/L | 5 | 12/16/2020 09:21 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/28/2020 12:19 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Manganese | 0.97 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Molybdenum | 10 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Selenium | 2.0 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Vanadium | 2.5 | 0.28 | 1.0 | | µg/L | 1 | 12/16/2020 09:15 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/16/2020 09:15 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-16-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | | PrepDate: | **12/15/2020** | Analyst: **CEI** |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 10:42 PM |
| Molybdenum | 13 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 10:42 PM |
| Selenium | 2.1 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 10:42 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-17-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Manganese | 1.2 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 10:54 PM |
| Molybdenum | 11 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 10:54 PM |
| Selenium | 7.7 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 10:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-18-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 12:22:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 11:05 PM |
| Molybdenum | 5.5 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 11:05 PM |
| Selenium | 3.6 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 11:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37D-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 10:25:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201216B** | QC Batch: **83485** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Manganese | 2.3 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 11:28 PM |
| Molybdenum | 65 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 11:28 PM |
| Selenium | 1.1 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 11:28 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-37S-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | Analyst: **CEI** |
| Arsenic | 2.0 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 07:24 PM |
| Manganese | 6.0 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 07:24 PM |
| Molybdenum | 15 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 07:24 PM |
| Selenium | 0.82 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 07:24 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-11-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201221D** | QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | Analyst: **CEI** |
| Arsenic | 1.4 | 0.081 | 0.10 | | µg/L | 1 | 12/21/2020 06:11 PM |
| Manganese | 0.60 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 07:33 PM |
| Molybdenum | 5.1 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 07:33 PM |
| Selenium | 4.0 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 07:33 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **MB-83485** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149563**
Client ID: **PBW** Batch ID: **83485** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4053125**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | ND | 1.0 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

Sample ID **LCS-83485** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149563**
Client ID: **LCSW** Batch ID: **83485** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4053126**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.392 | 0.50 | 10.00 | 0 | 104 | 85 | 115 | | | | |
| Arsenic | 9.867 | 0.10 | 10.00 | 0 | 98.7 | 85 | 115 | | | | |
| Barium | 9.629 | 1.0 | 10.00 | 0 | 96.3 | 85 | 115 | | | | |
| Beryllium | 10.703 | 0.50 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Cadmium | 9.598 | 0.50 | 10.00 | 0 | 96.0 | 85 | 115 | | | | |
| Cobalt | 9.875 | 0.50 | 10.00 | 0 | 98.8 | 85 | 115 | | | | |
| Lead | 9.308 | 1.0 | 10.00 | 0 | 93.1 | 85 | 115 | | | | |
| Manganese | 94.419 | 0.50 | 100.0 | 0 | 94.4 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | LCS-83485 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4053126 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 9.417 | 0.50 | 10.00 | 0 | 94.2 | 85 | 115 | | | | |
| Nickel | 9.898 | 1.0 | 10.00 | 0 | 99.0 | 85 | 115 | | | | |
| Selenium | 10.133 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Silver | 9.624 | 0.50 | 10.00 | 0 | 96.2 | 85 | 115 | | | | |
| Thallium | 9.496 | 0.50 | 10.00 | 0 | 95.0 | 85 | 115 | | | | |
| Vanadium | 10.176 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Zinc | 99.018 | 10 | 100.0 | 0 | 99.0 | 85 | 115 | | | | |

| Sample ID | N043399-004DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4053172 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.722 | 0.50 | 10.00 | 0 | 107 | 75 | 125 | | | | |
| Arsenic | 9.790 | 0.10 | 10.00 | 0 | 97.9 | 75 | 125 | | | | |
| Beryllium | 9.397 | 0.50 | 10.00 | 0 | 94.0 | 75 | 125 | | | | |
| Cadmium | 9.827 | 0.50 | 10.00 | 0 | 98.3 | 75 | 125 | | | | |
| Cobalt | 9.291 | 0.50 | 10.00 | 0.3839 | 89.1 | 75 | 125 | | | | |
| Lead | 9.772 | 1.0 | 10.00 | 0 | 97.7 | 75 | 125 | | | | |
| Manganese | 91.040 | 0.50 | 100.0 | 0.9699 | 90.1 | 75 | 125 | | | | |
| Molybdenum | 20.537 | 0.50 | 10.00 | 10.08 | 105 | 75 | 125 | | | | |
| Nickel | 5.801 | 1.0 | 10.00 | 0 | 58.0 | 75 | 125 | | | | S |
| Selenium | 12.015 | 0.50 | 10.00 | 1.956 | 101 | 75 | 125 | | | | |
| Silver | 9.246 | 0.50 | 10.00 | 0 | 92.5 | 75 | 125 | | | | |
| Thallium | 8.179 | 0.50 | 10.00 | 0 | 81.8 | 75 | 125 | | | | |
| Vanadium | 12.475 | 1.0 | 10.00 | 2.505 | 99.7 | 75 | 125 | | | | |
| Zinc | 86.478 | 10 | 100.0 | 0 | 86.5 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043399-004DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4053175 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 195.942 | 5.0 | 10.00 | 194.2 | 17.0 | 75 | 125 | | | | S |

| Sample ID | N043399-004DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4053177 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.415 | 0.50 | 10.00 | 0 | 104 | 75 | 125 | 10.72 | 2.91 | 20 | |
| Arsenic | 9.846 | 0.10 | 10.00 | 0 | 98.5 | 75 | 125 | 9.790 | 0.562 | 20 | |
| Beryllium | 9.144 | 0.50 | 10.00 | 0 | 91.4 | 75 | 125 | 9.397 | 2.73 | 20 | |
| Cadmium | 9.925 | 0.50 | 10.00 | 0 | 99.2 | 75 | 125 | 9.827 | 0.992 | 20 | |
| Cobalt | 9.583 | 0.50 | 10.00 | 0.3839 | 92.0 | 75 | 125 | 9.291 | 3.09 | 20 | |
| Lead | 9.802 | 1.0 | 10.00 | 0 | 98.0 | 75 | 125 | 9.772 | 0.308 | 20 | |
| Manganese | 92.526 | 0.50 | 100.0 | 0.9699 | 91.6 | 75 | 125 | 91.04 | 1.62 | 20 | |
| Molybdenum | 20.797 | 0.50 | 10.00 | 10.08 | 107 | 75 | 125 | 20.54 | 1.25 | 20 | |
| Nickel | 5.950 | 1.0 | 10.00 | 0 | 59.5 | 75 | 125 | 5.801 | 2.54 | 20 | S |
| Selenium | 12.081 | 0.50 | 10.00 | 1.956 | 101 | 75 | 125 | 12.01 | 0.553 | 20 | |
| Silver | 9.306 | 0.50 | 10.00 | 0 | 93.1 | 75 | 125 | 9.246 | 0.648 | 20 | |
| Thallium | 8.363 | 0.50 | 10.00 | 0 | 83.6 | 75 | 125 | 8.179 | 2.22 | 20 | |
| Vanadium | 12.700 | 1.0 | 10.00 | 2.505 | 102 | 75 | 125 | 12.48 | 1.78 | 20 | |
| Zinc | 87.895 | 10 | 100.0 | 0 | 87.9 | 75 | 125 | 86.48 | 1.62 | 20 | |

| Sample ID | N043399-004DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149563 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4053178 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 198.227 | 5.0 | 10.00 | 194.2 | 39.9 | 75 | 125 | 195.9 | 1.16 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | MB-83485 | SampType: | MBLK | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149714 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/28/2020 | SeqNo: | 4060397 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-83485 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149714 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/28/2020 | SeqNo: | 4060398 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.495 | 1.0 | 10.00 | 0 | 94.9 | 85 | 115 | | | | |

| Sample ID | N043399-004DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149714 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/28/2020 | SeqNo: | 4060416 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.689 | 1.0 | 10.00 | 0.8365 | 88.5 | 75 | 125 | | | | |

| Sample ID | N043399-004DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149714 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83485 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/28/2020 | SeqNo: | 4060417 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.928 | 1.0 | 10.00 | 0.8365 | 90.9 | 75 | 125 | 9.689 | 2.43 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID **MB-83486** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055215** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | 0.164 | 1.0 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

| Sample ID **LCS-83486** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055216** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.426 | 0.50 | 10.00 | 0 | 104 | 85 | 115 | | | | |
| Arsenic | 10.735 | 0.10 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Barium | 11.266 | 1.0 | 10.00 | 0 | 113 | 85 | 115 | | | | |
| Beryllium | 10.151 | 0.50 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Cadmium | 10.515 | 0.50 | 10.00 | 0 | 105 | 85 | 115 | | | | |
| Cobalt | 9.982 | 0.50 | 10.00 | 0 | 99.8 | 85 | 115 | | | | |
| Lead | 10.671 | 1.0 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Manganese | 96.364 | 0.50 | 100.0 | 0 | 96.4 | 85 | 115 | | | | |
| Molybdenum | 10.143 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Nickel | 9.602 | 1.0 | 10.00 | 0 | 96.0 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | LCS-83486 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055216 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 9.636 | 0.50 | 10.00 | 0 | 96.4 | 85 | 115 | | | | |
| Silver | 9.530 | 0.50 | 10.00 | 0 | 95.3 | 85 | 115 | | | | |
| Thallium | 10.118 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Vanadium | 10.194 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Zinc | 96.756 | 10 | 100.0 | 0 | 96.8 | 85 | 115 | | | | |

| Sample ID | N043417-003DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055234 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.307 | 0.50 | 10.00 | 0.1652 | 111 | 75 | 125 | | | | |
| Arsenic | 16.855 | 0.10 | 10.00 | 5.685 | 112 | 75 | 125 | | | | |
| Barium | 30.655 | 1.0 | 10.00 | 20.07 | 106 | 75 | 125 | | | | |
| Beryllium | 6.024 | 0.50 | 10.00 | 0 | 60.2 | 75 | 125 | | | | S |
| Cadmium | 9.922 | 0.50 | 10.00 | 0.05317 | 98.7 | 75 | 125 | | | | |
| Cobalt | 9.243 | 0.50 | 10.00 | 0 | 92.4 | 75 | 125 | | | | |
| Lead | 10.440 | 1.0 | 10.00 | 0 | 104 | 75 | 125 | | | | |
| Manganese | 94.006 | 0.50 | 100.0 | 6.018 | 88.0 | 75 | 125 | | | | |
| Molybdenum | 81.134 | 0.50 | 10.00 | 70.98 | 102 | 75 | 125 | | | | |
| Nickel | 9.790 | 1.0 | 10.00 | 0.8323 | 89.6 | 75 | 125 | | | | |
| Selenium | 10.339 | 0.50 | 10.00 | 0 | 103 | 75 | 125 | | | | |
| Silver | 9.654 | 0.50 | 10.00 | 0 | 96.5 | 75 | 125 | | | | |
| Thallium | 7.045 | 0.50 | 10.00 | 0 | 70.5 | 75 | 125 | | | | S |
| Vanadium | 17.028 | 1.0 | 10.00 | 6.603 | 104 | 75 | 125 | | | | |
| Zinc | 90.394 | 10 | 100.0 | 0 | 90.4 | 75 | 125 | | | | |

| Sample ID | N043417-003DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055239 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043417-003DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055239 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.379 | 0.50 | 10.00 | 0.1652 | 112 | 75 | 125 | 11.31 | 0.633 | 20 | |
| Arsenic | 16.719 | 0.10 | 10.00 | 5.685 | 110 | 75 | 125 | 16.85 | 0.809 | 20 | |
| Barium | 30.243 | 1.0 | 10.00 | 20.07 | 102 | 75 | 125 | 30.65 | 1.35 | 20 | |
| Beryllium | 6.031 | 0.50 | 10.00 | 0 | 60.3 | 75 | 125 | 6.024 | 0.117 | 20 | S |
| Cadmium | 10.541 | 0.50 | 10.00 | 0.05317 | 105 | 75 | 125 | 9.922 | 6.05 | 20 | |
| Cobalt | 9.245 | 0.50 | 10.00 | 0 | 92.4 | 75 | 125 | 9.243 | 0.0209 | 20 | |
| Lead | 10.492 | 1.0 | 10.00 | 0 | 105 | 75 | 125 | 10.44 | 0.503 | 20 | |
| Manganese | 94.042 | 0.50 | 100.0 | 6.018 | 88.0 | 75 | 125 | 94.01 | 0.0391 | 20 | |
| Molybdenum | 80.506 | 0.50 | 10.00 | 70.98 | 95.2 | 75 | 125 | 81.13 | 0.776 | 20 | |
| Nickel | 9.817 | 1.0 | 10.00 | 0.8323 | 89.9 | 75 | 125 | 9.790 | 0.279 | 20 | |
| Silver | 9.378 | 0.50 | 10.00 | 0 | 93.8 | 75 | 125 | 9.654 | 2.90 | 20 | |
| Thallium | 7.182 | 0.50 | 10.00 | 0 | 71.8 | 75 | 125 | 7.045 | 1.92 | 20 | S |
| Vanadium | 17.008 | 1.0 | 10.00 | 6.603 | 104 | 75 | 125 | 17.03 | 0.116 | 20 | |
| Zinc | 88.768 | 10 | 100.0 | 0 | 88.8 | 75 | 125 | 90.39 | 1.82 | 20 | |

| Sample ID | MB-83486 | SampType: | MBLK | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149637 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4058481 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-83486 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149637 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4058482 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 10.330 | 1.0 | 10.00 | 0 | 103 | 85 | 115 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043417-003DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149637 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4058489 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.289 | 1.0 | 10.00 | 0 | 92.9 | 75 | 125 | | | | |

| Sample ID | N043417-003DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149637 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4058492 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 8.963 | 1.0 | 10.00 | 0 | 89.6 | 75 | 125 | 9.289 | 3.58 | 20 | |

| Sample ID | N043417-003DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 12/15/2020 | RunNo: | 149637 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4059391 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 9.583 | 0.50 | 10.00 | 0 | 95.8 | 75 | 125 | 10.34 | 7.59 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **N043399-004D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149563**
Client ID: **ZZZZZZ** Batch ID: **83485** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4053169**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.466 | 0.50 | 10.00 | 0 | 105 | 80 | 120 | | | | |
| Arsenic | 10.100 | 0.10 | 10.00 | 0 | 101 | 80 | 120 | | | | |
| Beryllium | 9.567 | 0.50 | 10.00 | 0 | 95.7 | 80 | 120 | | | | |
| Cadmium | 10.187 | 0.50 | 10.00 | 0 | 102 | 80 | 120 | | | | |
| Cobalt | 9.349 | 0.50 | 10.00 | 0.3839 | 89.7 | 80 | 120 | | | | |
| Lead | 9.803 | 1.0 | 10.00 | 0 | 98.0 | 80 | 120 | | | | |
| Manganese | 91.254 | 0.50 | 100.0 | 0.9699 | 90.3 | 80 | 120 | | | | |
| Molybdenum | 20.791 | 0.50 | 10.00 | 10.08 | 107 | 80 | 120 | | | | |
| Nickel | 5.743 | 1.0 | 10.00 | 0 | 57.4 | 80 | 120 | | | | S |
| Selenium | 12.008 | 0.50 | 10.00 | 1.956 | 101 | 80 | 120 | | | | |
| Silver | 9.573 | 0.50 | 10.00 | 0 | 95.7 | 80 | 120 | | | | |
| Thallium | 8.099 | 0.50 | 10.00 | 0 | 81.0 | 80 | 120 | | | | |
| Vanadium | 12.731 | 1.0 | 10.00 | 2.505 | 102 | 80 | 120 | | | | |
| Zinc | 87.273 | 10 | 100.0 | 0 | 87.3 | 80 | 120 | | | | |

Sample ID **N043399-004D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149563**
Client ID: **ZZZZZZ** Batch ID: **83485** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4053170**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 203.962 | 5.0 | 10.00 | 194.2 | 97.2 | 80 | 120 | | | | |

Sample ID **N043399-004D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149714**
Client ID: **ZZZZZZ** Batch ID: **83485** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/28/2020** SeqNo: **4060415**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.564 | 1.0 | 10.00 | 0.8365 | 87.3 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043417-003D-PS | SampType: | PS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | | RunNo: | 149586 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/16/2020 | SeqNo: | 4055231 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.030 | 0.50 | 10.00 | 0.1652 | 109 | 80 | 120 | | | | |
| Arsenic | 17.098 | 0.10 | 10.00 | 5.685 | 114 | 80 | 120 | | | | |
| Barium | 29.383 | 1.0 | 10.00 | 20.07 | 93.1 | 80 | 120 | | | | |
| Beryllium | 6.185 | 0.50 | 10.00 | 0 | 61.8 | 80 | 120 | | | | S |
| Cadmium | 10.451 | 0.50 | 10.00 | 0.05317 | 104 | 80 | 120 | | | | |
| Cobalt | 9.292 | 0.50 | 10.00 | 0 | 92.9 | 80 | 120 | | | | |
| Lead | 10.710 | 1.0 | 10.00 | 0 | 107 | 80 | 120 | | | | |
| Manganese | 94.772 | 0.50 | 100.0 | 6.018 | 88.8 | 80 | 120 | | | | |
| Molybdenum | 78.164 | 0.50 | 10.00 | 70.98 | 71.8 | 80 | 120 | | | | S |
| Nickel | 9.976 | 1.0 | 10.00 | 0.8323 | 91.4 | 80 | 120 | | | | |
| Selenium | 10.972 | 0.50 | 10.00 | 0 | 110 | 80 | 120 | | | | |
| Silver | 9.565 | 0.50 | 10.00 | 0 | 95.6 | 80 | 120 | | | | |
| Thallium | 7.379 | 0.50 | 10.00 | 0 | 73.8 | 80 | 120 | | | | S |
| Vanadium | 16.701 | 1.0 | 10.00 | 6.603 | 101 | 80 | 120 | | | | |
| Zinc | 90.349 | 10 | 100.0 | 0 | 90.3 | 80 | 120 | | | | |

| Sample ID | N043417-003D-PS | SampType: | PS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | | RunNo: | 149637 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83486 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 12/21/2020 | SeqNo: | 4058488 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.196 | 1.0 | 10.00 | 0 | 92.0 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-14-Q420 |
| **Lab Order:** | N043399 | **Collection Date:** | 12/10/2020 11:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043399-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201212C** | QC Batch: **83457** | | | PrepDate: | **12/12/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/12/2020 03:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID | MB1-83457 | SampType: | MBLK | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/12/2020 | RunNo: | 149499 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83457 | TestNo: | EPA 7470A | | | Analysis Date: | 12/12/2020 | SeqNo: | 4049738 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID | MB2-83457 | SampType: | MBLK | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/12/2020 | RunNo: | 149499 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83457 | TestNo: | EPA 7470A | | | Analysis Date: | 12/12/2020 | SeqNo: | 4049739 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID | LCS-83457 | SampType: | LCS | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/12/2020 | RunNo: | 149499 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83457 | TestNo: | EPA 7470A | | | Analysis Date: | 12/12/2020 | SeqNo: | 4049740 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.110 | 0.20 | 5.000 | 0 | 102 | 85 | 115 | | | | |

| Sample ID | N043399-004DMS | SampType: | MS | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/12/2020 | RunNo: | 149499 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83457 | TestNo: | EPA 7470A | | | Analysis Date: | 12/12/2020 | SeqNo: | 4049744 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.000 | 0.20 | 5.000 | 0 | 100 | 75 | 125 | | | | |

| Sample ID | N043399-004DMSD | SampType: | MSD | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 12/12/2020 | RunNo: | 149499 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83457 | TestNo: | EPA 7470A | | | Analysis Date: | 12/12/2020 | SeqNo: | 4049747 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.580 | 0.20 | 5.000 | 0 | 112 | 75 | 125 | 5.000 | 11.0 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043399
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID **N043405-002C-MS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | | Prep Date: **12/12/2020** | | RunNo: **149499** | | | | |
| Client ID: **ZZZZZZ** | Batch ID: **83457** | TestNo: **EPA 7470A** | | | Analysis Date: **12/12/2020** | | SeqNo: **4049760** | | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Mercury | 4.140 | 0.20 | 5.000 | 0 | 82.8 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD



| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Reggie Tep | | P.O.# SWA-ASSET-C9817-057 | Others ✓ | LEVEL III | 3. Container Intact |
| Title: Field Tech | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Specify: RWQCB | LEVEL IV | 4. Seal Present |
| Signature: Date: 12/10/20 | Sampled By: Nara Tey | | Global ID: | Regulatory | 5. IR number 2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: Ice |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/10/20 | | | Sample Temp: 5.5°C / 1.3°C |
| Project Number: 30035275 | | | | | Courier: ASSET Tracking No.: |

Matrix: Ground x | Potable | NPDES | Surface; Sediment | Soil | Other Solid

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Oxygen and Deuterium Isotopes (CFIRM), Ice (250 mL poly) | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (2x250 mL poly) | Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly) | Bromide, Sulfate, Chloride (EPA 300.0) (1 liter poly) | Fluoride (EPA 300.0) (1 liter poly) | Specific Conductance (EPA 120.1) (1 liter poly) | Total Dissolved Solids (SM92540) (1 liter poly) | Nitrate/Nitrite (SM4500NO3) Nitrate; H2SO4 (125 mL poly) | Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOAs) | Metals Dissolved (EPA7470A FF) Hg; HNO3 (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Potassium (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni (500 mL poly) | Dissolved metals (SW 6020), HNO3 As., Cr, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 Cu, Ni (600 mL poly) | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn (600 mL poly) | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 (600 mL poly) | VOCs (8260) (3x40 mL VOAs) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043399-01 | MW-40D-Q420 | 12/10/2020 | 10:28 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 2 | -02 | MW-40S-Q420 | 12/10/2020 | 9:30 | | X | | | | | | X | | X | | | | | | | X | | | | | | E | 4 | P | BNS | |
| 3 | -03 | MW-15-Q420 | 12/10/2020 | 8:24 | | X | | | X | X | | X | X | | | | | X | | | | | | X | | | E | 3 | P | BN | |
| 4 | -04 | MW-14-Q420 | 12/10/2020 | 11:28 | | X | | | X | X | | X | X | X | | X | | | | X | | | | | X | | | E | 4 | P | BNS | MSMSD |
| 5 | -05 | MW-16-Q420 | 12/10/2020 | 14:30 | | | | X | X | X | | X | X | | | | | X | | | | | | X | | | | E | 4 | P | BN | |
| 6 | -06 | MW-17-Q420 | 12/10/2020 | 13:18 | | | | X | X | X | | X | X | | | | | X | | | | | | X | | | | E | 4 | P | BN | |
| 7 | -07 | MW-18-Q420 | 12/10/2020 | 12:22 | | X | | | X | X | | X | X | | | | | X | | | | | | X | | | | E | 3 | P | BN | |
| 8 | -08 | MW-37D-Q420 | 12/10/2020 | 10:25 | | X | | | X | X | | X | X | X | | | | X | | | | | | X | | | | E | 4 | P | BNS | |
| 9 | -09 | MW-37S-Q420 | 12/10/2020 | 11:06 | | X | | | X | X | | X | X | | | | | X | X | | | | | | | | | E | 3 | P | BN | |
| 10 | -10 | MW-11-Q420 | 12/10/2020 | 13:01 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 11 | -11 | EB-717-Q420 | 12/10/2020 | 15:00 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 12 | -12 | EB-718-Q420 | 12/10/2020 | 14:20 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Reggie Tep | 12/10/20 1745 | RA Romeo Alcantara | 12-10-20 1745 |
| RA Romeo Alcantara | 12-10-20 2014 | RA Romeo Alcantara | 12-10-20 2014 |
| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/10/2020 | Workorder: | N043399 |
| Rep sample Temp (Deg C): | 5.5/1.3 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

MBC 12/17/2020

Checklist Completed By: BHN BHdez 12/11/2020

Reviewed By:

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043399

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/10/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043399-001A | MW-40D-Q420 | 12/10/2020 10:28:00 AM | 12/24/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-001B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043399-001C | | | 12/24/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043399-001D | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043399-002A | MW-40S-Q420 | 12/10/2020 9:30:00 AM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-002B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| N043399-002C | | | 12/24/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043399-002D | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043399

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/10/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043399-003A | MW-15-Q420 | 12/10/2020 8:24:00 AM | 12/24/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-003B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043399-003C | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043399-004A | MW-14-Q420 | 12/10/2020 11:28:00 AM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043399-004B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043399

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/10/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043399-004B | MW-14-Q420 | 12/10/2020 11:28:00 AM | 12/24/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | LSR |
| N043399-004C | | | 12/24/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☐ | WW |
| N043399-004D | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/24/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☑ | ☐ | WW |
| | | | 12/24/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☑ | ☐ | WW |
| N043399-005A | MW-16-Q420 | 12/10/2020 2:30:00 PM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-005B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043399-005C | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043399

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/10/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043399-005C | MW-16-Q420 | 12/10/2020 2:30:00 PM | 12/24/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043399-006A | MW-17-Q420 | 12/10/2020 1:18:00 PM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-006B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043399-006C | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043399-007A | MW-18-Q420 | 12/10/2020 12:22:00 PM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-007B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043399

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/10/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043399-007B | MW-18-Q420 | 12/10/2020 12:22:00 PM | 12/24/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043399-007C | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043399-008A | MW-37D-Q420 | 12/10/2020 10:25:00 AM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-008B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043399-008C | | | 12/24/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043399-008D | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043399

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/10/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043399-008D | MW-37D-Q420 | 12/10/2020 10:25:00 AM | 12/24/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043399-009A | MW-37S-Q420 | 12/10/2020 11:06:00 AM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-009B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043399-009C | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043399-010A | MW-11-Q420 | 12/10/2020 1:01:00 PM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-010B | | | 12/24/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043399

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/10/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043399-010B | MW-11-Q420 | 12/10/2020 1:01:00 PM | 12/24/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/24/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043399-010C | | | 12/24/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043399-010D | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/24/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043399-011A | EB-717-Q420 | 12/10/2020 3:00:00 PM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-012A | EB-718-Q420 | 12/10/2020 2:20:00 PM | 12/24/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043399-013A | FOLDER | 12/24/2020 | 12/24/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/24/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/24/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/24/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

January 07, 2021

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043417

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 11, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (4.4 ug/L) and hexavalent chromium (2.7 ug/L) for sample N043417-003 (MW-44-115-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Since the result of total dissolved chromium (1.17 ug/L actual value) differs with hexavalent chromium (0.4747 ug/L) by no more 0.7 ug/L for sample N043417-010 (MW-39-080-Q420), reanalysis of the sample was not necessary.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043417-003DMS1, N043417-003DMSD1, N043417-003D-MS2 and N043417-003D-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for Iron; however, the associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (4.4 ug/L) and hexavalent chromium (2.7 ug/L) for sample N043417-003 (MW-44-115-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 4.2 and 2.9 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Since the result of total dissolved chromium (1.17 ug/L actual value) differs with hexavalent chromium (0.4747 ug/L) by no more 0.7 ug/L for sample N043417-010 (MW-39-080-Q420), reanalysis of the sample was not necessary.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Beryllium and Thallium in QC samples N043417-003DMS and N043417-003DMSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043417
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043417-001A | MW-44-070-Q420 | Groundwater | 12/11/2020 9:36:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-001B | MW-44-070-Q420 | Groundwater | 12/11/2020 9:36:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-001C | MW-44-070-Q420 | Groundwater | 12/11/2020 9:36:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-001D | MW-44-070-Q420 | Groundwater | 12/11/2020 9:36:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-002A | MW-44-070-EB-Q420 | Groundwater | 12/11/2020 9:07:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-003A | MW-44-115-Q420 | Groundwater | 12/11/2020 8:52:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-003B | MW-44-115-Q420 | Groundwater | 12/11/2020 8:52:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-003C | MW-44-115-Q420 | Groundwater | 12/11/2020 8:52:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-003D | MW-44-115-Q420 | Groundwater | 12/11/2020 8:52:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-003E | MW-44-115-Q420 | Groundwater | 12/11/2020 8:52:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-004A | MW-44-125-Q420 | Groundwater | 12/11/2020 8:12:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-004B | MW-44-125-Q420 | Groundwater | 12/11/2020 8:12:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-004C | MW-44-125-Q420 | Groundwater | 12/11/2020 8:12:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-004D | MW-44-125-Q420 | Groundwater | 12/11/2020 8:12:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-004E | MW-44-125-Q420 | Groundwater | 12/11/2020 8:12:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-005A | MW-44-125-EB-Q420 | Groundwater | 12/11/2020 7:42:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-006A | MW-39-040-Q420 | Groundwater | 12/11/2020 10:30:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-006B | MW-39-040-Q420 | Groundwater | 12/11/2020 10:30:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-006C | MW-39-040-Q420 | Groundwater | 12/11/2020 10:30:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-007A | MW-39-050-Q420 | Groundwater | 12/11/2020 9:16:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-007B | MW-39-050-Q420 | Groundwater | 12/11/2020 9:16:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-007C | MW-39-050-Q420 | Groundwater | 12/11/2020 9:16:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-008A | MW-39-060-Q420 | Groundwater | 12/11/2020 8:04:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-008B | MW-39-060-Q420 | Groundwater | 12/11/2020 8:04:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-008C | MW-39-060-Q420 | Groundwater | 12/11/2020 8:04:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-008D | MW-39-060-Q420 | Groundwater | 12/11/2020 8:04:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-009A | MW-39-070-Q420 | Groundwater | 12/11/2020 9:55:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-009B | MW-39-070-Q420 | Groundwater | 12/11/2020 9:55:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-009C | MW-39-070-Q420 | Groundwater | 12/11/2020 9:55:00 AM | 12/11/2020 | 1/7/2021 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043417
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043417-009D | MW-39-070-Q420 | Groundwater | 12/11/2020 9:55:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-010A | MW-39-080-Q420 | Groundwater | 12/11/2020 8:42:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-010B | MW-39-080-Q420 | Groundwater | 12/11/2020 8:42:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-010C | MW-39-080-Q420 | Groundwater | 12/11/2020 8:42:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-010D | MW-39-080-Q420 | Groundwater | 12/11/2020 8:42:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-011A | OW-03D-Q420 | Groundwater | 12/11/2020 8:07:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-011B | OW-03D-Q420 | Groundwater | 12/11/2020 8:07:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-011C | OW-03D-Q420 | Groundwater | 12/11/2020 8:07:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-012A | OW-03M-Q420 | Groundwater | 12/11/2020 8:46:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-012B | OW-03M-Q420 | Groundwater | 12/11/2020 8:46:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-012C | OW-03M-Q420 | Groundwater | 12/11/2020 8:46:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-013A | OW-03S-Q420 | Groundwater | 12/11/2020 10:11:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-013B | OW-03S-Q420 | Groundwater | 12/11/2020 10:11:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-013C | OW-03S-Q420 | Groundwater | 12/11/2020 10:11:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-014A | EB-720-Q420 | Groundwater | 12/11/2020 9:46:00 AM | 12/11/2020 | 1/7/2021 |
| N043417-015A | EB-721-Q420 | Groundwater | 12/11/2020 10:30:00 AM | 12/11/2020 | 1/7/2021 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-070-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:36:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-115-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:52:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 10000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-125-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 8200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-040-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 10:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-050-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 880 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-060-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:04:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 920 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-070-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1900 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-080-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 5200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03D-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:07:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 9600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03M-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:46:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03S-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 10:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201212A** | QC Batch: **R149348** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1400 | 0.10 | 0.10 | | umhos/cm | 1 | 12/12/2020 03:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

| Sample ID: **N043417-006BDUP** | SampType: **DUP** | TestCode: **120.1_WPGE** | Units: **umhos/cm** | Prep Date: | RunNo: **149348** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149348** | TestNo: **EPA 120.1** | | Analysis Date: **12/12/2020** | SeqNo: **4038335** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 998.000 | 0.10 | | | | | | 996.0 | 0.201 | 2 | |

| Sample ID: **N043417-013BDUP** | SampType: **DUP** | TestCode: **120.1_WPGE** | Units: **umhos/cm** | Prep Date: | RunNo: **149348** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149348** | TestNo: **EPA 120.1** | | Analysis Date: **12/12/2020** | SeqNo: **4038344** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 1383.000 | 0.10 | | | | | | 1381 | 0.145 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-070-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:36:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 970 | 13 | 13 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-115-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:52:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6300 | 100 | 100 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-125-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 5000 | 50 | 50 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-050-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 610 | 10 | 10 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-060-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:04:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 620 | 10 | 10 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-070-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1200 | 13 | 13 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-080-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3100 | 50 | 50 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03D-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:07:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6000 | 100 | 100 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03M-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:46:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3500 | 50 | 50 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03S-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 10:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216D** | QC Batch: **83526** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 780 | 10 | 10 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83526** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/16/2020** | RunNo: **149494** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83526** | TestNo: **SM2540C** | | Analysis Date: **12/16/2020** | SeqNo: **4048918** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 953.000 | 10 | 1000 | 0 | 95.3 | 80 | 120 | | | | |

| Sample ID: **MB-83526** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/16/2020** | RunNo: **149494** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83526** | TestNo: **SM2540C** | | Analysis Date: **12/16/2020** | SeqNo: **4048919** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043417-011BDUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/16/2020** | RunNo: **149494** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83526** | TestNo: **SM2540C** | | Analysis Date: **12/16/2020** | SeqNo: **4048928** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 6120.000 | 100 | | | | | | 6000 | 1.98 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-070-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:36:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 02:57 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: **12/15/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 07:43 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-070-EB-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:07:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| **EPA 218.6** | | | | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 06:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-115-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:52:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2.7 | 0.17 | 1.0 | | µg/L | 5 | 12/14/2020 07:37 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 4.4 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 08:16 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-125-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** | QC Batch: **R149467** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 03:17 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201221D** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/21/2020 06:58 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-125-EB-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 7:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| **EPA 218.6** | | | | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 07:09 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-040-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 10:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** | QC Batch: **R149467** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 03:41 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 09:36 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-050-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| **EPA 218.6** | | | | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** PrepDate: Analyst: **RAB** | | | | | | | |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 04:00 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** **EPA 6020** | | | | | | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** PrepDate: **12/15/2020** Analyst: **CEI** | | | | | | | |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 09:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-060-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:04:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 04:37 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: **12/15/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 10:09 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-070-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** | QC Batch: **R149467** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 04:56 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 10:18 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-080-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** | QC Batch: **R149467** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 0.47 | 0.033 | 0.20 | | µg/L | 1 | 12/14/2020 05:15 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 1.2 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 10:27 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03D-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:07:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 12 | 0.17 | 1.0 | | µg/L | 5 | 12/14/2020 05:34 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 13 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 10:37 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03M-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:46:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 17 | 0.17 | 1.0 | | µg/L | 5 | 12/14/2020 05:53 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 17 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 10:46 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03S-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 10:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201214A** QC Batch: **R149467** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 19 | 0.17 | 1.0 | | µg/L | 5 | 12/14/2020 06:31 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 20 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 11:14 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-720-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:46:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 09:58 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-721-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 10:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 10:17 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149467** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047478** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149467** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047479** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.027 | 0.20 | 5.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N043368-007AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047481** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 7.048 | 1.0 | 5.000 | 2.074 | 99.5 | 90 | 110 | | | | |

| Sample ID: **N043399-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047484** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 55.842 | 1.0 | 25.00 | 30.98 | 99.5 | 90 | 110 | | | | |

| Sample ID: **N043399-004AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149467** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149467** | TestNo: **EPA 218.6** | | Analysis Date: **12/14/2020** | SeqNo: **4047486** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 37.782 | 1.0 | 25.00 | 12.79 | 100 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043399-004AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047487**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 38.187 | 1.0 | 25.00 | 12.79 | 102 | 90 | 110 | 37.78 | 1.07 | 20 | |

Sample ID: **N043399-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047491**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 36.488 | 1.0 | 25.00 | 11.88 | 98.4 | 90 | 110 | | | | |

Sample ID: **N043399-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047493**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.979 | 0.20 | 1.000 | 0 | 97.9 | 90 | 110 | | | | |

Sample ID: **N043399-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047495**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.017 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043399-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047497**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.377 | 1.0 | 5.000 | 4.503 | 97.5 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043399-009ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047500**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 11.557 | 1.0 | | | | | | 11.88 | 2.73 | 20 | |

Sample ID: **N043417-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047502**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.997 | 0.20 | 1.000 | 0 | 99.7 | 90 | 110 | | | | |

Sample ID: **N043417-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047504**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.076 | 0.20 | 1.000 | 0 | 108 | 90 | 110 | | | | |

Sample ID: **N043417-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047506**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.049 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

Sample ID: **N043417-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047508**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.022 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043417-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047512**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.013 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043417-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047514**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.011 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043417-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047516**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.507 | 0.20 | 1.000 | 0.4747 | 103 | 90 | 110 | | | | |

Sample ID: **N043417-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047518**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 37.384 | 1.0 | 25.00 | 11.83 | 102 | 90 | 110 | | | | |

Sample ID: **N043417-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047520**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 42.144 | 1.0 | 25.00 | 17.20 | 99.8 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043417-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047524**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 44.154 | 1.0 | 25.00 | 19.06 | 100 | 90 | 110 | | | | |

Sample ID: **N043417-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047526**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.000 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N043417-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047528**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.019 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043417-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149467**
Client ID: **ZZZZZZ** Batch ID: **R149467** TestNo: **EPA 218.6** Analysis Date: **12/14/2020** SeqNo: **4047530**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 7.455 | 1.0 | 5.000 | 2.725 | 94.6 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **MB-R149525** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **PBW** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051171**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

Sample ID: **LCS-R149525** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **LCSW** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051172**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.951 | 0.20 | 5.000 | 0 | 99.0 | 90 | 110 | | | | |

Sample ID: **N043417-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051174**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.978 | 0.20 | 1.000 | 0 | 97.8 | 90 | 110 | | | | |

Sample ID: **N043417-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051176**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.019 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043453-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051178**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.013 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051182**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051184**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.078 | 0.20 | 1.000 | 0.05430 | 102 | 90 | 110 | | | | |

Sample ID: **N043469-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051186**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.094 | 0.20 | 1.000 | 0.07220 | 102 | 90 | 110 | | | | |

Sample ID: **N043469-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051190**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 87193.500 | 1000 | 25000 | 61390 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051192**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2958.400 | 40 | 1000 | 1971 | 98.7 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043469-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051194** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 86350.000 | 1000 | 25000 | 61090 | 101 | 90 | 110 | | | | |

| Sample ID: **N043469-002AMSD** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051195** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 87024.500 | 1000 | 25000 | 61390 | 103 | 90 | 110 | 87190 | 0.194 | 0 | |

| Sample ID: **N043469-004AMSD** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051196** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3000.520 | 40 | 1000 | 1971 | 103 | 90 | 110 | 2958 | 1.41 | 0 | |

| Sample ID: **N043469-004ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051197** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1988.380 | 40 | | | | | | 1971 | 0.872 | 20 | |

| Sample ID: **N043469-006AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051201** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.159 | 1.0 | 5.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051203**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.195 | 1.0 | 5.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043469-006AMSD** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051204**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.287 | 1.0 | 5.000 | 0 | 106 | 90 | 110 | 5.158 | 2.46 | 0 | |

Sample ID: **N043469-010AMSD** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051205**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.000 | 1.0 | 5.000 | 0 | 100 | 90 | 110 | 5.195 | 3.84 | 0 | |

Sample ID: **N043469-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051207**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2951.140 | 40 | 1000 | 1977 | 97.4 | 90 | 110 | | | | |

Sample ID: **N043469-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051209**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.676 | 1.0 | 5.000 | 0.5205 | 103 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051213**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.301 | 1.0 | 5.000 | 0 | 106 | 90 | 110 | | | | |

Sample ID: **N043469-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051215**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.745 | 1.0 | 5.000 | 0 | 94.9 | 90 | 110 | | | | |

Sample ID: **N043469-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051217**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.009 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043469-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051221**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.032 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051223**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.004 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043469-016AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051225** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.036 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83486** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055045** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83486** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055046** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.824 | 1.0 | 10.00 | 0 | 98.2 | 85 | 115 | | | | |

| Sample ID: **N043417-003DMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055064** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 13.698 | 1.0 | 10.00 | 4.450 | 92.5 | 75 | 125 | | | | |

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055069** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 13.641 | 1.0 | 10.00 | 4.450 | 91.9 | 75 | 125 | 13.70 | 0.417 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-070-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:36:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 200 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-115-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:52:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 120 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-125-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 120 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-050-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 180 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-060-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:04:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 190 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-070-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 190 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-080-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:42:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 250 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03D-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:07:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 31 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03M-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:46:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 49 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03S-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 10:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 76 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149434** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045826** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 96.774 | 5.0 | 100.0 | 0 | 96.8 | 85 | 115 | | | | |

| Sample ID: **MB-R149434** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045827** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043399-010BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045829** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 88.710 | 5.0 | | | | | | 86.69 | 2.30 | 30 | |

| Sample ID: **N043417-003BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045832** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 210.685 | 5.0 | 100.0 | 121.0 | 89.7 | 75 | 125 | | | | |

| Sample ID: **N043417-003BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045833** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 213.710 | 5.0 | 100.0 | 121.0 | 92.7 | 75 | 125 | 210.7 | 1.43 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-001

**Client Sample ID:** MW-44-070-Q420
**Collection Date:** 12/11/2020 9:36:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 03:55 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 260 | 1.7 | 25 | | mg/L | 50 | 12/14/2020 04:56 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 230 | 2.0 | 25 | | mg/L | 50 | 12/14/2020 04:56 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-003

**Client Sample ID:** MW-44-115-Q420
**Collection Date:** 12/11/2020 8:52:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 02:15 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2900 | 35 | 500 | | mg/L | 1000 | 12/14/2020 12:06 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 910 | 4.0 | 50 | | mg/L | 100 | 12/14/2020 12:55 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-004

**Client Sample ID:** MW-44-125-Q420
**Collection Date:** 12/11/2020 8:12:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 04:10 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2500 | 35 | 500 | | mg/L | 1000 | 12/14/2020 05:45 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 600 | 4.0 | 50 | | mg/L | 100 | 12/14/2020 09:17 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-007

**Client Sample ID:** MW-39-050-Q420
**Collection Date:** 12/11/2020 9:16:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 04:24 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 87 | 0.70 | 10 | | mg/L | 20 | 12/14/2020 02:16 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 200 | 0.80 | 10 | | mg/L | 20 | 12/14/2020 02:16 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-008

**Client Sample ID:** MW-39-060-Q420
**Collection Date:** 12/11/2020 8:04:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/12/2020 05:21 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 93 | 0.70 | 10 | | mg/L | 20 | 12/14/2020 02:49 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 210 | 0.80 | 10 | | mg/L | 20 | 12/14/2020 02:49 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-009

**Client Sample ID:** MW-39-070-Q420
**Collection Date:** 12/11/2020 9:55:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 04:38 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 380 | 3.5 | 50 | | mg/L | 100 | 12/14/2020 06:01 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 270 | 0.80 | 10 | | mg/L | 20 | 12/14/2020 09:33 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-010

**Client Sample ID:** MW-39-080-Q420
**Collection Date:** 12/11/2020 8:42:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 04:53 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1400 | 17 | 250 | | mg/L | 500 | 12/14/2020 06:17 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 460 | 2.0 | 25 | | mg/L | 50 | 12/14/2020 09:49 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-011

**Client Sample ID:** OW-03D-Q420
**Collection Date:** 12/11/2020 8:07:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/12/2020 06:18 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3200 | 35 | 500 | | mg/L | 1000 | 12/14/2020 06:34 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 470 | 2.0 | 25 | | mg/L | 50 | 12/14/2020 10:06 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-012

**Client Sample ID:** OW-03M-Q420
**Collection Date:** 12/11/2020 8:46:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 05:07 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1900 | 17 | 250 | | mg/L | 500 | 12/14/2020 06:50 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 340 | 2.0 | 25 | | mg/L | 50 | 12/14/2020 10:22 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-013

**Client Sample ID:** OW-03S-Q420
**Collection Date:** 12/11/2020 10:11:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201212A** QC Batch: **R149370** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/12/2020 06:04 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 330 | 3.5 | 50 | | mg/L | 100 | 12/14/2020 07:06 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201214B** QC Batch: **R149407** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 87 | 0.40 | 5.0 | | mg/L | 10 | 12/14/2020 10:38 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149370_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149370** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149370** | TestNo: **EPA 300.0** | | Analysis Date: **12/12/2020** | SeqNo: **4040957** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149370_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149370** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149370** | TestNo: **EPA 300.0** | | Analysis Date: **12/12/2020** | SeqNo: **4040958** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.233 | 0.50 | 1.250 | 0 | 98.7 | 90 | 110 | | | | |

| Sample ID: **N043417-003BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149370** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149370** | TestNo: **EPA 300.0** | | Analysis Date: **12/12/2020** | SeqNo: **4040965** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 2.703 | 1.0 | 2.500 | 0.4396 | 90.5 | 80 | 120 | | | | |

| Sample ID: **N043417-003BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149370** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149370** | TestNo: **EPA 300.0** | | Analysis Date: **12/12/2020** | SeqNo: **4040968** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 2.630 | 1.0 | 2.500 | 0.4396 | 87.6 | 80 | 120 | 2.703 | 2.75 | 20 | |

| Sample ID: **N043399-010BDUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149370** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149370** | TestNo: **EPA 300.0** | | Analysis Date: **12/12/2020** | SeqNo: **4040969** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.575 | 2.5 | | | | | | 0.5035 | 0 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **N043399-010BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149370** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149370** | TestNo: **EPA 300.0** | | Analysis Date: **12/12/2020** | SeqNo: **4040970** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.847 | 2.5 | 6.250 | 0.5035 | 101 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **MB-R149407_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044207** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.158 | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149407_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044208** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.983 | 0.50 | 2.000 | 0 | 99.1 | 90 | 110 | | | | |

| Sample ID: **N043417-003BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044210** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4898.500 | 500 | 2000 | 2948 | 97.5 | 80 | 120 | | | | |

| Sample ID: **N043417-003BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044211** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4912.200 | 500 | 2000 | 2948 | 98.2 | 80 | 120 | 4898 | 0.279 | 20 | |

| Sample ID: **N043417-007BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044215** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 127.022 | 10 | 40.00 | 86.80 | 101 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID: **N043417-008BDUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | | Prep Date: | | | | RunNo: **149407** | | |
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | | Analysis Date: **12/14/2020** | | | | SeqNo: **4044217** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Chloride | 92.900 | 10 | | | | | | 93.10 | 0.217 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **MB-R149407_SO4** | SampType: **MBLK** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044240** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149407_SO4** | SampType: **LCS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044241** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.934 | 0.50 | 4.000 | 0 | 98.4 | 90 | 110 | | | | |

| Sample ID: **N043417-003BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044243** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1318.400 | 50 | 400.0 | 908.7 | 102 | 80 | 120 | | | | |

| Sample ID: **N043417-003BMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044244** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1321.500 | 50 | 400.0 | 908.7 | 103 | 80 | 120 | 1318 | 0.235 | 20 | |

| Sample ID: **N043417-007BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149407** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149407** | TestNo: **EPA 300.0** | | Analysis Date: **12/14/2020** | SeqNo: **4044248** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 285.636 | 10 | 80.00 | 201.8 | 105 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043417-008BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149407**
Client ID: **ZZZZZZ** Batch ID: **R149407** TestNo: **EPA 300.0** Analysis Date: **12/14/2020** SeqNo: **4044250**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 202.638 | 10 | | | | | | 205.3 | 1.32 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-115-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:52:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217C** | QC Batch: **R149496** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 01:33 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-125-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:12:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217C** | QC Batch: **R149496** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 01:51 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-060-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:04:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217C** | QC Batch: **R149496** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 01:56 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149496** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | | | RunNo: **149496** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | | | SeqNo: **4049377** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R149496** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | | | RunNo: **149496** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | | | SeqNo: **4049378** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Nitrate/Nitrite as N | 0.479 | 0.050 | 0.5000 | 0 | 95.8 | 85 | 115 | | | | |

| Sample ID: **N043417-003CDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | | | RunNo: **149496** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | | | SeqNo: **4049380** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Nitrate/Nitrite as N | 0.038 | 0.050 | | | | | | 0.04890 | 0 | 20 | |

| Sample ID: **N043417-003CMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | | | RunNo: **149496** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | | | SeqNo: **4049381** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Nitrate/Nitrite as N | 0.537 | 0.050 | 0.5000 | 0.04890 | 97.6 | 75 | 125 | | | | |

| Sample ID: **N043417-003CMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | | | RunNo: **149496** | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | | | SeqNo: **4049382** | | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Nitrate/Nitrite as N | 0.573 | 0.050 | 0.5000 | 0.04890 | 105 | 75 | 125 | 0.5370 | 6.50 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-001

**Client Sample ID:** MW-44-070-Q420
**Collection Date:** 12/11/2020 9:36:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 200 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:26 PM |
| Calcium | 72000 | 85 | 500 | | ug/L | 1 | 12/23/2020 09:17 AM |
| Iron | 410 | 18 | 20 | | ug/L | 1 | 12/23/2020 09:17 AM |
| Magnesium | 18000 | 48 | 100 | | ug/L | 1 | 12/23/2020 09:17 AM |
| Sodium | 230000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 10:41 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-003

**Client Sample ID:** MW-44-115-Q420
**Collection Date:** 12/11/2020 8:52:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 1500 | 74 | 100 | | ug/L | 1 | 12/23/2020 08:45 AM |
| Calcium | 80000 | 85 | 500 | | ug/L | 1 | 12/23/2020 08:45 AM |
| Iron | 230 | 18 | 20 | | ug/L | 1 | 12/23/2020 08:45 AM |
| Magnesium | 11000 | 48 | 100 | | ug/L | 1 | 12/23/2020 08:45 AM |
| Sodium | 2300000 | 24000 | 120000 | | ug/L | 250 | 12/29/2020 10:00 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-004

**Client Sample ID:** MW-44-125-Q420
**Collection Date:** 12/11/2020 8:12:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | Analyst: **DJ** | |
| Boron | 320 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:30 PM |
| Calcium | 65000 | 85 | 500 | | ug/L | 1 | 12/23/2020 09:33 AM |
| Iron | 310 | 18 | 20 | | ug/L | 1 | 12/23/2020 09:33 AM |
| Magnesium | 17000 | 48 | 100 | | ug/L | 1 | 12/23/2020 09:33 AM |
| Sodium | 440000 | 4800 | 25000 | | ug/L | 50 | 12/29/2020 10:44 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-007

**Client Sample ID:** MW-39-050-Q420
**Collection Date:** 12/11/2020 9:16:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 120 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:35 PM |
| Calcium | 72000 | 85 | 500 | | ug/L | 1 | 12/23/2020 09:38 AM |
| Iron | 150 | 18 | 20 | | ug/L | 1 | 12/23/2020 09:38 AM |
| Magnesium | 19000 | 48 | 100 | | ug/L | 1 | 12/23/2020 09:38 AM |
| Sodium | 100000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 10:47 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-008

**Client Sample ID:** MW-39-060-Q420
**Collection Date:** 12/11/2020 8:04:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 140 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:39 PM |
| Calcium | 54000 | 85 | 500 | | ug/L | 1 | 12/23/2020 09:42 AM |
| Iron | 120 | 18 | 20 | | ug/L | 1 | 12/23/2020 09:42 AM |
| Magnesium | 17000 | 48 | 100 | | ug/L | 1 | 12/23/2020 09:42 AM |
| Sodium | 120000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 10:51 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-009

**Client Sample ID:** MW-39-070-Q420
**Collection Date:** 12/11/2020 9:55:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 220 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:50 PM |
| Calcium | 53000 | 85 | 500 | | ug/L | 1 | 12/23/2020 09:46 AM |
| Iron | 220 | 18 | 20 | | ug/L | 1 | 12/23/2020 09:46 AM |
| Magnesium | 17000 | 48 | 100 | | ug/L | 1 | 12/23/2020 09:46 AM |
| Sodium | 360000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 11:08 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-010

**Client Sample ID:** MW-39-080-Q420
**Collection Date:** 12/11/2020 8:42:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 610 | 74 | 100 | | ug/L | 1 | 12/26/2020 02:55 PM |
| Calcium | 100000 | 85 | 500 | | ug/L | 1 | 12/23/2020 09:50 AM |
| Iron | 32 | 18 | 20 | | ug/L | 1 | 12/23/2020 09:50 AM |
| Magnesium | 38000 | 48 | 100 | | ug/L | 1 | 12/23/2020 09:50 AM |
| Sodium | 1100000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 11:11 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-011

**Client Sample ID:** OW-03D-Q420
**Collection Date:** 12/11/2020 8:07:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | Analyst: **DJ** | |
| Boron | 1400 | 74 | 100 | | ug/L | 1 | 12/23/2020 09:54 AM |
| Calcium | 150000 | 85 | 500 | | ug/L | 1 | 12/23/2020 09:54 AM |
| Iron | 54 | 18 | 20 | | ug/L | 1 | 12/23/2020 09:54 AM |
| Magnesium | 22000 | 48 | 100 | | ug/L | 1 | 12/23/2020 09:54 AM |
| Sodium | 1900000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 11:14 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-012

**Client Sample ID:** OW-03M-Q420
**Collection Date:** 12/11/2020 8:46:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | 1500 | 74 | 100 | | ug/L | 1 | 12/23/2020 10:00 AM |
| Calcium | 85000 | 85 | 500 | | ug/L | 1 | 12/23/2020 10:00 AM |
| Iron | 420 | 18 | 20 | | ug/L | 1 | 12/23/2020 10:00 AM |
| Magnesium | 12000 | 48 | 100 | | ug/L | 1 | 12/23/2020 10:00 AM |
| Sodium | 1200000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 11:17 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-013

**Client Sample ID:** OW-03S-Q420
**Collection Date:** 12/11/2020 10:11:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | | Analyst: **DJ** |
| Boron | ND | 74 | 100 | | ug/L | 1 | 12/26/2020 02:59 PM |
| Calcium | 59000 | 85 | 500 | | ug/L | 1 | 12/23/2020 10:04 AM |
| Iron | 56 | 18 | 20 | | ug/L | 1 | 12/23/2020 10:04 AM |
| Magnesium | 11000 | 48 | 100 | | ug/L | 1 | 12/23/2020 10:04 AM |
| Sodium | 180000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 11:21 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043417-003DMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057785**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6692.047 | 100 | 5000 | 1526 | 103 | 75 | 125 | | | | |
| Calcium | 88549.533 | 500 | 10000 | 80190 | 83.6 | 75 | 125 | | | | |
| Iron | 165.709 | 20 | 100.0 | 231.5 | -65.8 | 75 | 125 | | | | S |
| Magnesium | 21090.193 | 100 | 10000 | 10770 | 103 | 75 | 125 | | | | |

Sample ID: **N043417-003DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057786**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6754.691 | 100 | 5000 | 1526 | 105 | 75 | 125 | 6692 | 0.932 | 20 | |
| Calcium | 87077.571 | 500 | 10000 | 80190 | 68.9 | 75 | 125 | 88550 | 1.68 | 20 | S |
| Iron | 256.349 | 20 | 100.0 | 231.5 | 24.9 | 75 | 125 | 165.7 | 43.0 | 20 | SR |
| Magnesium | 20636.249 | 100 | 10000 | 10770 | 98.6 | 75 | 125 | 21090 | 2.18 | 20 | |

Sample ID: **MB-83498** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **PBW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057809**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83498** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **LCSW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057810**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5458.078 | 100 | 5000 | 0 | 109 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS1-83498** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149642** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83498** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/23/2020** | SeqNo: **4057810** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 11471.634 | 500 | 10000 | 0 | 115 | 85 | 115 | | | | |
| Iron | 109.219 | 20 | 100.0 | 0 | 109 | 85 | 115 | | | | |
| Magnesium | 11438.046 | 100 | 10000 | 0 | 114 | 85 | 115 | | | | |

| Sample ID: **MB-83498** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149729** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83498** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4061314** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

| Sample ID: **LCS2-83498** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149729** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83498** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4061315** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18571.179 | 500 | 20000 | 0 | 92.9 | 85 | 115 | | | | |

| Sample ID: **N043417-003D-MS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149729** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83498** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4061326** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2255618.813 | 120000 | 20000 | 2320000 | -324 | 75 | 125 | | | | S |

| Sample ID: **N043417-003D-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/15/2020** | RunNo: **149729** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83498** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4061328** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2237924.989 | 120000 | 20000 | 2320000 | -412 | 75 | 125 | 2256000 | 0.788 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043417-003D-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057784**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6435.461 | 100 | 5000 | 1526 | 98.2 | 80 | 120 | | | | |
| Calcium | 86175.870 | 500 | 10000 | 80190 | 59.9 | 80 | 120 | | | | S |
| Iron | 218.484 | 20 | 100.0 | 231.5 | -13.0 | 80 | 120 | | | | S |
| Magnesium | 20978.297 | 100 | 10000 | 10770 | 102 | 80 | 120 | | | | |

Sample ID: **N043417-003D-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061324**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2197040.002 | 120000 | 20000 | 2320000 | -617 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-001

**Client Sample ID:** MW-44-070-Q420
**Collection Date:** 12/11/2020 9:36:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | PrepDate: | | **12/15/2020** | Analyst: **CEI** |
| Arsenic | 2.7 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 07:43 PM |
| Manganese | 190 | 1.3 | 2.5 | | µg/L | 5 | 12/16/2020 07:48 PM |
| Molybdenum | 8.8 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 07:43 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 07:43 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-003

**Client Sample ID:** MW-44-115-Q420
**Collection Date:** 12/11/2020 8:52:00 AM
**Matrix:** GROUNDWATER

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201216A** QC Batch: **83486** PrepDate: **12/15/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Arsenic | 5.7 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Barium | 20 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 06:20 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Manganese | 6.0 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Molybdenum | 71 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Vanadium | 6.6 | 0.28 | 1.0 | | µg/L | 1 | 12/16/2020 08:16 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/16/2020 08:16 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-004

**Client Sample ID:** MW-44-125-Q420
**Collection Date:** 12/11/2020 8:12:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Arsenic | 2.5 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 09:26 PM |
| Manganese | 170 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 09:26 PM |
| Molybdenum | 27 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 09:26 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 09:26 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-006

**Client Sample ID:** MW-39-040-Q420
**Collection Date:** 12/11/2020 10:30:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Arsenic | 18 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 09:36 PM |
| Manganese | 99 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 09:36 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-007

**Client Sample ID:** MW-39-050-Q420
**Collection Date:** 12/11/2020 9:16:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Arsenic | 2.0 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 09:45 PM |
| Manganese | 170 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 09:45 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 09:45 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 09:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-008

**Client Sample ID:** MW-39-060-Q420
**Collection Date:** 12/11/2020 8:04:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Arsenic | 2.7 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 10:09 PM |
| Manganese | 110 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 10:09 PM |
| Molybdenum | 5.2 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 10:09 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 10:09 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-009

**Client Sample ID:** MW-39-070-Q420
**Collection Date:** 12/11/2020 9:55:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201221D** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Manganese | 3.6 | 0.26 | 0.50 | | µg/L | 1 | 12/21/2020 07:17 PM |
| Molybdenum | 16 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 10:18 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 10:18 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-010

**Client Sample ID:** MW-39-080-Q420
**Collection Date:** 12/11/2020 8:42:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Manganese | 4.2 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 10:27 PM |
| Molybdenum | 26 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 10:27 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 10:27 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | OW-03D-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:07:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201221D** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Manganese | 2.1 | 0.26 | 0.50 | | µg/L | 1 | 12/21/2020 07:26 PM |
| Molybdenum | 23 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 10:37 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/21/2020 07:26 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-012

**Client Sample ID:** OW-03M-Q420
**Collection Date:** 12/11/2020 8:46:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201221D** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Manganese | 0.50 | 0.26 | 0.50 | | µg/L | 1 | 12/21/2020 07:31 PM |
| Molybdenum | 15 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 10:46 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/21/2020 07:31 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043417
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043417-013

**Client Sample ID:** OW-03S-Q420
**Collection Date:** 12/11/2020 10:11:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201221D** | QC Batch: **83486** | | | PrepDate: | | **12/15/2020** | Analyst: **CEI** |
| Manganese | 0.70 | 0.26 | 0.50 | | µg/L | 1 | 12/21/2020 07:50 PM |
| Molybdenum | 7.5 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 11:14 PM |
| Selenium | 5.3 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 11:14 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83486** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149586**
Client ID: **PBW** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4055215**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | 0.164 | 1.0 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

Sample ID: **LCS-83486** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149586**
Client ID: **LCSW** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4055216**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.426 | 0.50 | 10.00 | 0 | 104 | 85 | 115 | | | | |
| Arsenic | 10.735 | 0.10 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Barium | 11.266 | 1.0 | 10.00 | 0 | 113 | 85 | 115 | | | | |
| Beryllium | 10.151 | 0.50 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Cadmium | 10.515 | 0.50 | 10.00 | 0 | 105 | 85 | 115 | | | | |
| Cobalt | 9.982 | 0.50 | 10.00 | 0 | 99.8 | 85 | 115 | | | | |
| Lead | 10.671 | 1.0 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Manganese | 96.364 | 0.50 | 100.0 | 0 | 96.4 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **LCS-83486** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055216** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 10.143 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Nickel | 9.602 | 1.0 | 10.00 | 0 | 96.0 | 85 | 115 | | | | |
| Selenium | 9.636 | 0.50 | 10.00 | 0 | 96.4 | 85 | 115 | | | | |
| Silver | 9.530 | 0.50 | 10.00 | 0 | 95.3 | 85 | 115 | | | | |
| Thallium | 10.118 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Vanadium | 10.194 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Zinc | 96.756 | 10 | 100.0 | 0 | 96.8 | 85 | 115 | | | | |

| Sample ID: **N043417-003DMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055234** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.307 | 0.50 | 10.00 | 0.1652 | 111 | 75 | 125 | | | | |
| Arsenic | 16.855 | 0.10 | 10.00 | 5.685 | 112 | 75 | 125 | | | | |
| Barium | 30.655 | 1.0 | 10.00 | 20.07 | 106 | 75 | 125 | | | | |
| Beryllium | 6.024 | 0.50 | 10.00 | 0 | 60.2 | 75 | 125 | | | | S |
| Cadmium | 9.922 | 0.50 | 10.00 | 0.05317 | 98.7 | 75 | 125 | | | | |
| Cobalt | 9.243 | 0.50 | 10.00 | 0 | 92.4 | 75 | 125 | | | | |
| Lead | 10.440 | 1.0 | 10.00 | 0 | 104 | 75 | 125 | | | | |
| Manganese | 94.006 | 0.50 | 100.0 | 6.018 | 88.0 | 75 | 125 | | | | |
| Molybdenum | 81.134 | 0.50 | 10.00 | 70.98 | 102 | 75 | 125 | | | | |
| Nickel | 9.790 | 1.0 | 10.00 | 0.8323 | 89.6 | 75 | 125 | | | | |
| Selenium | 10.339 | 0.50 | 10.00 | 0 | 103 | 75 | 125 | | | | |
| Silver | 9.654 | 0.50 | 10.00 | 0 | 96.5 | 75 | 125 | | | | |
| Thallium | 7.045 | 0.50 | 10.00 | 0 | 70.5 | 75 | 125 | | | | S |
| Vanadium | 17.028 | 1.0 | 10.00 | 6.603 | 104 | 75 | 125 | | | | |
| Zinc | 90.394 | 10 | 100.0 | 0 | 90.4 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055239** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.379 | 0.50 | 10.00 | 0.1652 | 112 | 75 | 125 | 11.31 | 0.633 | 20 | |
| Arsenic | 16.719 | 0.10 | 10.00 | 5.685 | 110 | 75 | 125 | 16.85 | 0.809 | 20 | |
| Barium | 30.243 | 1.0 | 10.00 | 20.07 | 102 | 75 | 125 | 30.65 | 1.35 | 20 | |
| Beryllium | 6.031 | 0.50 | 10.00 | 0 | 60.3 | 75 | 125 | 6.024 | 0.117 | 20 | S |
| Cadmium | 10.541 | 0.50 | 10.00 | 0.05317 | 105 | 75 | 125 | 9.922 | 6.05 | 20 | |
| Cobalt | 9.245 | 0.50 | 10.00 | 0 | 92.4 | 75 | 125 | 9.243 | 0.0209 | 20 | |
| Lead | 10.492 | 1.0 | 10.00 | 0 | 105 | 75 | 125 | 10.44 | 0.503 | 20 | |
| Manganese | 94.042 | 0.50 | 100.0 | 6.018 | 88.0 | 75 | 125 | 94.01 | 0.0391 | 20 | |
| Molybdenum | 80.506 | 0.50 | 10.00 | 70.98 | 95.2 | 75 | 125 | 81.13 | 0.776 | 20 | |
| Nickel | 9.817 | 1.0 | 10.00 | 0.8323 | 89.9 | 75 | 125 | 9.790 | 0.279 | 20 | |
| Silver | 9.378 | 0.50 | 10.00 | 0 | 93.8 | 75 | 125 | 9.654 | 2.90 | 20 | |
| Thallium | 7.182 | 0.50 | 10.00 | 0 | 71.8 | 75 | 125 | 7.045 | 1.92 | 20 | S |
| Vanadium | 17.008 | 1.0 | 10.00 | 6.603 | 104 | 75 | 125 | 17.03 | 0.116 | 20 | |
| Zinc | 88.768 | 10 | 100.0 | 0 | 88.8 | 75 | 125 | 90.39 | 1.82 | 20 | |

| Sample ID: **MB-83486** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4058481** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83486** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4058482** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 10.330 | 1.0 | 10.00 | 0 | 103 | 85 | 115 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **N043417-003DMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4058489** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.289 | 1.0 | 10.00 | 0 | 92.9 | 75 | 125 | | | | |

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4058492** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 8.963 | 1.0 | 10.00 | 0 | 89.6 | 75 | 125 | 9.289 | 3.58 | 20 | |

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4059391** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 9.583 | 0.50 | 10.00 | 0 | 95.8 | 75 | 125 | 10.34 | 7.59 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043417-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149586**
Client ID: **ZZZZZZ** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4055231**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.030 | 0.50 | 10.00 | 0.1652 | 109 | 80 | 120 | | | | |
| Arsenic | 17.098 | 0.10 | 10.00 | 5.685 | 114 | 80 | 120 | | | | |
| Barium | 29.383 | 1.0 | 10.00 | 20.07 | 93.1 | 80 | 120 | | | | |
| Beryllium | 6.185 | 0.50 | 10.00 | 0 | 61.8 | 80 | 120 | | | | S |
| Cadmium | 10.451 | 0.50 | 10.00 | 0.05317 | 104 | 80 | 120 | | | | |
| Cobalt | 9.292 | 0.50 | 10.00 | 0 | 92.9 | 80 | 120 | | | | |
| Lead | 10.710 | 1.0 | 10.00 | 0 | 107 | 80 | 120 | | | | |
| Manganese | 94.772 | 0.50 | 100.0 | 6.018 | 88.8 | 80 | 120 | | | | |
| Molybdenum | 78.164 | 0.50 | 10.00 | 70.98 | 71.8 | 80 | 120 | | | | S |
| Nickel | 9.976 | 1.0 | 10.00 | 0.8323 | 91.4 | 80 | 120 | | | | |
| Selenium | 10.972 | 0.50 | 10.00 | 0 | 110 | 80 | 120 | | | | |
| Silver | 9.565 | 0.50 | 10.00 | 0 | 95.6 | 80 | 120 | | | | |
| Thallium | 7.379 | 0.50 | 10.00 | 0 | 73.8 | 80 | 120 | | | | S |
| Vanadium | 16.701 | 1.0 | 10.00 | 6.603 | 101 | 80 | 120 | | | | |
| Zinc | 90.349 | 10 | 100.0 | 0 | 90.3 | 80 | 120 | | | | |

Sample ID: **N043417-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149637**
Client ID: **ZZZZZZ** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/21/2020** SeqNo: **4058488**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.196 | 1.0 | 10.00 | 0 | 92.0 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-44-115-Q420 |
| **Lab Order:** | N043417 | **Collection Date:** | 12/11/2020 8:52:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043417-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| **EPA 7470A** | | | | | | | |
| RunID: **NV00922-AA2_201216B** QC Batch: **83514** PrepDate: **12/16/2020** Analyst: **DJ** | | | | | | | |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/16/2020 12:14 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **MB-83514** | SampType: **MBLK** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047335** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-83514** | SampType: **LCS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047336** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.720 | 0.20 | 5.000 | 0 | 94.4 | 85 | 115 | | | | |

| Sample ID: **N043417-003DMS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047346** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.160 | 0.20 | 5.000 | 0 | 103 | 75 | 125 | | | | |

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047347** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.110 | 0.20 | 5.000 | 0 | 102 | 75 | 125 | 5.160 | 0.974 | 20 | |

| Sample ID: **N043452-001DMS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047352** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.970 | 0.20 | 5.000 | 0 | 99.4 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043417
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **N043452-001DMSD** | SampType: **MSD** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047353** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.840 | 0.20 | 5.000 | 0 | 96.8 | 75 | 125 | 4.970 | 2.65 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD



| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Specify: RWQCB |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Global ID: |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 |
| Submitted By: Jeded Boyd | | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Field Tech | Phone: 916-786-3302 Fax: | | |
| Signature: Date: 12/11/20 | Sampled By: Ressia Tap | | |

QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:

Sample Receipt Condition

| | Y | N |
|---|---|---|
| 1. Chilled | ✓ | |
| 2. Headspace | | |
| 3. Container Intact | ✓ | |
| 4. Seal Present | | ✓ |
| 5. IR number | L | |

6. Method of Cooling: ICe
Sample Temp: 2.4/7.1

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Signature: Date: 12/11/20

Project Name: PG&E Topock - GMP
Project Number: 30035275

Matrix: Ground x; Sediment; Potable; Soil; NPDES; Other Solid; Surface

Courier:
Tracking No.:

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | 250 mL poly | 250 mL poly | 2x250 mL poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 125 mL poly | 3x40 mL VOAs | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Oxygen and Deuterium Isotopes (CFIRM), Ice | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Alkalinity, Total as CaCO3 (SM2320B) | Bromide, Sulfate, Chloride (EPA 300.0) | Fluoride (EPA 300.0) | Specific Conductance (EPA 120.1) | Total Dissolved Solids (SM92540) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 | Total Organic Carbon (SM5310C); H2SO4 | Metals Dissolved (EPA7470A FF) Hg; HNO3 | Dissolved Metals (SW 6010B); HNO3 Potassium | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | Dissolved metals (SW 6020), HNO3 As, Cr, Mn | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 Cu, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 | VOCs (8260) | | | | | |
| 1 | N043417-01 | MW-44-070-Q420 | 12/11/2020 | 9:36 | | | X | X | X | X | | X | X | | | | | X | X | | | | | | | | E | 5 | P | BN | |
| 2 | -02 | MW-44-070-EB-Q420 | 12/11/2020 | 9:07 | | X | | | X | X | | X | X | X | | X | | | | X | | | | | X | | E | 1 | P | B | |
| 3 | -03 | MW-44-115-Q420 | 12/11/2020 | 8:52 | | X | X | | X | X | | X | X | X | | | | | | | X | | | | | | E | 5 | P | BNS | MSMSD |
| 4 | -04 | MW-44-125-Q420 | 12/11/2020 | 8:12 | | | X | X | X | X | | X | X | X | | | | X | X | | | | | | | | E | 6 | P | BNS | |
| 5 | -05 | MW-44-125-EB-Q420 | 12/11/2020 | 7:42 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 6 | -06 | MW-39-040-Q420 | 12/11/2020 | 10:30 | | X | | | | | | X | | | | | | | | | X | | | | | | E | 3 | P | BN | |
| 7 | -07 | MW-39-050-Q420 | 12/11/2020 | 9:16 | | X | | | X | X | | X | X | | | | | X | X | | | | | | | | E | 3 | P | BN | |
| 8 | -08 | MW-39-060-Q420 | 12/11/2020 | 8:04 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 9 | -09 | MW-39-070-Q420 | 12/11/2020 | 9:55 | | X | X | | X | X | | X | X | | | | | X | | | | | X | | | (1) | E ~~5~~ | P | BN | * 4 |
| 10 | -10 | MW-39-080-Q420 | 12/11/2020 | 8:42 | | X | X | | X | X | | X | X | | | | | X | | | | | X | | | (1) | E ~~6~~ | P | BN | * 4 |
| 11 | -11 | OW-03D-Q420 | 12/11/2020 | 8:07 | | X | | | X | X | | X | X | | | | | X | | | | | X | | | | E | 3 | P | BN | |
| 12 | -12 | OW-03M-Q420 | 12/11/2020 | 8:46 | | X | | | X | X | | X | X | | | | | X | | | | | X | | | | E | 3 | P | BN | |

Relinquished by (Signature and Printed Name): Ressia Tap Date/Time: 12/11/20 1145
Received by (Signature and Printed Name): JVGE Date/Time: 12/12/20 1145

Relinquished by (Signature and Printed Name): JVGE Date/Time: 12/12/20 1901
Received by (Signature and Printed Name): JVGE Date/Time: 12/12/20 1901

Relinquished by (Signature and Printed Name): Date/Time:
Received by (Signature and Printed Name): Date/Time:

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD

Page 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# SWA-ASSET-C9817-057 | Labspec | CalTrans | 2. Headspace ✓ |
| Submitted By: Jesse D Bay | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | | | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12/11/20 | Sampled By: Reggie Tep | | Global ID: | Regulatory | 5. IR number 2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: Date: 12/11/20 | | | | Sample Temp: 2.4 / 2.1 |
| Project Number: 30035275 | | | | | Courier: Tracking No.: |

Matrix: Ground x | Sediment | Potable | Soil | NPDES | Other Solid | Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CFIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 2x250 mL poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOAs | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043417-13 | OW-03S-Q420 | 12/11/2020 | 10:11 | | X | | | X | X | | X | X | | | | | X | | | | | X | | | E | 3 | P | BN | |
| 2 | -14 | EB-720-Q420 | 12/11/2020 | 9:46 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 3 | -15 | EB-721-Q420 | 12/11/2020 | 10:30 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Reggie Tep | 12/11/20 1145 | [signature] | 12/12/20 1145 |
| [signature] | 12/12/20 1901 | [signature] | 12/12/20 1900 |
| | | | |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

| Preservatives: | | | | Container Type: | | |
|---|---|---|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C | T=Tube | V=VOA | P=Pint |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | | J=Jar | B=Tedlar | G=Glass |
| Others/Specify: | B | (NH4)2SO4/NH4OH | | M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/12/2020 | Workorder: | N043417 |
| Rep sample Temp (Deg C): | 2.4/2.1 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/14/2020

Reviewed By: MBC 12/17/2020

# ASSET Laboratories

## WORK ORDER Summary

*14-Dec-20*

**WorkOrder:** N043417

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/11/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043417-001A | MW-44-070-Q420 | 12/11/2020 9:36:00 AM | 12/28/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-001B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043417-001C | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-001D | | | 12/28/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043417-002A | MW-44-070-EB-Q420 | 12/11/2020 9:07:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-003A | MW-44-115-Q420 | 12/11/2020 8:52:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043417-003B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | LSR |
| | | | 12/28/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*14-Dec-20*

**WorkOrder:** N043417

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/11/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043417-003B | MW-44-115-Q420 | 12/11/2020 8:52:00 AM | 12/28/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | LSR |
| N043417-003C | | | 12/28/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☐ | WW |
| N043417-003D | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/28/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☑ | ☐ | WW |
| | | | 12/28/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☑ | ☐ | WW |
| N043417-003E | | | 12/28/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☑ | ☑ | SUB |
| N043417-004A | MW-44-125-Q420 | 12/11/2020 8:12:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-004B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*14-Dec-20*

**WorkOrder:** N043417

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/11/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043417-004C | MW-44-125-Q420 | 12/11/2020 8:12:00 AM | 12/28/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-004D | | | 12/28/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043417-004E | | | 12/28/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043417-005A | MW-44-125-EB-Q420 | 12/11/2020 7:42:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-006A | MW-39-040-Q420 | 12/11/2020 10:30:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-006B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| N043417-006C | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-007A | MW-39-050-Q420 | 12/11/2020 9:16:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-007B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*14-Dec-20*

**WorkOrder:** N043417

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/11/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043417-007C | MW-39-050-Q420 | 12/11/2020 9:16:00 AM | 12/28/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-008A | MW-39-060-Q420 | 12/11/2020 8:04:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-008B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043417-008C | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-008D | | | 12/28/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043417-009A | MW-39-070-Q420 | 12/11/2020 9:55:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-009B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*14-Dec-20*

**WorkOrder:** N043417

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/11/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043417-009B | MW-39-070-Q420 | 12/11/2020 9:55:00 AM | 12/28/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043417-009C | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-009D | | | 12/28/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043417-010A | MW-39-080-Q420 | 12/11/2020 8:42:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-010B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*14-Dec-20*

**WorkOrder:** N043417

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/11/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043417-010C | MW-39-080-Q420 | 12/11/2020 8:42:00 AM | 12/28/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-010D | | | 12/28/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043417-011A | OW-03D-Q420 | 12/11/2020 8:07:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-011B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043417-011C | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-012A | OW-03M-Q420 | 12/11/2020 8:46:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-012B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*14-Dec-20*

**WorkOrder:** N043417

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/11/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043417-012B | OW-03M-Q420 | 12/11/2020 8:46:00 AM | 12/28/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043417-012C | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-013A | OW-03S-Q420 | 12/11/2020 10:11:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-013B | | | 12/28/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/28/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043417-013C | | | 12/28/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*14-Dec-20*

**WorkOrder:** N043417

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/11/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043417-013C | OW-03S-Q420 | 12/11/2020 10:11:00 AM | 12/28/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/28/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043417-014A | EB-720-Q420 | 12/11/2020 9:46:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-015A | EB-721-Q420 | 12/11/2020 10:30:00 AM | 12/28/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043417-016A | FOLDER | 12/28/2020 | 12/28/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/28/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/28/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/28/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: Reggie Tep

**14-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043417-001D / MW-44-070-Q420 | Groundwater | 12/11/2020 9:36:00 AM | 8OZP | 1 | | |
| N043417-003E / MW-44-115-Q420 | Groundwater | 12/11/2020 8:52:00 AM | 8OZP | 1 | | |
| N043417-004E / MW-44-125-Q420 | Groundwater | 12/11/2020 8:12:00 AM | 8OZP | 1 | | |
| N043417-009D / MW-39-070-Q420 | Groundwater | 12/11/2020 9:55:00 AM | 8OZP | 1 | | |
| N043417-010D / MW-39-080-Q420 | Groundwater | 12/11/2020 8:42:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43417A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium by CFIRM.

Fedex #: 772361876690

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/14/2020 1600 | **Received by:** | | |
| **Relinquished by:** | | | **Received by:** | | |

January 05, 2021

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043434

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 14, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043434

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Sample N043434-008 (MW-38D-1220) was not analyzed for some analytes. Please see attached correspondence.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043417-003DMS1, N043417-003DMSD1, N043417-003D-MS2 and N043417-003D-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for Iron; however, the associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Beryllium and Thallium in QC samples N043417-003DMS and N043417-003DMSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043434
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043434-001A | PM-03-Q420 | Groundwater | 12/14/2020 9:45:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-001B | PM-03-Q420 | Groundwater | 12/14/2020 9:45:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-001C | PM-03-Q420 | Groundwater | 12/14/2020 9:45:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-001D | PM-03-Q420 | Groundwater | 12/14/2020 9:45:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-001E | PM-03-Q420 | Groundwater | 12/14/2020 9:45:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-002A | PM-04-Q420 | Groundwater | 12/14/2020 10:10:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-002B | PM-04-Q420 | Groundwater | 12/14/2020 10:10:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-002C | PM-04-Q420 | Groundwater | 12/14/2020 10:10:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-002D | PM-04-Q420 | Groundwater | 12/14/2020 10:10:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-002E | PM-04-Q420 | Groundwater | 12/14/2020 10:10:00 AM | 12/14/2020 | 1/5/2021 |
| N043434-003A | MW-12-Q420 | Groundwater | 12/14/2020 2:10:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-003B | MW-12-Q420 | Groundwater | 12/14/2020 2:10:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-003C | MW-12-Q420 | Groundwater | 12/14/2020 2:10:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-003D | MW-12-Q420 | Groundwater | 12/14/2020 2:10:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-004A | MW-905-Q420 | Groundwater | 12/14/2020 2:20:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-004B | MW-905-Q420 | Groundwater | 12/14/2020 2:20:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-004C | MW-905-Q420 | Groundwater | 12/14/2020 2:20:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-004D | MW-905-Q420 | Groundwater | 12/14/2020 2:20:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-005A | MW-13-Q420 | Groundwater | 12/14/2020 1:52:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-005B | MW-13-Q420 | Groundwater | 12/14/2020 1:52:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-005C | MW-13-Q420 | Groundwater | 12/14/2020 1:52:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-006A | EB-719-Q420 | Groundwater | 12/14/2020 2:30:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-007A | EB-722-Q420 | Groundwater | 12/14/2020 2:00:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-008A | MW-38D-1220 | Groundwater | 12/14/2020 12:27:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-008B | MW-38D-1220 | Groundwater | 12/14/2020 12:27:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-008C | MW-38D-1220 | Groundwater | 12/14/2020 12:27:00 PM | 12/14/2020 | 1/5/2021 |
| N043434-008D | MW-38D-1220 | Groundwater | 12/14/2020 12:27:00 PM | 12/14/2020 | 1/5/2021 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-03-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 9:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201215A** | QC Batch: **R149418** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1300 | 0.10 | 0.10 | | umhos/cm | 1 | 12/15/2020 10:40 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-04-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 10:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201215A** | QC Batch: **R149418** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2400 | 0.10 | 0.10 | | umhos/cm | 1 | 12/15/2020 10:40 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-12-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201215A** | QC Batch: **R149418** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6400 | 0.10 | 0.10 | | umhos/cm | 1 | 12/15/2020 10:40 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-905-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201215A** | QC Batch: **R149418** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6500 | 0.10 | 0.10 | | umhos/cm | 1 | 12/15/2020 10:40 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-13-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 1:52:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201215A** | QC Batch: **R149418** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/15/2020 10:40 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043434-008BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149418**
Client ID: **ZZZZZZ** Batch ID: **R149418** TestNo: **EPA 120.1** Analysis Date: **12/15/2020** SeqNo: **4044845**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 17100.000 | 0.10 | | | | | | 17090 | 0.0585 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-03-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 9:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 760 | 10 | 10 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-04-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 10:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1500 | 17 | 17 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-12-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3800 | 50 | 50 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-905-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3900 | 50 | 50 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-13-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 1:52:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201216C** | QC Batch: **83525** | | | PrepDate: | **12/16/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1600 | 20 | 20 | | mg/L | 1 | 12/16/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83525** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/16/2020** | RunNo: **149493** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83525** | TestNo: **SM2540C** | | Analysis Date: **12/16/2020** | SeqNo: **4048879** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 970.000 | 10 | 1000 | 0 | 97.0 | 80 | 120 | | | | |

| Sample ID: **MB-83525** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/16/2020** | RunNo: **149493** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83525** | TestNo: **SM2540C** | | Analysis Date: **12/16/2020** | SeqNo: **4048880** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | ND | 10 | | | | | | | | | |

| Sample ID: **N043399-008BDUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/16/2020** | RunNo: **149493** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83525** | TestNo: **SM2540C** | | Analysis Date: **12/16/2020** | SeqNo: **4048884** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 7110.000 | 100 | | | | | | 7130 | 0.281 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-03-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 9:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201215A** QC Batch: **R149468** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 9.6 | 0.033 | 0.20 | | µg/L | 1 | 12/15/2020 01:12 PM |
| **TOTAL METALS BY ICPMS** | | | | | | | |
| | | | **EPA 200.8** | | | | |
| RunID: **NV00922-ICP8_201229A** QC Batch: **83605** | | | | PrepDate: | **12/23/2020** | | Analyst: **CEI** |
| Chromium | 9.6 | 0.13 | 1.0 | | µg/L | 1 | 12/29/2020 10:41 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 9.5 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 11:24 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-04-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 10:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201215A** QC Batch: **R149468** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 16 | 0.17 | 1.0 | | µg/L | 5 | 12/15/2020 01:21 PM |
| **TOTAL METALS BY ICPMS** | | | | | | | |
| | | | **EPA 200.8** | | | | |
| RunID: **NV00922-ICP8_201229A** QC Batch: **83605** | | | | PrepDate: | **12/23/2020** | | Analyst: **CEI** |
| Chromium | 16 | 0.13 | 1.0 | | µg/L | 1 | 12/29/2020 11:10 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 16 | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 11:33 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-12-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201215A** | QC Batch: **R149468** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 1600 | 6.6 | 40 | | µg/L | 200 | 12/15/2020 01:31 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201221D** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 1900 | 3.2 | 25 | | µg/L | 25 | 12/21/2020 08:08 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-905-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201215A** | QC Batch: **R149468** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 1600 | 6.6 | 40 | | µg/L | 200 | 12/15/2020 01:40 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201221D** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 1900 | 3.2 | 25 | | µg/L | 25 | 12/21/2020 08:18 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-13-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 1:52:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201215A** QC Batch: **R149468** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 23 | 0.17 | 1.0 | | µg/L | 5 | 12/15/2020 01:49 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 24 | 0.13 | 1.0 | | µg/L | 1 | 12/17/2020 12:11 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-719-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201215A** | QC Batch: **R149468** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/15/2020 01:59 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-722-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201215A** | QC Batch: **R149468** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/15/2020 02:08 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-1220 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 12:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201215A** QC Batch: **R149468** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 17 | 0.17 | 1.0 | | µg/L | 5 | 12/15/2020 02:18 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Chromium | 19 | 0.13 | 1.0 | | µg/L | 1 | 12/17/2020 12:20 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8_W_CRPGE_TPK**

| Sample ID: **MB-83605** | SampType: **MBLK** | TestCode: **200.8_W_CRP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149749** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83605** | TestNo: **EPA 200.8** | | Analysis Date: **12/29/2020** | SeqNo: **4062543** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 0.175 | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83605** | SampType: **LCS** | TestCode: **200.8_W_CRP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149749** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83605** | TestNo: **EPA 200.8** | | Analysis Date: **12/29/2020** | SeqNo: **4062544** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.669 | 1.0 | 10.00 | 0 | 96.7 | 85 | 115 | | | | |

| Sample ID: **N043434-001E-MS** | SampType: **MS** | TestCode: **200.8_W_CRP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149749** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83605** | TestNo: **EPA 200.8** | | Analysis Date: **12/29/2020** | SeqNo: **4062548** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 18.514 | 1.0 | 10.00 | 9.571 | 89.4 | 75 | 125 | | | | |

| Sample ID: **N043434-001E-MSD** | SampType: **MSD** | TestCode: **200.8_W_CRP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149749** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83605** | TestNo: **EPA 200.8** | | Analysis Date: **12/29/2020** | SeqNo: **4062549** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 18.370 | 1.0 | 10.00 | 9.571 | 88.0 | 75 | 125 | 18.51 | 0.780 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **MB-R149468** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **PBW** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047541**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

Sample ID: **LCS-R149468** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **LCSW** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047542**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.939 | 0.20 | 5.000 | 0 | 98.8 | 90 | 110 | | | | |

Sample ID: **N043434-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047555**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 14.768 | 0.20 | 5.000 | 9.561 | 104 | 90 | 110 | | | | |

Sample ID: **N043434-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047556**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 40.691 | 1.0 | 25.00 | 15.97 | 98.9 | 90 | 110 | | | | |

Sample ID: **N043434-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047557**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2568.080 | 40 | 1000 | 1607 | 96.1 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043434-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047558**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2576.820 | 40 | 1000 | 1583 | 99.4 | 90 | 110 | | | | |

Sample ID: **N043434-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047559**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 47.656 | 1.0 | 25.00 | 23.24 | 97.7 | 90 | 110 | | | | |

Sample ID: **N043434-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047560**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.995 | 0.20 | 1.000 | 0 | 99.5 | 90 | 110 | | | | |

Sample ID: **N043434-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047561**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.973 | 0.20 | 1.000 | 0 | 97.2 | 90 | 110 | | | | |

Sample ID: **N043434-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047562**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 42.301 | 1.0 | 25.00 | 17.23 | 100 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043434-003AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047563**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2592.880 | 40 | 1000 | 1607 | 98.6 | 90 | 110 | 2568 | 0.961 | 20 | |

Sample ID: **N043432-002ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047567**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 143.764 | 4.0 | | | | | | 142.8 | 0.673 | 20 | |

Sample ID: **N043432-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047568**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 245.598 | 4.0 | 100.0 | 142.8 | 103 | 90 | 110 | | | | |

Sample ID: **N043432-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149468**
Client ID: **ZZZZZZ** Batch ID: **R149468** TestNo: **EPA 218.6** Analysis Date: **12/15/2020** SeqNo: **4047570**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 24.205 | 0.40 | 10.00 | 14.07 | 101 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83486** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055045** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83486** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055046** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.824 | 1.0 | 10.00 | 0 | 98.2 | 85 | 115 | | | | |

| Sample ID: **N043417-003DMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055064** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 13.698 | 1.0 | 10.00 | 4.450 | 92.5 | 75 | 125 | | | | |

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055069** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 13.641 | 1.0 | 10.00 | 4.450 | 91.9 | 75 | 125 | 13.70 | 0.417 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-03-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 9:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 85 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-04-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 10:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 64 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-12-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-905-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| | S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| | DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-13-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 1:52:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201215D** | QC Batch: **R149434** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 71 | 1.2 | 5.0 | | mg/L | 1 | 12/15/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149434** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045826** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 96.774 | 5.0 | 100.0 | 0 | 96.8 | 85 | 115 | | | | |

| Sample ID: **MB-R149434** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045827** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043399-010BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045829** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 88.710 | 5.0 | | | | | | 86.69 | 2.30 | 30 | |

| Sample ID: **N043417-003BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045832** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 210.685 | 5.0 | 100.0 | 121.0 | 89.7 | 75 | 125 | | | | |

| Sample ID: **N043417-003BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149434** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149434** | TestNo: **SM 2320 B** | | Analysis Date: **12/15/2020** | SeqNo: **4045833** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 213.710 | 5.0 | 100.0 | 121.0 | 92.7 | 75 | 125 | 210.7 | 1.43 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-03-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 9:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/15/2020 03:40 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 320 | 3.5 | 50 | | mg/L | 100 | 12/15/2020 10:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 62 | 0.40 | 5.0 | | mg/L | 10 | 12/15/2020 11:32 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-04-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 10:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/15/2020 03:56 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 650 | 7.0 | 100 | | mg/L | 200 | 12/15/2020 10:27 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 180 | 0.80 | 10 | | mg/L | 20 | 12/16/2020 12:38 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-12-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | 1.2 | 0.060 | 1.0 | | mg/L | 2 | 12/15/2020 04:12 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1800 | 17 | 250 | | mg/L | 500 | 12/15/2020 06:39 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 470 | 2.0 | 25 | | mg/L | 50 | 12/15/2020 07:28 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-905-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | 1.1 | 0.060 | 1.0 | | mg/L | 2 | 12/15/2020 04:28 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1700 | 17 | 250 | | mg/L | 500 | 12/15/2020 10:43 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 460 | 2.0 | 25 | | mg/L | 50 | 12/15/2020 11:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-13-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 1:52:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/15/2020 06:06 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 680 | 7.0 | 100 | | mg/L | 200 | 12/15/2020 11:00 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201215A** QC Batch: **R149459** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 150 | 0.80 | 10 | | mg/L | 20 | 12/16/2020 12:54 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149459_BR** | SampType: **MBLK** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049315** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149459_BR** | SampType: **LCS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049316** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.274 | 0.50 | 1.250 | 0 | 102 | 90 | 110 | | | | |

| Sample ID: **N043433-002AMS** | SampType: **MS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049320** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 13.303 | 5.0 | 12.50 | 0.7730 | 100 | 80 | 120 | | | | |

| Sample ID: **N043433-001ADUP** | SampType: **DUP** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049322** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.902 | 2.5 | | | | | | 0.9640 | 0 | 20 | |

| Sample ID: **N043433-002AMSD** | SampType: **MSD** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049327** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 13.232 | 5.0 | 12.50 | 0.7730 | 99.7 | 80 | 120 | 13.30 | 0.535 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **MB-R149459_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049289** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149459_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049290** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.976 | 0.50 | 2.000 | 0 | 98.8 | 90 | 110 | | | | |

| Sample ID: **N043434-003BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049296** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2728.000 | 250 | 1000 | 1763 | 96.5 | 80 | 120 | | | | |

| Sample ID: **N043434-003BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049297** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2734.350 | 250 | 1000 | 1763 | 97.1 | 80 | 120 | 2728 | 0.233 | 20 | |

| Sample ID: **N043433-001ADUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149459** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149459** | TestNo: **EPA 300.0** | | Analysis Date: **12/15/2020** | SeqNo: **4049299** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 865.620 | 100 | | | | | | 866.8 | 0.136 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149459_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149459**
Client ID: **PBW** Batch ID: **R149459** TestNo: **EPA 300.0** Analysis Date: **12/15/2020** SeqNo: **4049353**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.246 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149459_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149459**
Client ID: **LCSW** Batch ID: **R149459** TestNo: **EPA 300.0** Analysis Date: **12/15/2020** SeqNo: **4049354**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.002 | 0.50 | 4.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N043434-003BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149459**
Client ID: **ZZZZZZ** Batch ID: **R149459** TestNo: **EPA 300.0** Analysis Date: **12/15/2020** SeqNo: **4049360**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 675.795 | 25 | 200.0 | 468.1 | 104 | 80 | 120 | | | | |

Sample ID: **N043434-003BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149459**
Client ID: **ZZZZZZ** Batch ID: **R149459** TestNo: **EPA 300.0** Analysis Date: **12/15/2020** SeqNo: **4049361**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 678.085 | 25 | 200.0 | 468.1 | 105 | 80 | 120 | 675.8 | 0.338 | 20 | |

Sample ID: **N043433-001ADUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149459**
Client ID: **ZZZZZZ** Batch ID: **R149459** TestNo: **EPA 300.0** Analysis Date: **12/15/2020** SeqNo: **4049365**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 427.025 | 25 | | | | | | 427.3 | 0.0655 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-03-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 9:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | **SM4500-NO3F** | | | |
| RunID: **NV00922-WC_201217C** | QC Batch: **R149496** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 3.2 | 0.063 | 0.10 | | mg/L | 2 | 12/17/2020 02:52 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-04-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 10:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | **SM4500-NO3F** | | | |
| RunID: **NV00922-WC_201217C** | QC Batch: **R149496** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.2 | 0.063 | 0.10 | | mg/L | 2 | 12/17/2020 02:57 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-12-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217C** | QC Batch: **R149496** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 15 | 0.32 | 0.50 | | mg/L | 10 | 12/17/2020 03:44 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-905-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217J** | QC Batch: **R149518** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 14 | 0.32 | 0.50 | | mg/L | 10 | 12/17/2020 10:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149496** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149496** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4049377** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R149496** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149496** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4049378** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.479 | 0.050 | 0.5000 | 0 | 95.8 | 85 | 115 | | | | |

| Sample ID: **N043417-003CDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149496** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4049380** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.038 | 0.050 | | | | | | 0.04890 | 0 | 20 | |

| Sample ID: **N043417-003CMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149496** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4049381** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.537 | 0.050 | 0.5000 | 0.04890 | 97.6 | 75 | 125 | | | | |

| Sample ID: **N043417-003CMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149496** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149496** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4049382** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.573 | 0.050 | 0.5000 | 0.04890 | 105 | 75 | 125 | 0.5370 | 6.50 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

Sample ID: **MB-R149518** SampType: **MBLK** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149518**
Client ID: **PBW** Batch ID: **R149518** TestNo: **SM4500-NO3** Analysis Date: **12/17/2020** SeqNo: **4050411**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

Sample ID: **LCS-R149518** SampType: **LCS** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149518**
Client ID: **LCSW** Batch ID: **R149518** TestNo: **SM4500-NO3** Analysis Date: **12/17/2020** SeqNo: **4050412**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.489 | 0.050 | 0.5000 | 0 | 97.9 | 85 | 115 | | | | |

Sample ID: **N043452-001BDUP** SampType: **DUP** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149518**
Client ID: **ZZZZZZ** Batch ID: **R149518** TestNo: **SM4500-NO3** Analysis Date: **12/17/2020** SeqNo: **4050414**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 4.485 | 0.25 | | | | | | 4.407 | 1.75 | 20 | |

Sample ID: **N043452-001BMS** SampType: **MS** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149518**
Client ID: **ZZZZZZ** Batch ID: **R149518** TestNo: **SM4500-NO3** Analysis Date: **12/17/2020** SeqNo: **4050415**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 6.897 | 0.25 | 2.500 | 4.407 | 99.6 | 75 | 125 | | | | |

Sample ID: **N043452-001BMSD** SampType: **MSD** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149518**
Client ID: **ZZZZZZ** Batch ID: **R149518** TestNo: **SM4500-NO3** Analysis Date: **12/17/2020** SeqNo: **4050416**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 7.022 | 0.25 | 2.500 | 4.407 | 105 | 75 | 125 | 6.897 | 1.80 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-03-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 9:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201226A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | Analyst: **DJ** | |
| Boron | 110 | 74 | 100 | | ug/L | 1 | 12/26/2020 03:07 PM |
| Calcium | 76000 | 85 | 500 | | ug/L | 1 | 12/23/2020 10:30 AM |
| Iron | 110 | 18 | 20 | | ug/L | 1 | 12/23/2020 10:30 AM |
| Magnesium | 19000 | 48 | 100 | | ug/L | 1 | 12/23/2020 10:30 AM |
| Sodium | 170000 | 12000 | 62000 | | ug/L | 125 | 12/29/2020 11:39 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043434
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043434-002

**Client Sample ID:** PM-04-Q420
**Collection Date:** 12/14/2020 10:10:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | Analyst: **DJ** | |
| Boron | 330 | 74 | 100 | | ug/L | 1 | 12/23/2020 10:34 AM |
| Calcium | 110000 | 85 | 500 | | ug/L | 1 | 12/23/2020 10:34 AM |
| Iron | 39 | 18 | 20 | | ug/L | 1 | 12/23/2020 10:34 AM |
| Magnesium | 34000 | 48 | 100 | | ug/L | 1 | 12/23/2020 10:34 AM |
| Sodium | 320000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 11:50 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043434
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043434-003

**Client Sample ID:** MW-12-Q420
**Collection Date:** 12/14/2020 2:10:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83498** | | | PrepDate: | **12/15/2020** | Analyst: **DJ** | |
| Boron | 1200 | 74 | 100 | | ug/L | 1 | 12/23/2020 10:39 AM |
| Calcium | 22000 | 85 | 500 | | ug/L | 1 | 12/23/2020 10:39 AM |
| Iron | 68 | 18 | 20 | | ug/L | 1 | 12/23/2020 10:39 AM |
| Magnesium | 5800 | 48 | 100 | | ug/L | 1 | 12/28/2020 10:21 AM |
| Sodium | 1200000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 11:53 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-905-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83498** | | | | PrepDate: | **12/15/2020** | Analyst: **DJ** |
| Boron | 1100 | 74 | 100 | | ug/L | 1 | 12/23/2020 10:58 AM |
| Calcium | 24000 | 85 | 500 | | ug/L | 1 | 12/23/2020 10:58 AM |
| Iron | 120 | 18 | 20 | | ug/L | 1 | 12/23/2020 10:58 AM |
| Magnesium | 6400 | 48 | 100 | | ug/L | 1 | 12/28/2020 10:25 AM |
| Sodium | 1400000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 11:56 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-13-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 1:52:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83498** | | | | PrepDate: | **12/15/2020** | Analyst: **DJ** |
| Boron | 680 | 74 | 100 | | ug/L | 1 | 12/23/2020 11:04 AM |
| Calcium | 120000 | 85 | 500 | | ug/L | 1 | 12/23/2020 11:04 AM |
| Iron | 43 | 18 | 20 | | ug/L | 1 | 12/23/2020 11:04 AM |
| Magnesium | 21000 | 48 | 100 | | ug/L | 1 | 12/23/2020 11:04 AM |
| Sodium | 340000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 11:59 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043417-003DMS1** SampType: **MS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057785**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6692.047 | 100 | 5000 | 1526 | 103 | 75 | 125 | | | | |
| Calcium | 88549.533 | 500 | 10000 | 80190 | 83.6 | 75 | 125 | | | | |
| Iron | 165.709 | 20 | 100.0 | 231.5 | -65.8 | 75 | 125 | | | | S |
| Magnesium | 21090.193 | 100 | 10000 | 10770 | 103 | 75 | 125 | | | | |

Sample ID: **N043417-003DMSD1** SampType: **MSD** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057786**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6754.691 | 100 | 5000 | 1526 | 105 | 75 | 125 | 6692 | 0.932 | 20 | |
| Calcium | 87077.571 | 500 | 10000 | 80190 | 68.9 | 75 | 125 | 88550 | 1.68 | 20 | S |
| Iron | 256.349 | 20 | 100.0 | 231.5 | 24.9 | 75 | 125 | 165.7 | 43.0 | 20 | SR |
| Magnesium | 20636.249 | 100 | 10000 | 10770 | 98.6 | 75 | 125 | 21090 | 2.18 | 20 | |

Sample ID: **MB-83498** SampType: **MBLK** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **PBW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057809**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83498** SampType: **LCS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **LCSW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057810**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5458.078 | 100 | 5000 | 0 | 109 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **LCS1-83498** SampType: **LCS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149642**
Client ID: **LCSW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057810**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 11471.634 | 500 | 10000 | 0 | 115 | 85 | 115 | | | | |
| Iron | 109.219 | 20 | 100.0 | 0 | 109 | 85 | 115 | | | | |
| Magnesium | 11438.046 | 100 | 10000 | 0 | 114 | 85 | 115 | | | | |

Sample ID: **MB-83498** SampType: **MBLK** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149729**
Client ID: **PBW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061314**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

Sample ID: **LCS2-83498** SampType: **LCS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149729**
Client ID: **LCSW** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061315**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18571.179 | 500 | 20000 | 0 | 92.9 | 85 | 115 | | | | |

Sample ID: **N043417-003D-MS2** SampType: **MS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2255618.813 | 120000 | 20000 | 2320000 | -324 | 75 | 125 | | | | S |

Sample ID: **N043417-003D-MSD2** SampType: **MSD** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/15/2020** RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2237924.989 | 120000 | 20000 | 2320000 | -412 | 75 | 125 | 2256000 | 0.788 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043417-003D-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057784**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6435.461 | 100 | 5000 | 1526 | 98.2 | 80 | 120 | | | | |
| Calcium | 86175.870 | 500 | 10000 | 80190 | 59.9 | 80 | 120 | | | | S |
| Iron | 218.484 | 20 | 100.0 | 231.5 | -13.0 | 80 | 120 | | | | S |
| Magnesium | 20978.297 | 100 | 10000 | 10770 | 102 | 80 | 120 | | | | |

Sample ID: **N043417-003D-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83498** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061324**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2197040.002 | 120000 | 20000 | 2320000 | -617 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-03-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 9:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201221D** | QC Batch: **83486** | | | PrepDate: | **12/15/2020** | | Analyst: **CEI** |
| Manganese | 0.80 | 0.26 | 0.50 | | µg/L | 1 | 12/21/2020 07:54 PM |
| Molybdenum | 5.8 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 11:24 PM |
| Selenium | 1.7 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 11:24 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PM-04-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 10:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | Analyst: **CEI** |
| Manganese | 2.9 | 0.26 | 0.50 | | µg/L | 1 | 12/16/2020 11:33 PM |
| Molybdenum | 5.4 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 11:33 PM |
| Selenium | 1.4 | 0.36 | 0.50 | | µg/L | 1 | 12/21/2020 07:36 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043434
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043434-003

**Client Sample ID:** MW-12-Q420
**Collection Date:** 12/14/2020 2:10:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201216A** QC Batch: **83486** PrepDate: **12/15/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Arsenic | 45 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Barium | 41 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 08:04 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Manganese | 2.2 | 0.26 | 0.50 | | µg/L | 1 | 12/21/2020 08:04 PM |
| Molybdenum | 10 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Nickel | 8.4 | 0.26 | 1.0 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Selenium | 28 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Vanadium | 20 | 0.28 | 1.0 | | µg/L | 1 | 12/16/2020 11:43 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/16/2020 11:43 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043434
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043434-004

**Client Sample ID:** MW-905-Q420
**Collection Date:** 12/14/2020 2:20:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201216A** QC Batch: **83486** PrepDate: **12/15/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Arsenic | 48 | 0.081 | 0.10 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Barium | 43 | 0.15 | 1.0 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/21/2020 08:13 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Manganese | 2.3 | 0.26 | 0.50 | | µg/L | 1 | 12/21/2020 08:13 PM |
| Molybdenum | 10 | 0.21 | 0.50 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Nickel | 6.5 | 0.26 | 1.0 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Selenium | 28 | 0.36 | 0.50 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Vanadium | 20 | 0.28 | 1.0 | | µg/L | 1 | 12/16/2020 11:52 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/16/2020 11:52 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-13-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 1:52:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201216A** | QC Batch: **83486** | | | | PrepDate: | **12/15/2020** | Analyst: **CEI** |
| Arsenic | 1.9 | 0.081 | 0.10 | | µg/L | 1 | 12/17/2020 12:11 AM |
| Manganese | 2.6 | 0.26 | 0.50 | | µg/L | 1 | 12/21/2020 08:23 PM |
| Molybdenum | 12 | 0.21 | 0.50 | | µg/L | 1 | 12/17/2020 12:11 AM |
| Selenium | 3.3 | 0.36 | 0.50 | | µg/L | 1 | 12/17/2020 12:11 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83486** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149586**
Client ID: **PBW** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4055215**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | 0.164 | 1.0 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

Sample ID: **LCS-83486** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149586**
Client ID: **LCSW** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4055216**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.426 | 0.50 | 10.00 | 0 | 104 | 85 | 115 | | | | |
| Arsenic | 10.735 | 0.10 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Barium | 11.266 | 1.0 | 10.00 | 0 | 113 | 85 | 115 | | | | |
| Beryllium | 10.151 | 0.50 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Cadmium | 10.515 | 0.50 | 10.00 | 0 | 105 | 85 | 115 | | | | |
| Cobalt | 9.982 | 0.50 | 10.00 | 0 | 99.8 | 85 | 115 | | | | |
| Lead | 10.671 | 1.0 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Manganese | 96.364 | 0.50 | 100.0 | 0 | 96.4 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **LCS-83486** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055216** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 10.143 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Nickel | 9.602 | 1.0 | 10.00 | 0 | 96.0 | 85 | 115 | | | | |
| Selenium | 9.636 | 0.50 | 10.00 | 0 | 96.4 | 85 | 115 | | | | |
| Silver | 9.530 | 0.50 | 10.00 | 0 | 95.3 | 85 | 115 | | | | |
| Thallium | 10.118 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Vanadium | 10.194 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Zinc | 96.756 | 10 | 100.0 | 0 | 96.8 | 85 | 115 | | | | |

| Sample ID: **N043417-003DMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149586** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/16/2020** | SeqNo: **4055234** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.307 | 0.50 | 10.00 | 0.1652 | 111 | 75 | 125 | | | | |
| Arsenic | 16.855 | 0.10 | 10.00 | 5.685 | 112 | 75 | 125 | | | | |
| Barium | 30.655 | 1.0 | 10.00 | 20.07 | 106 | 75 | 125 | | | | |
| Beryllium | 6.024 | 0.50 | 10.00 | 0 | 60.2 | 75 | 125 | | | | S |
| Cadmium | 9.922 | 0.50 | 10.00 | 0.05317 | 98.7 | 75 | 125 | | | | |
| Cobalt | 9.243 | 0.50 | 10.00 | 0 | 92.4 | 75 | 125 | | | | |
| Lead | 10.440 | 1.0 | 10.00 | 0 | 104 | 75 | 125 | | | | |
| Manganese | 94.006 | 0.50 | 100.0 | 6.018 | 88.0 | 75 | 125 | | | | |
| Molybdenum | 81.134 | 0.50 | 10.00 | 70.98 | 102 | 75 | 125 | | | | |
| Nickel | 9.790 | 1.0 | 10.00 | 0.8323 | 89.6 | 75 | 125 | | | | |
| Selenium | 10.339 | 0.50 | 10.00 | 0 | 103 | 75 | 125 | | | | |
| Silver | 9.654 | 0.50 | 10.00 | 0 | 96.5 | 75 | 125 | | | | |
| Thallium | 7.045 | 0.50 | 10.00 | 0 | 70.5 | 75 | 125 | | | | S |
| Vanadium | 17.028 | 1.0 | 10.00 | 6.603 | 104 | 75 | 125 | | | | |
| Zinc | 90.394 | 10 | 100.0 | 0 | 90.4 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043417-003DMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149586**
Client ID: **ZZZZZZ** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4055239**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.379 | 0.50 | 10.00 | 0.1652 | 112 | 75 | 125 | 11.31 | 0.633 | 20 | |
| Arsenic | 16.719 | 0.10 | 10.00 | 5.685 | 110 | 75 | 125 | 16.85 | 0.809 | 20 | |
| Barium | 30.243 | 1.0 | 10.00 | 20.07 | 102 | 75 | 125 | 30.65 | 1.35 | 20 | |
| Beryllium | 6.031 | 0.50 | 10.00 | 0 | 60.3 | 75 | 125 | 6.024 | 0.117 | 20 | S |
| Cadmium | 10.541 | 0.50 | 10.00 | 0.05317 | 105 | 75 | 125 | 9.922 | 6.05 | 20 | |
| Cobalt | 9.245 | 0.50 | 10.00 | 0 | 92.4 | 75 | 125 | 9.243 | 0.0209 | 20 | |
| Lead | 10.492 | 1.0 | 10.00 | 0 | 105 | 75 | 125 | 10.44 | 0.503 | 20 | |
| Manganese | 94.042 | 0.50 | 100.0 | 6.018 | 88.0 | 75 | 125 | 94.01 | 0.0391 | 20 | |
| Molybdenum | 80.506 | 0.50 | 10.00 | 70.98 | 95.2 | 75 | 125 | 81.13 | 0.776 | 20 | |
| Nickel | 9.817 | 1.0 | 10.00 | 0.8323 | 89.9 | 75 | 125 | 9.790 | 0.279 | 20 | |
| Silver | 9.378 | 0.50 | 10.00 | 0 | 93.8 | 75 | 125 | 9.654 | 2.90 | 20 | |
| Thallium | 7.182 | 0.50 | 10.00 | 0 | 71.8 | 75 | 125 | 7.045 | 1.92 | 20 | S |
| Vanadium | 17.008 | 1.0 | 10.00 | 6.603 | 104 | 75 | 125 | 17.03 | 0.116 | 20 | |
| Zinc | 88.768 | 10 | 100.0 | 0 | 88.8 | 75 | 125 | 90.39 | 1.82 | 20 | |

Sample ID: **MB-83486** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149637**
Client ID: **PBW** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/21/2020** SeqNo: **4058481**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | ND | 1.0 | | | | | | | | | |

Sample ID: **LCS-83486** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/15/2020** RunNo: **149637**
Client ID: **LCSW** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/21/2020** SeqNo: **4058482**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 10.330 | 1.0 | 10.00 | 0 | 103 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **N043417-003DMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4058489** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.289 | 1.0 | 10.00 | 0 | 92.9 | 75 | 125 | | | | |

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4058492** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 8.963 | 1.0 | 10.00 | 0 | 89.6 | 75 | 125 | 9.289 | 3.58 | 20 | |

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/15/2020** | RunNo: **149637** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83486** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/21/2020** | SeqNo: **4059391** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 9.583 | 0.50 | 10.00 | 0 | 95.8 | 75 | 125 | 10.34 | 7.59 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043417-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149586**
Client ID: **ZZZZZZ** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/16/2020** SeqNo: **4055231**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.030 | 0.50 | 10.00 | 0.1652 | 109 | 80 | 120 | | | | |
| Arsenic | 17.098 | 0.10 | 10.00 | 5.685 | 114 | 80 | 120 | | | | |
| Barium | 29.383 | 1.0 | 10.00 | 20.07 | 93.1 | 80 | 120 | | | | |
| Beryllium | 6.185 | 0.50 | 10.00 | 0 | 61.8 | 80 | 120 | | | | S |
| Cadmium | 10.451 | 0.50 | 10.00 | 0.05317 | 104 | 80 | 120 | | | | |
| Cobalt | 9.292 | 0.50 | 10.00 | 0 | 92.9 | 80 | 120 | | | | |
| Lead | 10.710 | 1.0 | 10.00 | 0 | 107 | 80 | 120 | | | | |
| Manganese | 94.772 | 0.50 | 100.0 | 6.018 | 88.8 | 80 | 120 | | | | |
| Molybdenum | 78.164 | 0.50 | 10.00 | 70.98 | 71.8 | 80 | 120 | | | | S |
| Nickel | 9.976 | 1.0 | 10.00 | 0.8323 | 91.4 | 80 | 120 | | | | |
| Selenium | 10.972 | 0.50 | 10.00 | 0 | 110 | 80 | 120 | | | | |
| Silver | 9.565 | 0.50 | 10.00 | 0 | 95.6 | 80 | 120 | | | | |
| Thallium | 7.379 | 0.50 | 10.00 | 0 | 73.8 | 80 | 120 | | | | S |
| Vanadium | 16.701 | 1.0 | 10.00 | 6.603 | 101 | 80 | 120 | | | | |
| Zinc | 90.349 | 10 | 100.0 | 0 | 90.3 | 80 | 120 | | | | |

Sample ID: **N043417-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149637**
Client ID: **ZZZZZZ** Batch ID: **83486** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/21/2020** SeqNo: **4058488**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 9.196 | 1.0 | 10.00 | 0 | 92.0 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-12-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201216B** | QC Batch: **83514** | | | PrepDate: | **12/16/2020** | | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/16/2020 12:55 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-905-Q420 |
| **Lab Order:** | N043434 | **Collection Date:** | 12/14/2020 2:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043434-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| **EPA 7470A** | | | | | | | |
| RunID: **NV00922-AA2_201216B** QC Batch: **83514** PrepDate: **12/16/2020** Analyst: **DJ** | | | | | | | |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/16/2020 12:58 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **MB-83514** | SampType: **MBLK** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047335** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-83514** | SampType: **LCS** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047336** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.720 | 0.20 | 5.000 | 0 | 94.4 | 85 | 115 | | | | |

| Sample ID: **N043417-003DMS** | SampType: **MS** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047346** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.160 | 0.20 | 5.000 | 0 | 103 | 75 | 125 | | | | |

| Sample ID: **N043417-003DMSD** | SampType: **MSD** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047347** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.110 | 0.20 | 5.000 | 0 | 102 | 75 | 125 | 5.160 | 0.974 | 20 | |

| Sample ID: **N043452-001DMS** | SampType: **MS** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047352** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.970 | 0.20 | 5.000 | 0 | 99.4 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043434
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **N043452-001DMSD** | SampType: **MSD** | TestCode: **7470_W_DISS** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149465** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83514** | TestNo: **EPA 7470A** | | Analysis Date: **12/16/2020** | SeqNo: **4047353** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.840 | 0.20 | 5.000 | 0 | 96.8 | 75 | 125 | 4.970 | 2.65 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

N043434


**ASSET LABORATORIES**
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


# CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# SWA-ASSET-C9817-057 | Labspec | CalTrans | 2. Headspace |
| Submitted By: Reggie Tey | | Phone: 949-727-1400, ext 200 Fax: | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | Phone: 916-786-3302 Fax: | | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12/14/20 | Sampled By: Nara Tey | | Global ID: | Regulatory | 5. IR number 2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/14/20 | | | Sample Temp: 4.4°C / 2.4°C |
| Project Number: 30035275 | | | | | Courier: ASSETS Tracking No.: |

Matrix: Ground x | Potable | NPDES | Surface; Sediment | Soil | Other Solid

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Oxygen and Deuterium Isotopes (CFIRM), Ice (250 mL poly) | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly) | Bromide, Sulfate, Chloride (EPA 300.0) (1 liter poly) | Fluoride (EPA 300.0) (1 liter poly) | Specific Conductance (EPA 120.1) (1 liter poly) | Total Dissolved Solids (SM92540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 (125 mL poly) | Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOAs) | Metals Dissolved (EPA7470A FF) Hg; HNO3 (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Potassium (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni (500 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mn (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 Cu, Ni (500 mL poly) | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 (500 mL poly) | VOCs (8260) (3x40 mL VOAs) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043434-01 | PM-03-Q420 | 12/14/2020 | 9:45 | | X | | | X | X | | X | X | X | | | | X | | | | X | | | X | | E | 5 | P | BNS | |
| 2 | -02 | PM-04-Q420 | 12/14/2020 | 10:10 | | X | | | X | X | | X | X | X | | | | X | | | | X | | | X | | E | 5 | P | BNS | |
| 3 | -03 | MW-12-Q420 | 12/14/2020 | 14:10 | | X | | | X | X | | X | X | X | | X | | | | X | | | | X | | | E | 4 | P | BNS | |
| 4 | -04 | MW-905-Q420 | 12/14/2020 | 14:20 | | X | | | X | X | | X | X | X | | X | | | | X | | | | X | | | E | 4 | P | BNS | |
| 5 | -05 | MW-13-Q420 | 12/14/2020 | 13:52 | | X | | | X | X | | X | X | | | | | X | X | | | | | | | | E | 3 | P | BN | |
| 6 | -06 | EB-719-Q420 | 12/14/2020 | 14:30 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 7 | -07 | EB-722-Q420 | 12/14/2020 | 14:00 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 8 | -08 | MW-38D-Q420 | 12/14/2020 | 12:27 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nara Tey | 12/14/20 1545 | RA ROMEO ALCANTARA | 12/14/20 1545 |
| RA ROMEO ALCANTARA | 12/14/20 1828 | RA ROMEO ALCANTARA | 12/14/20 1828 |
| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/14/2020 | Workorder: | N043434 |
| Rep sample Temp (Deg C): | 4.4/2.4 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/15/2020

Reviewed By: MBC 12/18/2020

## Mary Ann Balilu (maryann.balilu@assetlaboratoriesph.com)

**From:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Sent:** Tuesday, December 15, 2020 11:10 AM
**To:** AssetLabs Sample Control; 'Yoandra Rodriguez'; marlon@assetlaboratories.com; maryann.balilu@assetlaboratoriesph.com
**Cc:** Tina Rice; Madsen, Laura
**Subject:** RE: N043432, N043433 and N043434 COC and Work Order Summary for Samples Received 12/14/2020

Hi Yoandra,
Can you put on hold everything for Sample N043434-08 (MW-38D-Q420), except the Cr6/CrT? We would like the chromium analyzed but put the rest of the constituents on hold for now.

Thanks,
Laura

---

**From:** AssetLabs Sample Control <samplecontrol@assetlaboratories.com>
**Sent:** Tuesday, December 15, 2020 12:45 PM
**To:** Bush, Dan <Dan.Bush@arcadis.com>; Dan Moore <Daniel.Moore@critigen.com>
**Cc:** Madsen, Laura <Laura.Madsen@arcadis.com>; Sean.Maurel@arcadis.com; Tina Rice <Tina.Rice@critigen.com>; rsunjara@blainetech.com; Nicholas.Vadpey@arcadis.com; Harmon, Alison <Ali.Harmon@arcadis.com>; Serna, Erica <Erica.Serna@arcadis.com>; Borelis, Mariah <Mariah.Borelis@arcadis.com>; Bloes, Marty <mbloes@pivox.com>; ntep@blainetech.com
**Subject:** N043432, N043433 and N043434 COC and Work Order Summary for Samples Received 12/14/2020

Hi Dan Bush:

Enclosed are COC and WO Summary for samples received 12/14/2020. If you have any questions, please contact your Project Manager listed below.

A new column “Matrix_Spike” has been added in the excel file. If the “MS/MSD” field is ticked when logging in the testcode, the “Matrix_Spike” column will be marked ”YES”.

**Marlon Cartin**
3151 W. Post Road
Las Vegas, Nevada
89118
**Tel. No.:** (702)-307-2659 Ext. 410
**Cel. No.:** (702)-439-0421
**Email:** marlon@assetlaboratories.com

Thank you for using ASSET Laboratories.

Sincerely,
Mary Ann Balilu

Sample Control Officer



ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | **P:** 562.219.7435 | **F:** 562.219.7436
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | **P:** 702.307.2659 | **F:** 702.307.2691
www.assetlaboratories.com

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# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043434

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/14/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043434-001A | PM-03-Q420 | 12/14/2020 9:45:00 AM | 12/29/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043434-001B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043434-001C | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043434-001D | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043434-001E | | | 12/29/2020 | | | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 200.8 | TOTAL METALS BY ICPMS | ☐ | ☐ | ☐ | WW |
| N043434-002A | PM-04-Q420 | 12/14/2020 10:10:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043434-002B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043434

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/14/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043434-002B | PM-04-Q420 | 12/14/2020 10:10:00 AM | 12/29/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043434-002C | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043434-002D | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043434-002E | | | 12/29/2020 | | | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 200.8 | TOTAL METALS BY ICPMS | ☐ | ☐ | ☐ | WW |
| N043434-003A | MW-12-Q420 | 12/14/2020 2:10:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043434-003B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043434-003C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043434

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/14/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043434-003C | MW-12-Q420 | 12/14/2020 2:10:00 PM | 12/29/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043434-003D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043434-004A | MW-905-Q420 | 12/14/2020 2:20:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043434-004B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043434-004C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043434

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/14/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043434-004C | MW-905-Q420 | 12/14/2020 2:20:00 PM | 12/29/2020 | Groundwater | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043434-004D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043434-005A | MW-13-Q420 | 12/14/2020 1:52:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043434-005B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043434-005C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043434-006A | EB-719-Q420 | 12/14/2020 2:30:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043434-007A | EB-722-Q420 | 12/14/2020 2:00:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043434-008A | MW-38D-Q420 | 12/14/2020 12:27:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043434-008B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☑ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043434

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/14/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043434-008B | MW-38D-Q420 | 12/14/2020 12:27:00 PM | 12/29/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☑ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☑ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☑ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☑ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☑ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☑ | ☐ | ☐ | LSR |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☑ | ☐ | ☐ | LSR |
| N043434-008C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☑ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☑ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☑ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043434-008D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☑ | ☐ | ☐ | WW |
| N043434-009A | FOLDER | 12/29/2020 | 12/29/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | |
| | | | 12/29/2020 | | Folder | Folder | ☐ | ☐ | ☐ | |
| | | | 12/29/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | |
| | | | 12/29/2020 | | Folder | Folder | ☐ | ☐ | ☐ | |

January 05, 2021

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043453

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 15, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (3.6 ug/L) and hexavalent chromium (0 ug/L) for sample N043453-008 (MW-46-205-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (6.0 ug/L) and hexavalent chromium (4.5 ug/L) for sample N043453-009 (MW-36-100-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (1.7 ug/L) and hexavalent chromium (0 ug/L) for sample N043453-015 (MW-36-090-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for some samples due to matrix. Samples have high TDS concentration.

Matrix Spike Duplicate (MSD) is outside recovery criteria for some analytes in QC sample N043452-001DMSD1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N043452-001D-MS2 and N043452-001D-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (3.6 ug/L) and hexavalent chromium (0 ug/L) for sample N043453-008 (MW-46-205-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.6 and 1.3 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (6.0 ug/L) and hexavalent chromium (4.5 ug/L) for sample N043453-009 (MW-36-100-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 5.9 and 5.9 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.7 ug/L) and hexavalent chromium (0 ug/L) for sample N043453-015 (MW-36-090-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.0 and 1.1 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043453
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043453-001A | MW-21-Q420 | Groundwater | 12/15/2020 2:15:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-001B | MW-21-Q420 | Groundwater | 12/15/2020 2:15:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-001C | MW-21-Q420 | Groundwater | 12/15/2020 2:15:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-001D | MW-21-Q420 | Groundwater | 12/15/2020 2:15:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-002A | MW-71-035-Q420 | Groundwater | 12/15/2020 2:40:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-002B | MW-71-035-Q420 | Groundwater | 12/15/2020 2:40:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-002C | MW-71-035-Q420 | Groundwater | 12/15/2020 2:40:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-002D | MW-71-035-Q420 | Groundwater | 12/15/2020 2:40:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-003A | MW-28-025-Q420 | Groundwater | 12/15/2020 11:16:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-003B | MW-28-025-Q420 | Groundwater | 12/15/2020 11:16:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-003C | MW-28-025-Q420 | Groundwater | 12/15/2020 11:16:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-003D | MW-28-025-Q420 | Groundwater | 12/15/2020 11:16:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-004A | MW-28-025-EB-Q420 | Groundwater | 12/15/2020 10:45:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-005A | MW-28-090-Q420 | Groundwater | 12/15/2020 10:24:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-005B | MW-28-090-Q420 | Groundwater | 12/15/2020 10:24:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-005C | MW-28-090-Q420 | Groundwater | 12/15/2020 10:24:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-005D | MW-28-090-Q420 | Groundwater | 12/15/2020 10:24:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-006A | MW-28-090-EB-Q420 | Groundwater | 12/15/2020 9:55:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-007A | MW-46-175-Q420 | Groundwater | 12/15/2020 1:12:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-007B | MW-46-175-Q420 | Groundwater | 12/15/2020 1:12:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-007C | MW-46-175-Q420 | Groundwater | 12/15/2020 1:12:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-007D | MW-46-175-Q420 | Groundwater | 12/15/2020 1:12:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-007E | MW-46-175-Q420 | Groundwater | 12/15/2020 1:12:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-008A | MW-46-205-Q420 | Groundwater | 12/15/2020 12:18:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-008B | MW-46-205-Q420 | Groundwater | 12/15/2020 12:18:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-008C | MW-46-205-Q420 | Groundwater | 12/15/2020 12:18:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-009A | MW-36-100-Q420 | Groundwater | 12/15/2020 8:30:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-009B | MW-36-100-Q420 | Groundwater | 12/15/2020 8:30:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-009C | MW-36-100-Q420 | Groundwater | 12/15/2020 8:30:00 AM | 12/15/2020 | 1/5/2021 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043453
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043453-009D | MW-36-100-Q420 | Groundwater | 12/15/2020 8:30:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-009E | MW-36-100-Q420 | Groundwater | 12/15/2020 8:30:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-010A | MW-39-100-Q420 | Groundwater | 12/15/2020 9:22:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-010B | MW-39-100-Q420 | Groundwater | 12/15/2020 9:22:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-010C | MW-39-100-Q420 | Groundwater | 12/15/2020 9:22:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-010D | MW-39-100-Q420 | Groundwater | 12/15/2020 9:22:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-010E | MW-39-100-Q420 | Groundwater | 12/15/2020 9:22:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-011A | MW-36-020-Q420 | Groundwater | 12/15/2020 8:41:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-011B | MW-36-020-Q420 | Groundwater | 12/15/2020 8:41:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-011C | MW-36-020-Q420 | Groundwater | 12/15/2020 8:41:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-012A | MW-36-040-Q420 | Groundwater | 12/15/2020 10:21:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-012B | MW-36-040-Q420 | Groundwater | 12/15/2020 10:21:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-012C | MW-36-040-Q420 | Groundwater | 12/15/2020 10:21:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-012D | MW-36-040-Q420 | Groundwater | 12/15/2020 10:21:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-013A | MW-36-050-Q420 | Groundwater | 12/15/2020 10:53:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-013B | MW-36-050-Q420 | Groundwater | 12/15/2020 10:53:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-013C | MW-36-050-Q420 | Groundwater | 12/15/2020 10:53:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-014A | MW-36-070-Q420 | Groundwater | 12/15/2020 9:11:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-014B | MW-36-070-Q420 | Groundwater | 12/15/2020 9:11:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-014C | MW-36-070-Q420 | Groundwater | 12/15/2020 9:11:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-015A | MW-36-090-Q420 | Groundwater | 12/15/2020 9:50:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-015B | MW-36-090-Q420 | Groundwater | 12/15/2020 9:50:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-015C | MW-36-090-Q420 | Groundwater | 12/15/2020 9:50:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-015D | MW-36-090-Q420 | Groundwater | 12/15/2020 9:50:00 AM | 12/15/2020 | 1/5/2021 |
| N043453-016A | EB-723-Q420 | Groundwater | 12/15/2020 3:00:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-017A | EB-724-Q420 | Groundwater | 12/15/2020 1:24:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-018A | MW-38D-POST-Q420 | Groundwater | 12/15/2020 1:25:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-018B | MW-38D-POST-Q420 | Groundwater | 12/15/2020 1:25:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-018C | MW-38D-POST-Q420 | Groundwater | 12/15/2020 1:25:00 PM | 12/15/2020 | 1/5/2021 |
| N043453-018D | MW-38D-POST-Q420 | Groundwater | 12/15/2020 1:25:00 PM | 12/15/2020 | 1/5/2021 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043453
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043453-019A | MW-21-EB-Q420 | Groundwater | 12/15/2020 2:00:00 PM | 12/15/2020 | 1/5/2021 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-21-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 15000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-71-035-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 18000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 11:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-175-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 22000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-205-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 12:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 27000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7100 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:22:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 13000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-020-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6500 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-040-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:21:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1100 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-050-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-070-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 4400 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-POST-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:25:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201216B** | QC Batch: **R149470** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 20000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/16/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043453-001BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149470**
Client ID: **ZZZZZZ** Batch ID: **R149470** TestNo: **EPA 120.1** Analysis Date: **12/16/2020** SeqNo: **4047600**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 14510.000 | 0.10 | | | | | | 14530 | 0.138 | 2 | |

Sample ID: **N043453-013BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149470**
Client ID: **ZZZZZZ** Batch ID: **R149470** TestNo: **EPA 120.1** Analysis Date: **12/16/2020** SeqNo: **4047611**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 993.000 | 0.10 | | | | | | 996.0 | 0.302 | 2 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-21-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | | PrepDate: | **12/17/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 9700 | 100 | 100 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-71-035-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | | PrepDate: | **12/17/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 100 | 100 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 11:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | | PrepDate: | **12/17/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 750 | 10 | 10 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | | PrepDate: | **12/17/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4400 | 50 | 50 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-175-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | | PrepDate: | **12/17/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 200 | 200 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-205-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 12:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | PrepDate: | **12/17/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 13000 | 200 | 200 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | | PrepDate: | **12/17/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4600 | 50 | 50 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:22:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | PrepDate: | **12/17/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 8600 | 100 | 100 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-020-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | | PrepDate: | **12/17/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4900 | 50 | 50 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-040-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:21:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217I** | QC Batch: **83551** | | | PrepDate: | **12/17/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 630 | 10 | 10 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-050-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217H** | QC Batch: **83550** | | | PrepDate: | **12/17/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 590 | 10 | 10 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-070-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217H** | QC Batch: **83550** | | | PrepDate: | **12/17/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 640 | 10 | 10 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217H** | QC Batch: **83550** | | | PrepDate: | **12/17/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 2400 | 33 | 33 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-POST-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:25:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201217H** | QC Batch: **83550** | | | PrepDate: | **12/17/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 200 | 200 | | mg/L | 1 | 12/17/2020 01:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83550** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149515** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83550** | TestNo: **SM2540C** | | Analysis Date: **12/17/2020** | SeqNo: **4050373** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 947.000 | 10 | 1000 | 0 | 94.7 | 80 | 120 | | | | |

| Sample ID: **MB-83550** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149515** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83550** | TestNo: **SM2540C** | | Analysis Date: **12/17/2020** | SeqNo: **4050374** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | ND | 10 | | | | | | | | | |

| Sample ID: **N043453-018BDUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149515** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83550** | TestNo: **SM2540C** | | Analysis Date: **12/17/2020** | SeqNo: **4050384** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 10420.000 | 200 | | | | | | 10880 | 4.32 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

Sample ID: **LCS-83551** SampType: **LCS** TestCode: **160.1_2540C_** Units: **mg/L** Prep Date: **12/17/2020** RunNo: **149516**
Client ID: **LCSW** Batch ID: **83551** TestNo: **SM2540C** Analysis Date: **12/17/2020** SeqNo: **4050385**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 962.000 | 10 | 1000 | 0 | 96.2 | 80 | 120 | | | | |

Sample ID: **MB-83551** SampType: **MBLK** TestCode: **160.1_2540C_** Units: **mg/L** Prep Date: **12/17/2020** RunNo: **149516**
Client ID: **PBW** Batch ID: **83551** TestNo: **SM2540C** Analysis Date: **12/17/2020** SeqNo: **4050386**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | ND | 10 | | | | | | | | | |

Sample ID: **N043453-008BDUP** SampType: **DUP** TestCode: **160.1_2540C_** Units: **mg/L** Prep Date: **12/17/2020** RunNo: **149516**
Client ID: **ZZZZZZ** Batch ID: **83551** TestNo: **SM2540C** Analysis Date: **12/17/2020** SeqNo: **4050393**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 13600.000 | 200 | | | | | | 13460 | 1.03 | 5 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-21-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/16/2020 05:51 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 12:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-71-035-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/16/2020 06:10 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 12:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 11:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | **EPA 218.6** | | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 01:23 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 01:13 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-EB-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:45:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 03:55 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 01:42 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 01:22 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-EB-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 04:13 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-175-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 7.9 | 0.17 | 1.0 | | µg/L | 5 | 12/16/2020 07:07 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | 9.0 | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 01:32 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-205-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 12:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/16/2020 06:29 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | 3.6 | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 01:41 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 4.5 | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 12:55 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | 6.0 | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 01:51 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:22:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 120 | 0.33 | 2.0 | | µg/L | 10 | 12/16/2020 12:26 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | 110 | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 02:19 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-020-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 02:01 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 02:28 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-040-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:21:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 03:36 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 02:38 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-050-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 02:20 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 02:47 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-070-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 0.20 | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 02:39 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 02:56 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 03:17 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | 1.7 | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 03:15 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-723-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 04:34 PM |

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| | S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| | DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-724-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:24:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** | QC Batch: **R149495** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/16/2020 05:14 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-POST-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:25:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201216A** QC Batch: **R149495** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 19 | 0.17 | 1.0 | | µg/L | 5 | 12/16/2020 07:36 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | | Analyst: **CEI** |
| Chromium | 18 | 0.13 | 1.0 | | µg/L | 1 | 12/22/2020 03:24 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-21-EB-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 10:36 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149495** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149495** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149495** | TestNo: **EPA 218.6** | | Analysis Date: **12/16/2020** | SeqNo: **4049140** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149495** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149495** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149495** | TestNo: **EPA 218.6** | | Analysis Date: **12/16/2020** | SeqNo: **4049141** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.934 | 0.20 | 5.000 | 0 | 98.7 | 90 | 110 | | | | |

| Sample ID: **N043451-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149495** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149495** | TestNo: **EPA 218.6** | | Analysis Date: **12/16/2020** | SeqNo: **4049144** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.032 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

| Sample ID: **N043451-001AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149495** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149495** | TestNo: **EPA 218.6** | | Analysis Date: **12/16/2020** | SeqNo: **4049145** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.047 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | 1.032 | 1.39 | 20 | |

| Sample ID: **N043451-002ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149495** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149495** | TestNo: **EPA 218.6** | | Analysis Date: **12/16/2020** | SeqNo: **4049149** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.608 | 0.20 | | | | | | 5.498 | 1.98 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043451-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049150**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 10.789 | 0.20 | 5.000 | 5.498 | 106 | 90 | 110 | | | | |

Sample ID: **N043453-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049155**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.013 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043453-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049157**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.950 | 0.20 | 1.000 | 0 | 95.0 | 90 | 110 | | | | |

Sample ID: **N043453-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049159**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.025 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043453-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049161**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.986 | 0.20 | 1.000 | 0 | 98.6 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043453-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049163**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.213 | 0.20 | 1.000 | 0.2035 | 101 | 90 | 110 | | | | |

Sample ID: **N043453-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049167**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.050 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

Sample ID: **N043453-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049169**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.049 | 0.20 | 1.000 | 0.04590 | 100 | 90 | 110 | | | | |

Sample ID: **N043453-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049171**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.009 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043453-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049173**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.004 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043453-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049175**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.015 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043453-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049179**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.997 | 0.20 | 1.000 | 0 | 99.7 | 90 | 110 | | | | |

Sample ID: **N043453-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049180**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.462 | 0.20 | 5.000 | 4.476 | 99.7 | 90 | 110 | | | | |

Sample ID: **N043453-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049181**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 163.389 | 2.0 | 50.00 | 115.6 | 95.6 | 90 | 110 | | | | |

Sample ID: **N043453-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049183**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.183 | 1.0 | 5.000 | 0.3080 | 97.5 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043453-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049185**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.805 | 1.0 | 5.000 | 0 | 96.1 | 90 | 110 | | | | |

Sample ID: **N043453-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049187**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.589 | 1.0 | 5.000 | 0.4770 | 102 | 90 | 110 | | | | |

Sample ID: **N043453-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049191**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 12.503 | 1.0 | 5.000 | 7.886 | 92.3 | 90 | 110 | | | | |

Sample ID: **N043453-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149495**
Client ID: **ZZZZZZ** Batch ID: **R149495** TestNo: **EPA 218.6** Analysis Date: **12/16/2020** SeqNo: **4049193**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 23.426 | 1.0 | 5.000 | 18.65 | 95.6 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149525** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051171** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149525** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051172** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.951 | 0.20 | 5.000 | 0 | 99.0 | 90 | 110 | | | | |

| Sample ID: **N043417-014AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051174** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.978 | 0.20 | 1.000 | 0 | 97.8 | 90 | 110 | | | | |

| Sample ID: **N043417-015AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051176** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.019 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID: **N043453-019AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051178** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.013 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051182**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051184**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.078 | 0.20 | 1.000 | 0.05430 | 102 | 90 | 110 | | | | |

Sample ID: **N043469-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051186**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.094 | 0.20 | 1.000 | 0.07220 | 102 | 90 | 110 | | | | |

Sample ID: **N043469-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051190**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 87193.500 | 1000 | 25000 | 61390 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051192**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2958.400 | 40 | 1000 | 1971 | 98.7 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043469-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051194** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 86350.000 | 1000 | 25000 | 61090 | 101 | 90 | 110 | | | | |

| Sample ID: **N043469-002AMSD** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051195** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 87024.500 | 1000 | 25000 | 61390 | 103 | 90 | 110 | 87190 | 0.194 | 0 | |

| Sample ID: **N043469-004AMSD** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051196** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3000.520 | 40 | 1000 | 1971 | 103 | 90 | 110 | 2958 | 1.41 | 0 | |

| Sample ID: **N043469-004ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051197** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1988.380 | 40 | | | | | | 1971 | 0.872 | 20 | |

| Sample ID: **N043469-006AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051201** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.159 | 1.0 | 5.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051203**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.195 | 1.0 | 5.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043469-006AMSD** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051204**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.287 | 1.0 | 5.000 | 0 | 106 | 90 | 110 | 5.158 | 2.46 | 0 | |

Sample ID: **N043469-010AMSD** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051205**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.000 | 1.0 | 5.000 | 0 | 100 | 90 | 110 | 5.195 | 3.84 | 0 | |

Sample ID: **N043469-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051207**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2951.140 | 40 | 1000 | 1977 | 97.4 | 90 | 110 | | | | |

Sample ID: **N043469-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051209**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.676 | 1.0 | 5.000 | 0.5205 | 103 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051213**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.301 | 1.0 | 5.000 | 0 | 106 | 90 | 110 | | | | |

Sample ID: **N043469-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051215**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.745 | 1.0 | 5.000 | 0 | 94.9 | 90 | 110 | | | | |

Sample ID: **N043469-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051217**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.009 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043469-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051221**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.032 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051223**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.004 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051225**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.036 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83520** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83520** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060538** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83520** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83520** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060539** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.941 | 1.0 | 10.00 | 0 | 99.4 | 85 | 115 | | | | |

| Sample ID: **N043452-001DMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83520** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060551** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.810 | 1.0 | 10.00 | 0.2695 | 95.4 | 75 | 125 | | | | |

| Sample ID: **N043452-001DMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83520** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060553** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.886 | 1.0 | 10.00 | 0.2695 | 96.2 | 75 | 125 | 9.810 | 0.771 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-21-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 750 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-71-035-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 190 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 11:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 220 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 260 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-175-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 43 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-205-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 12:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 48 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 290 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:22:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 250 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-020-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 820 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-040-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:21:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 270 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-050-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 190 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-070-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 160 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 270 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-POST-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:25:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201220E** | QC Batch: **R149585** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 43 | 1.2 | 5.0 | | mg/L | 1 | 12/20/2020 03:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149585** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149585** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149585** | TestNo: **SM 2320 B** | | Analysis Date: **12/20/2020** | SeqNo: **4054814** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 94.017 | 5.0 | 100.0 | 0 | 94.0 | 85 | 115 | | | | |

| Sample ID: **MB-R149585** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149585** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149585** | TestNo: **SM 2320 B** | | Analysis Date: **12/20/2020** | SeqNo: **4054815** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043452-001ADUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149585** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149585** | TestNo: **SM 2320 B** | | Analysis Date: **12/20/2020** | SeqNo: **4054817** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 121.795 | 5.0 | | | | | | 120.7 | 0.881 | 30 | |

| Sample ID: **N043452-001AMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149585** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149585** | TestNo: **SM 2320 B** | | Analysis Date: **12/20/2020** | SeqNo: **4054818** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 213.675 | 5.0 | 100.0 | 120.7 | 92.9 | 75 | 125 | | | | |

| Sample ID: **N043452-001AMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149585** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149585** | TestNo: **SM 2320 B** | | Analysis Date: **12/20/2020** | SeqNo: **4054819** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 212.607 | 5.0 | 100.0 | 120.7 | 91.9 | 75 | 125 | 213.7 | 0.501 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-21-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** | QC Batch: **R149491** | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/16/2020 01:24 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** | QC Batch: **R149491** | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3400 | 35 | 500 | | mg/L | 1000 | 12/16/2020 10:22 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** | QC Batch: **R149491** | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1600 | 8.0 | 100 | | mg/L | 200 | 12/17/2020 02:59 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-71-035-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/16/2020 01:40 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5300 | 35 | 500 | | mg/L | 1000 | 12/16/2020 10:38 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1200 | 4.0 | 50 | | mg/L | 100 | 12/17/2020 03:15 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 11:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/16/2020 01:56 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 100 | 0.70 | 10 | | mg/L | 20 | 12/16/2020 08:44 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 250 | 0.80 | 10 | | mg/L | 20 | 12/16/2020 08:44 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/16/2020 02:13 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1800 | 17 | 250 | | mg/L | 500 | 12/16/2020 11:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 1.8 | 0.048 | 0.50 | | mg/L | 5 | 12/16/2020 02:13 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 560 | 2.0 | 25 | | mg/L | 50 | 12/16/2020 10:54 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-175-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/16/2020 02:29 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5800 | 70 | 1000 | | mg/L | 2000 | 12/16/2020 11:27 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 960 | 4.0 | 50 | | mg/L | 100 | 12/17/2020 03:31 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-205-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 12:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/16/2020 02:45 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 7200 | 35 | 500 | | mg/L | 1000 | 12/16/2020 11:43 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 900 | 4.0 | 50 | | mg/L | 100 | 12/17/2020 03:48 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/16/2020 03:02 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1900 | 17 | 250 | | mg/L | 500 | 12/17/2020 |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 600 | 2.0 | 25 | | mg/L | 50 | 12/17/2020 04:04 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:22:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/16/2020 03:50 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3700 | 35 | 500 | | mg/L | 1000 | 12/17/2020 12:48 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 920 | 4.0 | 50 | | mg/L | 100 | 12/17/2020 04:53 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-020-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/16/2020 04:07 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1100 | 7.0 | 100 | | mg/L | 200 | 12/17/2020 12:32 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1500 | 8.0 | 100 | | mg/L | 200 | 12/17/2020 12:32 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-040-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:21:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/16/2020 04:23 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 86 | 0.70 | 10 | | mg/L | 20 | 12/17/2020 12:16 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 140 | 0.80 | 10 | | mg/L | 20 | 12/17/2020 12:16 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-050-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/16/2020 04:39 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 84 | 0.70 | 10 | | mg/L | 20 | 12/17/2020 01:37 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 190 | 0.80 | 10 | | mg/L | 20 | 12/17/2020 01:37 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-070-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/16/2020 04:56 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 93 | 0.70 | 10 | | mg/L | 20 | 12/17/2020 01:54 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 210 | 0.80 | 10 | | mg/L | 20 | 12/17/2020 01:54 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/16/2020 05:12 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1000 | 17 | 250 | | mg/L | 500 | 12/17/2020 02:10 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 390 | 2.0 | 25 | | mg/L | 50 | 12/17/2020 05:09 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-POST-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:25:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/16/2020 12:35 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5800 | 70 | 1000 | | mg/L | 2000 | 12/17/2020 02:26 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201216A** QC Batch: **R149491** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 580 | 2.0 | 25 | | mg/L | 50 | 12/17/2020 05:26 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149491_BR** | SampType: **MBLK** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149491** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149491** | TestNo: **EPA 300.0** | | Analysis Date: **12/16/2020** | SeqNo: **4049024** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149491_BR** | SampType: **LCS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149491** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149491** | TestNo: **EPA 300.0** | | Analysis Date: **12/16/2020** | SeqNo: **4049025** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.255 | 0.50 | 1.250 | 0 | 100 | 90 | 110 | | | | |

| Sample ID: **N043452-001AMS** | SampType: **MS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149491** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149491** | TestNo: **EPA 300.0** | | Analysis Date: **12/16/2020** | SeqNo: **4049046** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.735 | 2.5 | 6.250 | 0.5005 | 99.7 | 80 | 120 | | | | |

| Sample ID: **N043452-001AMSD** | SampType: **MSD** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149491** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149491** | TestNo: **EPA 300.0** | | Analysis Date: **12/16/2020** | SeqNo: **4049047** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.895 | 2.5 | 6.250 | 0.5005 | 102 | 80 | 120 | 6.734 | 2.36 | 20 | |

| Sample ID: **N043452-002ADUP** | SampType: **DUP** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149491** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149491** | TestNo: **EPA 300.0** | | Analysis Date: **12/16/2020** | SeqNo: **4049048** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.095 | 5.0 | | | | | | 1.198 | 0 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **N043453-005BMS** | SampType: **MS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149491** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149491** | TestNo: **EPA 300.0** | | Analysis Date: **12/16/2020** | SeqNo: **4049051** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.664 | 2.5 | 6.250 | 0.4505 | 99.4 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149491_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **PBW** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048984**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.161 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149491_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **LCSW** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048985**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.983 | 0.50 | 2.000 | 0 | 99.2 | 90 | 110 | | | | |

Sample ID: **N043452-001AMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **ZZZZZZ** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048993**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 352.320 | 25 | 100.0 | 249.4 | 103 | 80 | 120 | | | | |

Sample ID: **N043452-001AMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **ZZZZZZ** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048994**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 353.115 | 25 | 100.0 | 249.4 | 104 | 80 | 120 | 352.3 | 0.225 | 20 | |

Sample ID: **N043453-003BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **ZZZZZZ** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048996**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 102.358 | 10 | | | | | | 101.4 | 0.928 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **N043453-003BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **ZZZZZZ** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048997**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 141.668 | 10 | 40.00 | 101.4 | 101 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_FPGE**

Sample ID: **MB-R149491_F** SampType: **MBLK** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **PBW** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048896**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | | |

Sample ID: **LCS-R149491_F** SampType: **LCS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **LCSW** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048897**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.288 | 0.10 | 1.250 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043452-001AMS** SampType: **MS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **ZZZZZZ** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048905**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 6.998 | 0.50 | 6.250 | 0.7055 | 101 | 80 | 120 | | | | |

Sample ID: **N043452-001AMSD** SampType: **MSD** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **ZZZZZZ** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048906**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 6.958 | 0.50 | 6.250 | 0.7055 | 100 | 80 | 120 | 6.998 | 0.573 | 20 | |

Sample ID: **N043452-002ADUP** SampType: **DUP** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149491**
Client ID: **ZZZZZZ** Batch ID: **R149491** TestNo: **EPA 300.0** Analysis Date: **12/16/2020** SeqNo: **4048907**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.774 | 1.0 | | | | | | 0.8480 | 0 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: MB-R149491_SO4 | SampType: MBLK | TestCode: 300_W_SO4P | Units: mg/L | Prep Date: | RunNo: 149491 |
|---|---|---|---|---|---|
| Client ID: PBW | Batch ID: R149491 | TestNo: EPA 300.0 | | Analysis Date: 12/16/2020 | SeqNo: 4049064 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

| Sample ID: LCS-R149491_SO4 | SampType: LCS | TestCode: 300_W_SO4P | Units: mg/L | Prep Date: | RunNo: 149491 |
|---|---|---|---|---|---|
| Client ID: LCSW | Batch ID: R149491 | TestNo: EPA 300.0 | | Analysis Date: 12/16/2020 | SeqNo: 4049065 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.949 | 0.50 | 4.000 | 0 | 98.7 | 90 | 110 | | | | |

| Sample ID: N043452-001AMS | SampType: MS | TestCode: 300_W_SO4P | Units: mg/L | Prep Date: | RunNo: 149491 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: R149491 | TestNo: EPA 300.0 | | Analysis Date: 12/16/2020 | SeqNo: 4049073 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 212.588 | 10 | 80.00 | 134.6 | 97.5 | 80 | 120 | | | | |

| Sample ID: N043452-001AMSD | SampType: MSD | TestCode: 300_W_SO4P | Units: mg/L | Prep Date: | RunNo: 149491 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: R149491 | TestNo: EPA 300.0 | | Analysis Date: 12/16/2020 | SeqNo: 4049074 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 211.186 | 10 | 80.00 | 134.6 | 95.7 | 80 | 120 | 212.6 | 0.662 | 20 | |

| Sample ID: N043453-003BDUP | SampType: DUP | TestCode: 300_W_SO4P | Units: mg/L | Prep Date: | RunNo: 149491 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: R149491 | TestNo: EPA 300.0 | | Analysis Date: 12/16/2020 | SeqNo: 4049076 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 250.856 | 10 | | | | | | 249.7 | 0.475 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043453-003BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149491** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149491** | TestNo: **EPA 300.0** | | Analysis Date: **12/16/2020** | SeqNo: **4049077** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 331.006 | 10 | 80.00 | 249.7 | 102 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-21-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217J** | QC Batch: **R149518** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.21 | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 08:06 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-71-035-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.092 | 0.032 | 0.050 | | mg/L | 1 | 12/22/2020 02:19 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 11:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217J** | QC Batch: **R149518** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 08:15 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217J** | QC Batch: **R149518** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 09:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-175-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217J** | QC Batch: **R149518** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 1.0 | 0.063 | 0.10 | | mg/L | 2 | 12/17/2020 09:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217J** | QC Batch: **R149518** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 09:34 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:22:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.11 | 0.032 | 0.050 | | mg/L | 1 | 12/22/2020 02:23 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-040-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:21:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217J** | QC Batch: **R149518** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 09:44 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-POST-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:25:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201217J** | QC Batch: **R149518** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.52 | 0.032 | 0.050 | | mg/L | 1 | 12/17/2020 09:48 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149518** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149518** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149518** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4050411** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R149518** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149518** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149518** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4050412** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.489 | 0.050 | 0.5000 | 0 | 97.9 | 85 | 115 | | | | |

| Sample ID: **N043452-001BDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149518** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149518** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4050414** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 4.485 | 0.25 | | | | | | 4.407 | 1.75 | 20 | |

| Sample ID: **N043452-001BMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149518** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149518** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4050415** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 6.897 | 0.25 | 2.500 | 4.407 | 99.6 | 75 | 125 | | | | |

| Sample ID: **N043452-001BMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149518** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149518** | TestNo: **SM4500-NO3** | | Analysis Date: **12/17/2020** | SeqNo: **4050416** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 7.022 | 0.25 | 2.500 | 4.407 | 105 | 75 | 125 | 6.897 | 1.80 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149636** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057237** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R149636** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057238** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.478 | 0.050 | 0.5000 | 0 | 95.5 | 85 | 115 | | | | |

| Sample ID: **N043469-002DDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057240** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 23.715 | 2.5 | | | | | | 23.52 | 0.826 | 20 | |

| Sample ID: **N043469-002DMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057241** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 48.200 | 2.5 | 25.00 | 23.52 | 98.7 | 75 | 125 | | | | |

| Sample ID: **N043469-002DMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057242** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 49.030 | 2.5 | 25.00 | 23.52 | 102 | 75 | 125 | 48.20 | 1.71 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043453
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043453-001

**Client Sample ID:** MW-21-Q420
**Collection Date:** 12/15/2020 2:15:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 6400 | 370 | 500 | | ug/L | 5 | 12/23/2020 03:38 PM |
| Calcium | 190000 | 420 | 2500 | | ug/L | 5 | 12/28/2020 10:49 AM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/23/2020 03:38 PM |
| Magnesium | 97000 | 240 | 500 | | ug/L | 5 | 12/23/2020 03:38 PM |
| Sodium | 2900000 | 24000 | 120000 | | ug/L | 250 | 12/29/2020 12:58 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043453
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043453-002

**Client Sample ID:** MW-71-035-Q420
**Collection Date:** 12/15/2020 2:40:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 3000 | 370 | 500 | | ug/L | 5 | 12/23/2020 03:46 PM |
| Calcium | 790000 | 420 | 2500 | | ug/L | 5 | 12/28/2020 10:53 AM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/23/2020 03:46 PM |
| Magnesium | 81000 | 240 | 500 | | ug/L | 5 | 12/23/2020 03:46 PM |
| Sodium | 3000000 | 24000 | 120000 | | ug/L | 250 | 12/29/2020 01:01 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 11:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | | PrepDate: | **12/17/2020** | Analyst: **DJ** |
| Boron | 430 | 74 | 100 | | ug/L | 1 | 12/23/2020 03:52 PM |
| Calcium | 99000 | 85 | 500 | | ug/L | 1 | 12/28/2020 10:58 AM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/23/2020 03:52 PM |
| Magnesium | 30000 | 48 | 100 | | ug/L | 1 | 12/23/2020 03:52 PM |
| Sodium | 100000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 01:18 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 1300 | 74 | 100 | | ug/L | 1 | 12/23/2020 03:56 PM |
| Calcium | 190000 | 85 | 500 | | ug/L | 1 | 12/28/2020 11:11 AM |
| Iron | 430 | 18 | 20 | | ug/L | 1 | 12/23/2020 03:56 PM |
| Magnesium | 52000 | 48 | 100 | | ug/L | 1 | 12/23/2020 03:56 PM |
| Sodium | 1300000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 02:10 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-175-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 4200 | 370 | 500 | | ug/L | 5 | 12/23/2020 04:02 PM |
| Calcium | 100000 | 420 | 2500 | | ug/L | 5 | 12/28/2020 11:17 AM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/23/2020 04:02 PM |
| Magnesium | 3500 | 240 | 500 | | ug/L | 5 | 12/28/2020 11:17 AM |
| Sodium | 4400000 | 24000 | 120000 | | ug/L | 250 | 12/29/2020 01:26 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043453
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043453-008

**Client Sample ID:** MW-46-205-Q420
**Collection Date:** 12/15/2020 12:18:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 5200 | 370 | 500 | | ug/L | 5 | 12/23/2020 04:06 PM |
| Calcium | 93000 | 420 | 2500 | | ug/L | 5 | 12/28/2020 11:21 AM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/23/2020 04:06 PM |
| Magnesium | 3100 | 240 | 500 | | ug/L | 5 | 12/28/2020 11:21 AM |
| Sodium | 4700000 | 24000 | 120000 | | ug/L | 250 | 12/29/2020 01:29 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 1200 | 74 | 100 | | ug/L | 1 | 12/23/2020 04:12 PM |
| Calcium | 180000 | 85 | 500 | | ug/L | 1 | 12/28/2020 11:25 AM |
| Iron | 180 | 18 | 20 | | ug/L | 1 | 12/23/2020 04:12 PM |
| Magnesium | 53000 | 48 | 100 | | ug/L | 1 | 12/23/2020 04:12 PM |
| Sodium | 1400000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 02:13 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:22:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 2600 | 370 | 500 | | ug/L | 5 | 12/23/2020 04:21 PM |
| Calcium | 260000 | 420 | 2500 | | ug/L | 5 | 12/28/2020 11:30 AM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/23/2020 04:21 PM |
| Magnesium | 46000 | 240 | 500 | | ug/L | 5 | 12/28/2020 11:30 AM |
| Sodium | 2500000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 01:40 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-020-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 1400 | 74 | 100 | | ug/L | 1 | 12/23/2020 04:25 PM |
| Calcium | 190000 | 85 | 500 | | ug/L | 1 | 12/28/2020 11:35 AM |
| Iron | 2200 | 18 | 20 | | ug/L | 1 | 12/23/2020 04:25 PM |
| Magnesium | 220000 | 48 | 100 | | ug/L | 1 | 12/23/2020 04:25 PM |
| Sodium | 1200000 | 9600 | 50000 | | ug/L | 100 | 12/29/2020 01:44 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-040-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:21:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | ND | 74 | 100 | | ug/L | 1 | 12/23/2020 04:41 PM |
| Calcium | 49000 | 85 | 500 | | ug/L | 1 | 12/28/2020 11:40 AM |
| Iron | 340 | 18 | 20 | | ug/L | 1 | 12/23/2020 04:41 PM |
| Magnesium | 13000 | 48 | 100 | | ug/L | 1 | 12/23/2020 04:41 PM |
| Sodium | 160000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 01:47 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-050-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | | PrepDate: | **12/17/2020** | Analyst: **DJ** |
| Boron | ND | 74 | 100 | | ug/L | 1 | 12/23/2020 04:45 PM |
| Calcium | 76000 | 85 | 500 | | ug/L | 1 | 12/28/2020 11:45 AM |
| Iron | 93 | 18 | 20 | | ug/L | 1 | 12/23/2020 04:45 PM |
| Magnesium | 19000 | 48 | 100 | | ug/L | 1 | 12/23/2020 04:45 PM |
| Sodium | 93000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-070-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | | PrepDate: | **12/17/2020** | Analyst: **DJ** |
| Boron | ND | 74 | 100 | | ug/L | 1 | 12/23/2020 04:49 PM |
| Calcium | 71000 | 85 | 500 | | ug/L | 1 | 12/28/2020 11:49 AM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/23/2020 04:49 PM |
| Magnesium | 17000 | 48 | 100 | | ug/L | 1 | 12/23/2020 04:49 PM |
| Sodium | 98000 | 2400 | 12000 | | ug/L | 25 | 12/29/2020 01:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 520 | 74 | 100 | | ug/L | 1 | 12/23/2020 04:53 PM |
| Calcium | 86000 | 85 | 500 | | ug/L | 1 | 12/28/2020 11:53 AM |
| Iron | 110 | 18 | 20 | | ug/L | 1 | 12/23/2020 04:53 PM |
| Magnesium | 25000 | 48 | 100 | | ug/L | 1 | 12/23/2020 04:53 PM |
| Sodium | 620000 | 4800 | 25000 | | ug/L | 50 | 12/29/2020 02:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-POST-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:25:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201223A** | QC Batch: **83519** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 5100 | 370 | 500 | | ug/L | 5 | 12/23/2020 04:57 PM |
| Calcium | 250000 | 420 | 2500 | | ug/L | 5 | 12/28/2020 12:06 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/23/2020 04:57 PM |
| Magnesium | 6900 | 240 | 500 | | ug/L | 5 | 12/28/2020 12:06 PM |
| Sodium | 3800000 | 24000 | 120000 | | ug/L | 250 | 12/29/2020 02:07 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83519** SampType: **MBLK** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149642**
Client ID: **PBW** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057843**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83519** SampType: **LCS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149642**
Client ID: **LCSW** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057844**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5390.410 | 100 | 5000 | 0 | 108 | 85 | 115 | | | | |
| Calcium | 10122.686 | 500 | 10000 | 0 | 101 | 85 | 115 | | | | |
| Iron | 103.315 | 20 | 100.0 | 0 | 103 | 85 | 115 | | | | |
| Magnesium | 9686.506 | 100 | 10000 | 0 | 96.9 | 85 | 115 | | | | |

Sample ID: **N043452-001DMS1** SampType: **MS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057848**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5385.589 | 100 | 5000 | 233.9 | 103 | 75 | 125 | | | | |
| Calcium | 79149.041 | 500 | 10000 | 71570 | 75.8 | 75 | 125 | | | | |
| Iron | 223.697 | 20 | 100.0 | 118.1 | 106 | 75 | 125 | | | | |
| Magnesium | 31704.647 | 100 | 10000 | 22190 | 95.1 | 75 | 125 | | | | |

Sample ID: **N043452-001DMSD1** SampType: **MSD** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057849**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5516.032 | 100 | 5000 | 233.9 | 106 | 75 | 125 | 5386 | 2.39 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043452-001DMSD1** SampType: **MSD** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057849**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 77972.411 | 500 | 10000 | 71570 | 64.0 | 75 | 125 | 79150 | 1.50 | 20 | S |
| Iron | 245.965 | 20 | 100.0 | 118.1 | 128 | 75 | 125 | 223.7 | 9.48 | 20 | S |
| Magnesium | 32168.197 | 100 | 10000 | 22190 | 99.8 | 75 | 125 | 31700 | 1.45 | 20 | |

Sample ID: **MB-83519** SampType: **MBLK** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149729**
Client ID: **PBW** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061355**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

Sample ID: **LCS2-83519** SampType: **LCS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149729**
Client ID: **LCSW** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061356**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18480.855 | 500 | 20000 | 0 | 92.4 | 85 | 115 | | | | |

Sample ID: **N043452-001D-MS2** SampType: **MS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061365**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 141521.915 | 12000 | 20000 | 134300 | 36.1 | 75 | 125 | | | | S |

Sample ID: **N043452-001D-MSD2** SampType: **MSD** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061367**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 143923.423 | 12000 | 20000 | 134300 | 48.1 | 75 | 125 | 141500 | 1.68 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043452-001D-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149642**
Client ID: **ZZZZZZ** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/23/2020** SeqNo: **4057847**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5209.700 | 100 | 5000 | 233.9 | 99.5 | 80 | 120 | | | | |
| Calcium | 79168.704 | 500 | 10000 | 71570 | 76.0 | 80 | 120 | | | | S |
| Iron | 227.064 | 20 | 100.0 | 118.1 | 109 | 80 | 120 | | | | |
| Magnesium | 32142.017 | 100 | 10000 | 22190 | 99.5 | 80 | 120 | | | | |

Sample ID: **N043452-001D-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149729**
Client ID: **ZZZZZZ** Batch ID: **83519** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4061363**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 141101.224 | 12000 | 20000 | 134300 | 34.0 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-21-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Manganese | 38 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 12:45 PM |
| Molybdenum | 64 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 12:45 PM |
| Selenium | 4.7 | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 03:48 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-71-035-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 1.3 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 12:54 PM |
| Manganese | 280 | 1.3 | 2.5 | | µg/L | 5 | 12/22/2020 01:08 PM |
| Molybdenum | 16 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 12:54 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 03:53 PM |

**Qualifiers:**

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|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-025-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 11:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 0.58 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 04:07 PM |
| Manganese | 3.1 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 01:13 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 01:13 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 04:07 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-28-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 2.0 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 01:22 PM |
| Manganese | 120 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 01:22 PM |
| Molybdenum | 24 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 01:22 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 04:11 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-175-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Manganese | 15 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 01:32 PM |
| Molybdenum | 190 | 1.1 | 2.5 | | µg/L | 5 | 12/22/2020 01:36 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 04:16 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-46-205-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 12:18:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Manganese | 53 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 01:41 PM |
| Molybdenum | 340 | 1.1 | 2.5 | | µg/L | 5 | 12/22/2020 01:46 PM |
| Selenium | 0.91 | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 05:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-009 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201222A** QC Batch: **83520** PrepDate: **12/16/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.9 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 01:51 PM |
| Manganese | 220 | 1.3 | 2.5 | | µg/L | 5 | 12/22/2020 02:14 PM |
| Molybdenum | 19 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 01:51 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 04:25 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-39-100-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:22:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 02:19 PM |
| Manganese | 7.0 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 02:19 PM |
| Molybdenum | 7.5 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 02:19 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 02:19 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-020-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 8:41:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 02:28 PM |
| Manganese | 450 | 1.3 | 2.5 | | µg/L | 5 | 12/22/2020 02:33 PM |
| Molybdenum | 21 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 02:28 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 02:28 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-040-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:21:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 4.5 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 02:38 PM |
| Manganese | 120 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 02:38 PM |
| Molybdenum | 2.9 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 02:38 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 02:38 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-050-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 10:53:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 5.6 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 02:47 PM |
| Manganese | 210 | 1.3 | 2.5 | | µg/L | 5 | 12/22/2020 02:52 PM |
| Molybdenum | 3.9 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 02:47 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 02:47 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-070-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 1.9 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 02:56 PM |
| Manganese | 140 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 02:56 PM |
| Molybdenum | 5.0 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 02:56 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 02:56 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-36-090-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 9:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 5.2 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 03:15 PM |
| Manganese | 34 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 03:15 PM |
| Molybdenum | 9.6 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 03:15 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 03:15 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-POST-Q420 |
| **Lab Order:** | N043453 | **Collection Date:** | 12/15/2020 1:25:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043453-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83520** | | | | PrepDate: | **12/16/2020** | Analyst: **CEI** |
| Arsenic | 8.5 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 03:24 PM |
| Manganese | 29 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 03:24 PM |
| Molybdenum | 89 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 03:24 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 03:24 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83520** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/16/2020** RunNo: **149694**
Client ID: **PBW** Batch ID: **83520** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060716**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-83520** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/16/2020** RunNo: **149694**
Client ID: **LCSW** Batch ID: **83520** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060717**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.103 | 0.10 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Manganese | 100.226 | 0.50 | 100.0 | 0 | 100 | 85 | 115 | | | | |
| Molybdenum | 9.847 | 0.50 | 10.00 | 0 | 98.5 | 85 | 115 | | | | |
| Selenium | 9.632 | 0.50 | 10.00 | 0 | 96.3 | 85 | 115 | | | | |

Sample ID: **N043452-001DMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/16/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83520** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060729**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.108 | 0.10 | 10.00 | 1.130 | 99.8 | 75 | 125 | | | | |
| Molybdenum | 16.973 | 0.50 | 10.00 | 6.411 | 106 | 75 | 125 | | | | |

Sample ID: **N043452-001DMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/16/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83520** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060730**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 228.309 | 2.5 | 100.0 | 129.8 | 98.5 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043453
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **N043452-001DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83520** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060731** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.380 | 0.10 | 10.00 | 1.130 | 102 | 75 | 125 | 11.11 | 2.42 | 20 | |
| Molybdenum | 16.878 | 0.50 | 10.00 | 6.411 | 105 | 75 | 125 | 16.97 | 0.559 | 20 | |

| Sample ID: **N043452-001DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83520** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060732** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 226.433 | 2.5 | 100.0 | 129.8 | 96.7 | 75 | 125 | 228.3 | 0.825 | 20 | |

| Sample ID: **N043452-001DMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83520** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060771** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 12.714 | 0.50 | 10.00 | 3.760 | 89.5 | 75 | 125 | | | | |

| Sample ID: **N043452-001DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/16/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83520** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060772** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 12.876 | 0.50 | 10.00 | 3.760 | 91.2 | 75 | 125 | 12.71 | 1.26 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

N043453

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


Page 1 of 2

| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Reggie Tep | | P.O.# SWA-ASSET-C9817-057 | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: RT Date: 12/15/20 | Sampled By: Nara Tep | | Global ID: | Regulatory | 5. IR number 1 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/15/20 | | | Sample Temp: 1.1°C/3.6°C/4.3°C |
| Project Number: 30035275 | | | | | Courier: ASSET Tracking No.: |

Matrix: Ground x | Sediment | Potable | Soil | NPDES | Other Solid | Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Oxygen and Deuterium Isotopes (CFiRM), Ice (250 mL poly) | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (3x500 mL poly) | Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly) | Bromide, Sulfate, Chloride (EPA 300.0) (1 liter poly) | Fluoride (EPA 300.0) (1 liter poly) | Specific Conductance (EPA 120.1) (1 liter poly) | Total Dissolved Solids (SM92540) (1 liter poly) | Nitrate/Nitrite (SM4500NO3) Nitrate; H2SO4 (125 mL poly) | Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOAs) | Metals Dissolved (EPA7470A FF) Hg; HNO3 (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Potassium (500 mL poly) | Dissolved metals (SW 6010B), HNO3 (500 mL poly) B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 (500 mL poly) As, Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 (500 mL poly) B, Ca, Cu, Fe, Na, Ni | Dissolved metals (SW 6020), HNO3 (500 mL poly) As, Cr, Mn | Dissolved metals (SW 6010B), HNO3 (500 mL poly) B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 (500 mL poly) Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 (500 mL poly) Cu, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 (500 mL poly) | VOCs (8260) (3x40 mL VOAs) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043453-01 | MW-21-Q420 | 12/15/2020 | 14:15 | | | | X | X | X | | X | X | X | | | | X | | | | X | | | | | E | 5 | P | BNS | |
| 2 | -02 | MW-71-035-Q420 | 12/15/2020 | 14:40 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 3 | -03 | MW-28-025-Q420 | 12/15/2020 | 11:16 | | | | X | X | X | | X | X | X | | | | X | X | | | | | | | | E | 5 | P | BNS | |
| 4 | -04 | MW-28-025-EB-Q420 | 12/15/2020 | 10:45 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 5 | -05 | MW-28-090-Q420 | 12/15/2020 | 10:24 | | | | X | X | X | X | X | X | X | | | | X | X | | | | | | | | E | 5 | P | BNS | |
| 6 | -06 | MW-28-090-EB-Q420 | 12/15/2020 | 9:55 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 7 | -07 | MW-46-175-Q420 | 12/15/2020 | 13:12 | | X | X | | X | X | | X | X | X | | | | X | | | | X | | | | | E | 5 | P | BNS | |
| 8 | -08 | MW-46-205-Q420 | 12/15/2020 | 12:18 | | X | | | X | X | | X | X | | | | | X | | | | X | | | | | E | 3 | P | BN | |
| 9 | -09 | MW-36-100-Q420 | 12/15/2020 | 8:30 | | X | X | | X | X | | X | X | X | | | | X | X | | | | | | | (5) | E | 5 | P | BN | 5 |
| 10 | -10 | MW-39-100-Q420 | 12/15/2020 | 9:22 | | X | X | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 5 | P | BNS | |
| 11 | -11 | MW-36-020-Q420 | 12/15/2020 | 8:41 | | X | | | X | X | | X | X | | | | | X | X | | | | | | | | E | 3 | P | BN | |
| 12 | -12 | MW-36-040-Q420 | 12/15/2020 | 10:21 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Reggie Tep | 12/15/20 1545 | Nara Tep | 12/15/20 1545 |
| Nara Tep | 12/15/20 | Romeo Alcantara | 12/15/20 1545 |
| Romeo Alcantara | 12/15/20 | Romeo Alcantara | 12/15/20 1910 |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.

5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

| Preservatives: | | | | Container Type: | | |
|---|---|---|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C | T=Tube | V=VOA | P=Pint |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | | J=Jar | B=Tedlar | G=Glass |
| Others/Specify: | B (NH4)2SO4/NH4OH | | | M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
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www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD



| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Excel EDD; Geotracker; Lebspec; Others ✓; Specify: RWQCB; Global ID: |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Sample Receipt Condition: Y / N; 1. Chilled ✓; 2. Headspace; 3. Container Intact ✓; 4. Seal Present ✓; 5. IR number 2; 6. Method of Cooling: ICE |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 |
| Submitted By: Reggie Tep | | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Field Tech | Phone: 916-786-3302 Fax: | | Sample Temp: 1.1/3.6/2/4.8°C |
| Signature: RT 12/15/20 Date: | Sampled By: Nara Tep | | Courier: ACCENT |
| Project Name: PG&E Topock - GMP | Signature: Date: 12/15/20 | | Tracking No.: |
| Project Number: 30035275 | | | |

*I hereby authorize ASSET Labs to perform the tests indicated below.*

*I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.*

Matrix: Ground x; Potable; NPDES; Surface; Sediment; Soil; Other Solid

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Oxygen and Deuterium Isotopes (CFIRM), Ice (250 mL poly) | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (3x250 mL poly) | Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly) | Bromide, Sulfate, Chloride (EPA 300.0) (1 liter poly) | Fluoride (EPA 300.0) (1 liter poly) | Specific Conductance (EPA 120.1) (1 liter poly) | Total Dissolved Solids (SM92540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 (125 mL poly) | Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOAs) | Metals Dissolved (EPA7470A FF) Hg; HNO3 (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Potassium (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Ca, Fe, Na, Ni (500 mL poly) | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se (500 mL poly) | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 (500 mL poly) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043453-13 | MW-36-050-Q420 | 12/15/2020 | 10:53 | | X | | | X | X | | X | X | | | | | X | X | | | | | | E | 3 | P | BN | |
| 2 | -14 | MW-36-070-Q420 | 12/15/2020 | 9:11 | | X | | | X | X | | X | X | | | | | X | X | | | | | | E | 3 | P | BN | |
| 3 | -15 | MW-36-090-Q420 | 12/15/2020 | 9:50 | | X | X | | X | X | | X | X | | | | | X | X | | | | | | E | 4 | P | BN | |
| 4 | -16 | EB-723-Q420 | 12/15/2020 | 15:00 | | X | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 5 | -17 | EB-724-Q420 | 12/15/2020 | 13:24 | | X | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 6 | MW38D | ~~MW-36B~~-POST-Q420 | 12/15/2020 | 13:25 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | E | 4 | P | BSN | |
| 7 | -19 | MW-21-EB-Q420 | 12/15/2020 | 14:00 | | X | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|---|---|---|
| Relinquished by (Signature and Printed Name): Reggie Tep | Date/Time: 12/15/20 1545 | Received by (Signature and Printed Name): Nara Tep | Date/Time: 12/15/20 1545 |
| Relinquished by (Signature and Printed Name): Nara Tep | Date/Time: 12/15/20 | Received by (Signature and Printed Name): DANIEL ALCANTARA | Date/Time: 12/15/20 1545 |
| Relinquished by (Signature and Printed Name): Romeo Alcantara | Date/Time: 12/15/20 1910 | Received by (Signature and Printed Name): Romeo Alcantara | Date/Time: 12/15/20 1910 |

**Turn Around Time (TAT)**

- A = < 24 Hrs or Same Day TAT
- B = Next Workday
- C = 2 Workdays
- D = 3 Workdays
- X E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less then 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/15/2020 | Workorder: | N043453 |
| Rep sample Temp (Deg C): | 1.1/3.6/4.3 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/16/2020

Reviewed By: MBC 12/18/2020

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-001A | MW-21-Q420 | 12/15/2020 2:15:00 PM | 12/30/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-001B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-001C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-001D | | | 12/30/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-002A | MW-71-035-Q420 | 12/15/2020 2:40:00 PM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-002B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-002B | MW-71-035-Q420 | 12/15/2020 2:40:00 PM | 12/30/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-002C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-002D | | | 12/30/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-003A | MW-28-025-Q420 | 12/15/2020 11:16:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-003B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-003C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-003D | MW-28-025-Q420 | 12/15/2020 11:16:00 AM | 12/30/2020 | Groundwater | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-004A | MW-28-025-EB-Q420 | 12/15/2020 10:45:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-005A | MW-28-090-Q420 | 12/15/2020 10:24:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-005B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-005C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-005D | | | 12/30/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-006A | MW-28-090-EB-Q420 | 12/15/2020 9:55:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-007A | MW-46-175-Q420 | 12/15/2020 1:12:00 PM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-007B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-007B | MW-46-175-Q420 | 12/15/2020 1:12:00 PM | 12/30/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-007C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-007D | | | 12/30/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-007E | | | 12/30/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043453-008A | MW-46-205-Q420 | 12/15/2020 12:18:00 PM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-008B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-008B | MW-46-205-Q420 | 12/15/2020 12:18:00 PM | 12/30/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-008C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-009A | MW-36-100-Q420 | 12/15/2020 8:30:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-009B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-009C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-009D | | | 12/30/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-009E | | | 12/30/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-010A | MW-39-100-Q420 | 12/15/2020 9:22:00 AM | 12/30/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-010B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-010C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-010D | | | 12/30/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-010E | | | 12/30/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043453-011A | MW-36-020-Q420 | 12/15/2020 8:41:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-011B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-011B | MW-36-020-Q420 | 12/15/2020 8:41:00 AM | 12/30/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-011C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-012A | MW-36-040-Q420 | 12/15/2020 10:21:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-012B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-012C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-012D | MW-36-040-Q420 | 12/15/2020 10:21:00 AM | 12/30/2020 | Groundwater | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-013A | MW-36-050-Q420 | 12/15/2020 10:53:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-013B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-013C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-014A | MW-36-070-Q420 | 12/15/2020 9:11:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-014B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-014B | MW-36-070-Q420 | 12/15/2020 9:11:00 AM | 12/30/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-014C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-015A | MW-36-090-Q420 | 12/15/2020 9:50:00 AM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-015B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-015C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-015D | | | 12/30/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |

# ASSET Laboratories

## WORK ORDER Summary

*16-Dec-20*

**WorkOrder:** N043453

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/15/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043453-016A | EB-723-Q420 | 12/15/2020 3:00:00 PM | 12/30/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-017A | EB-724-Q420 | 12/15/2020 1:24:00 PM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-018A | MW-38D-POST-Q420 | 12/15/2020 1:25:00 PM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-018B | | | 12/30/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043453-018C | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/30/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043453-018D | | | 12/30/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043453-019A | MW-21-EB-Q420 | 12/15/2020 2:00:00 PM | 12/30/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043453-020A | FOLDER | 12/30/2020 | 12/30/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/30/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/30/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/30/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: Nara Tep

**17-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043453-007E / MW-46-175-Q420 | Groundwater | 12/15/2020 1:12:00 PM | 8OZP | 1 | | |
| N043453-009E / MW-36-100-Q420 | Groundwater | 12/15/2020 8:30:00 AM | 8OZP | 1 | | |
| N043453-010E / MW-39-100-Q420 | Groundwater | 12/15/2020 9:22:00 AM | 8OZP | 1 | | |
| N043453-015D / MW-36-090-Q420 | Groundwater | 12/15/2020 9:50:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43453A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium by CFIRM. EDD requirement Labspec7 edata.

Fedex #: 772409226366

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/17/2020 1600 | **Received by:** | | |
| **Relinquished by:** | | | **Received by:** | | |

January 08, 2021

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043469

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 16, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

SM 4500-NO3F for sample N043469-006 was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (1.4 ug/L) and hexavalent chromium (0 ug/L) for sample N043469-007 (MW-941-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (1.2 ug/L) and hexavalent chromium (0 ug/L) for sample N043469-010 (MW-66BR-270-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for samples N043469-002 and -003 due to matrix. Digestates are colored.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in

QC samples N043469-002CMS1, N043469-002CMSD1, N043469-004CMS1,N043469-004CMSD1, N043469-006CMS1, N043469-010CMS1, N043469-010CMSD1, N043469-002CMS2, N043469-002CMSD2, N043469-004CMS2, N043469-004CMSD2, N043469-006CMS2, N043469-006CMSD2, N043469-010CMS2 and N043469-010CMSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) is outside recovery criteria for Iron in QC sample N043469-004CMS1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (1.4 ug/L) and hexavalent chromium (0 ug/L) for sample N043469-007 (MW-941-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.7 and 0.28 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.2 ug/L) and hexavalent chromium (0 ug/L) for sample N043469-010 (MW-66BR-270-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.2 and 0.01 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Manganese in QC samples N043469-010CMS and N043469-010CMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N043469-002CMS, N043469-002CMSD, N043469-004CMS and N043469-004CMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8260B:

Surrogate Dibromofluoromethane recovery bias high for both samples possibly due to matrix interference. The other surrogates were recovered within control limits. Initial run also failed surrogate

criteria on sample N043469-011 and N043469-010EMSD. Reported result from the reanalysis.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043469-010EMSD, N043470-006DMSDand N043470-004DMS possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043469
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043469-001A | MW-48-Q420 | Groundwater | 12/16/2020 3:15:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-001B | MW-48-Q420 | Groundwater | 12/16/2020 3:15:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-001C | MW-48-Q420 | Groundwater | 12/16/2020 3:15:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-002A | MW-68-180-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-002B | MW-68-180-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-002C | MW-68-180-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-002D | MW-68-180-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-003A | MW-939-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-003B | MW-939-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-003C | MW-939-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-003D | MW-939-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-004A | MW-68-240-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-004B | MW-68-240-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-004C | MW-68-240-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-004D | MW-68-240-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-005A | MW-940-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-005B | MW-940-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-005C | MW-940-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-005D | MW-940-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-006A | MW-68BR-280-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-006B | MW-68BR-280-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-006C | MW-68BR-280-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-006D | MW-68BR-280-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-007A | MW-941-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-007B | MW-941-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-007C | MW-941-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-007D | MW-941-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-008A | EB-725-Q420 | Groundwater | 12/16/2020 12:51:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-009A | EB-726-Q420 | Groundwater | 12/16/2020 3:30:00 PM | 12/16/2020 | 1/8/2021 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043469
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043469-010A | MW-66BR-270-Q420 | Groundwater | 12/16/2020 2:30:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-010B | MW-66BR-270-Q420 | Groundwater | 12/16/2020 2:30:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-010C | MW-66BR-270-Q420 | Groundwater | 12/16/2020 2:30:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-010D | MW-66BR-270-Q420 | Groundwater | 12/16/2020 2:30:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-010E | MW-66BR-270-Q420 | Groundwater | 12/16/2020 2:30:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-011A | MW-938-Q420 | Groundwater | 12/16/2020 2:40:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-011B | MW-938-Q420 | Groundwater | 12/16/2020 2:40:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-011C | MW-938-Q420 | Groundwater | 12/16/2020 2:40:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-011D | MW-938-Q420 | Groundwater | 12/16/2020 2:40:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-011E | MW-938-Q420 | Groundwater | 12/16/2020 2:40:00 PM | 12/16/2020 | 1/8/2021 |
| N043469-012A | MW-42-030-Q420 | Groundwater | 12/16/2020 9:55:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-012B | MW-42-030-Q420 | Groundwater | 12/16/2020 9:55:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-012C | MW-42-030-Q420 | Groundwater | 12/16/2020 9:55:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-012D | MW-42-030-Q420 | Groundwater | 12/16/2020 9:55:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-012E | MW-42-030-Q420 | Groundwater | 12/16/2020 9:55:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-013A | MW-42-055-Q420 | Groundwater | 12/16/2020 9:27:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-013B | MW-42-055-Q420 | Groundwater | 12/16/2020 9:27:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-013C | MW-42-055-Q420 | Groundwater | 12/16/2020 9:27:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-013D | MW-42-055-Q420 | Groundwater | 12/16/2020 9:27:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-014A | MW-42-055-EB-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-015A | MW-42-065-Q420 | Groundwater | 12/16/2020 8:51:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-015B | MW-42-065-Q420 | Groundwater | 12/16/2020 8:51:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-015C | MW-42-065-Q420 | Groundwater | 12/16/2020 8:51:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-015D | MW-42-065-Q420 | Groundwater | 12/16/2020 8:51:00 AM | 12/16/2020 | 1/8/2021 |
| N043469-016A | MW-42-065-EB-Q420 | Groundwater | 12/16/2020 8:20:00 AM | 12/16/2020 | 1/8/2021 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-48-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 3:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 18000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-180-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:18:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 5600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 5700 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-240-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:34:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 17000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:44:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 17000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 22000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 22000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66BR-270-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 18000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-938-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 18000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-030-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3300 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-055-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:27:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1100 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-065-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217B** | QC Batch: **R149492** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

| Sample ID: **N043469-005BDUP** | SampType: **DUP** | TestCode: **120.1_WPGE** | Units: **umhos/cm** | Prep Date: | RunNo: **149492** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149492** | TestNo: **EPA 120.1** | | Analysis Date: **12/17/2020** | SeqNo: **4048868** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 17150.000 | 0.10 | | | | | | 17160 | 0.0583 | 2 | |

| Sample ID: **N043469-015BDUP** | SampType: **DUP** | TestCode: **120.1_WPGE** | Units: **umhos/cm** | Prep Date: | RunNo: **149492** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149492** | TestNo: **EPA 120.1** | | Analysis Date: **12/17/2020** | SeqNo: **4048878** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 3630.000 | 0.10 | | | | | | 3600 | 0.830 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-48-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 3:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-180-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:18:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4200 | 50 | 50 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | | PrepDate: | **12/21/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4300 | 50 | 50 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-240-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:34:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 100 | 100 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:44:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 13000 | 200 | 200 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 200 | 200 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66BR-270-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 100 | 100 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-938-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-055-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:27:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221E** | QC Batch: **83585** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 660 | 10 | 10 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-065-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221F** | QC Batch: **83586** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 2100 | 25 | 25 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83585** | SampType: **LCS** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149650** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83585** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058031** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 975.000 | 10 | 1000 | 0 | 97.5 | 80 | 120 | | | | |

| Sample ID: **MB-83585** | SampType: **MBLK** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149650** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83585** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058032** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043469-006BDUP** | SampType: **DUP** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149650** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83585** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058039** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 12240.000 | 200 | | | | | | 12660 | 3.37 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83586** | SampType: **LCS** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149651** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83586** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058044** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 990.000 | 10 | 1000 | 0 | 99.0 | 80 | 120 | | | | |

| Sample ID: **MB-83586** | SampType: **MBLK** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149651** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83586** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058045** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043487-001BDUP** | SampType: **DUP** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149651** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83586** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058055** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 12620.000 | 200 | | | | | | 12720 | 0.789 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-48-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 3:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/17/2020 04:49 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/30/2020 12:00 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-180-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:18:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 61000 | 170 | 1000 | | µg/L | 5000 | 12/17/2020 01:42 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | 66000 | 65 | 500 | | µg/L | 500 | 12/30/2020 12:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 61000 | 170 | 1000 | | µg/L | 5000 | 12/17/2020 02:26 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | 63000 | 65 | 500 | | µg/L | 500 | 12/30/2020 12:38 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-240-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:34:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2000 | 6.6 | 40 | | µg/L | 200 | 12/17/2020 02:00 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | 2000 | 3.2 | 25 | | µg/L | 25 | 12/30/2020 12:42 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:44:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2000 | 6.6 | 40 | | µg/L | 200 | 12/17/2020 04:30 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | 1900 | 3.2 | 25 | | µg/L | 25 | 12/30/2020 01:06 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/17/2020 03:34 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/30/2020 01:11 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/17/2020 05:46 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | 1.4 | 0.13 | 1.0 | | µg/L | 1 | 12/30/2020 01:44 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-725-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:51:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 06:43 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-726-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 3:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 07:21 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66BR-270-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/17/2020 03:53 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | 1.2 | 0.13 | 1.0 | | µg/L | 1 | 12/30/2020 01:48 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-938-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/17/2020 06:24 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** | QC Batch: **83534** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/30/2020 02:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-030-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** QC Batch: **R149525** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 01:04 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** QC Batch: **83534** | | | | PrepDate: **12/17/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/30/2020 02:26 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-055-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:27:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** QC Batch: **R149525** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 11:48 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/30/2020 02:31 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-055-EB-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** | QC Batch: **R149525** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 07:40 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-065-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201217A** QC Batch: **R149525** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 12:07 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201230A** QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/30/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-065-EB-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:20:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| **EPA 218.6** | | | | | | | |
| RunID: **NV00922-IC7_201217A** QC Batch: **R149525** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/17/2020 07:59 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149525** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051171** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149525** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051172** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.951 | 0.20 | 5.000 | 0 | 99.0 | 90 | 110 | | | | |

| Sample ID: **N043417-014AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051174** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.978 | 0.20 | 1.000 | 0 | 97.8 | 90 | 110 | | | | |

| Sample ID: **N043417-015AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051176** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.019 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID: **N043453-019AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051178** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.013 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051182**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051184**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.078 | 0.20 | 1.000 | 0.05430 | 102 | 90 | 110 | | | | |

Sample ID: **N043469-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051186**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.094 | 0.20 | 1.000 | 0.07220 | 102 | 90 | 110 | | | | |

Sample ID: **N043469-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051190**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 87193.500 | 1000 | 25000 | 61390 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051192**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2958.400 | 40 | 1000 | 1971 | 98.7 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043469-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051194** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 86350.000 | 1000 | 25000 | 61090 | 101 | 90 | 110 | | | | |

| Sample ID: **N043469-002AMSD** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051195** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 87024.500 | 1000 | 25000 | 61390 | 103 | 90 | 110 | 87190 | 0.194 | 0 | |

| Sample ID: **N043469-004AMSD** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051196** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3000.520 | 40 | 1000 | 1971 | 103 | 90 | 110 | 2958 | 1.41 | 0 | |

| Sample ID: **N043469-004ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051197** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1988.380 | 40 | | | | | | 1971 | 0.872 | 20 | |

| Sample ID: **N043469-006AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051201** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.159 | 1.0 | 5.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051203**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.195 | 1.0 | 5.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043469-006AMSD** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051204**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.287 | 1.0 | 5.000 | 0 | 106 | 90 | 110 | 5.158 | 2.46 | 0 | |

Sample ID: **N043469-010AMSD** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051205**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.000 | 1.0 | 5.000 | 0 | 100 | 90 | 110 | 5.195 | 3.84 | 0 | |

Sample ID: **N043469-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051207**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2951.140 | 40 | 1000 | 1977 | 97.4 | 90 | 110 | | | | |

Sample ID: **N043469-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051209**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.676 | 1.0 | 5.000 | 0.5205 | 103 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043469-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051213**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.301 | 1.0 | 5.000 | 0 | 106 | 90 | 110 | | | | |

Sample ID: **N043469-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051215**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.745 | 1.0 | 5.000 | 0 | 94.9 | 90 | 110 | | | | |

Sample ID: **N043469-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051217**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.009 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043469-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051221**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.032 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043469-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149525**
Client ID: **ZZZZZZ** Batch ID: **R149525** TestNo: **EPA 218.6** Analysis Date: **12/17/2020** SeqNo: **4051223**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.004 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043469-016AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149525** | TestNo: **EPA 218.6** | | Analysis Date: **12/17/2020** | SeqNo: **4051225** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.036 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83534** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063597** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83534** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063598** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.912 | 1.0 | 10.00 | 0 | 99.1 | 85 | 115 | | | | |

| Sample ID: **N043469-002CMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063606** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 64318.488 | 500 | 10.00 | 65960 | -16400 | 75 | 125 | | | | S |

| Sample ID: **N043469-002CMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063609** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 64900.760 | 500 | 10.00 | 65960 | -10600 | 75 | 125 | 64320 | 0.901 | 20 | S |

| Sample ID: **N043469-004CMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063614** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 1976.441 | 25 | 10.00 | 1962 | 140 | 75 | 125 | | | | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

Sample ID: **N043469-004CMSD** SampType: **MSD** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149756**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/30/2020** SeqNo: **4063615**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 1957.302 | 25 | 10.00 | 1962 | -51.5 | 75 | 125 | 1976 | 0.973 | 20 | S |

Sample ID: **N043469-006CMS** SampType: **MS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149756**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/30/2020** SeqNo: **4063622**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.765 | 1.0 | 10.00 | 0.2910 | 94.7 | 75 | 125 | | | | |

Sample ID: **N043469-006CMSD** SampType: **MSD** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149756**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/30/2020** SeqNo: **4063623**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 10.207 | 1.0 | 10.00 | 0.2910 | 99.2 | 75 | 125 | 9.765 | 4.43 | 20 | |

Sample ID: **N043469-010CMS** SampType: **MS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149756**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/30/2020** SeqNo: **4063628**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.761 | 1.0 | 10.00 | 1.155 | 86.1 | 75 | 125 | | | | |

Sample ID: **N043469-010CMSD** SampType: **MSD** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149756**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/30/2020** SeqNo: **4063629**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.585 | 1.0 | 10.00 | 1.155 | 84.3 | 75 | 125 | 9.761 | 1.82 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **N043469-002C-PS** | SampType: **PS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063605** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 64213.665 | 500 | 10.00 | 65960 | -17400 | 80 | 120 | | | | S |

| Sample ID: **N043469-004C-PS** | SampType: **PS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063613** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 2004.489 | 25 | 10.00 | 1962 | 420 | 80 | 120 | | | | S |

| Sample ID: **N043469-006C-PS** | SampType: **PS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063621** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.819 | 1.0 | 10.00 | 0.2910 | 95.3 | 80 | 120 | | | | |

| Sample ID: **N043469-010C-PS** | SampType: **PS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: | RunNo: **149756** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063627** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.753 | 1.0 | 10.00 | 1.155 | 86.0 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-48-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 3:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 29 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-180-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:18:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 100 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-240-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:34:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 62 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:44:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 64 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 15 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 15 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66BR-270-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 6.4 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-938-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 5.3 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-055-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:27:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 230 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-065-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201222B** | QC Batch: **R149643** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 320 | 1.2 | 5.0 | | mg/L | 1 | 12/22/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149643** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149643** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149643** | TestNo: **SM 2320 B** | | Analysis Date: **12/22/2020** | SeqNo: **4058009** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 96.154 | 5.0 | 100.0 | 0 | 96.2 | 85 | 115 | | | | |

| Sample ID: **MB-R149643** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149643** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149643** | TestNo: **SM 2320 B** | | Analysis Date: **12/22/2020** | SeqNo: **4058010** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043469-001BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149643** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149643** | TestNo: **SM 2320 B** | | Analysis Date: **12/22/2020** | SeqNo: **4058012** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 29.915 | 5.0 | | | | | | 28.85 | 3.64 | 30 | |

| Sample ID: **N043469-002BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149643** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149643** | TestNo: **SM 2320 B** | | Analysis Date: **12/22/2020** | SeqNo: **4058014** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 199.786 | 5.0 | 100.0 | 107.9 | 91.9 | 75 | 125 | | | | |

| Sample ID: **N043469-002BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149643** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149643** | TestNo: **SM 2320 B** | | Analysis Date: **12/22/2020** | SeqNo: **4058015** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 200.855 | 5.0 | 100.0 | 107.9 | 92.9 | 75 | 125 | 199.8 | 0.533 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

Sample ID: **N043469-004BMS** SampType: **MS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **149643**
Client ID: **ZZZZZZ** Batch ID: **R149643** TestNo: **SM 2320 B** Analysis Date: **12/22/2020** SeqNo: **4058018**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 155.983 | 5.0 | 100.0 | 61.97 | 94.0 | 75 | 125 | | | | |

Sample ID: **N043469-004BMSD** SampType: **MSD** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **149643**
Client ID: **ZZZZZZ** Batch ID: **R149643** TestNo: **SM 2320 B** Analysis Date: **12/22/2020** SeqNo: **4058019**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 153.846 | 5.0 | 100.0 | 61.97 | 91.9 | 75 | 125 | 156.0 | 1.38 | 20 | |

Sample ID: **N043469-006BMS** SampType: **MS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **149643**
Client ID: **ZZZZZZ** Batch ID: **R149643** TestNo: **SM 2320 B** Analysis Date: **12/22/2020** SeqNo: **4058022**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 111.111 | 5.0 | 100.0 | 14.96 | 96.2 | 75 | 125 | | | | |

Sample ID: **N043469-006BMSD** SampType: **MSD** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **149643**
Client ID: **ZZZZZZ** Batch ID: **R149643** TestNo: **SM 2320 B** Analysis Date: **12/22/2020** SeqNo: **4058023**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 110.043 | 5.0 | 100.0 | 14.96 | 95.1 | 75 | 125 | 111.1 | 0.966 | 20 | |

Sample ID: **N043469-010BMS** SampType: **MS** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **149643**
Client ID: **ZZZZZZ** Batch ID: **R149643** TestNo: **SM 2320 B** Analysis Date: **12/22/2020** SeqNo: **4058026**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 100.427 | 5.0 | 100.0 | 6.410 | 94.0 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

Sample ID: **N043469-010BMSD** SampType: **MSD** TestCode: **2320_W_SP** Units: **mg/L** Prep Date: RunNo: **149643**
Client ID: **ZZZZZZ** Batch ID: **R149643** TestNo: **SM 2320 B** Analysis Date: **12/22/2020** SeqNo: **4058027**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 100.427 | 5.0 | 100.0 | 6.410 | 94.0 | 75 | 125 | 100.4 | 0 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-001

**Client Sample ID:** MW-48-Q420
**Collection Date:** 12/16/2020 3:15:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/17/2020 08:01 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5500 | 70 | 1000 | | mg/L | 2000 | 12/19/2020 01:13 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 570 | 2.0 | 25 | | mg/L | 50 | 12/19/2020 01:29 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-002

**Client Sample ID:** MW-68-180-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.60 | 10 | | mg/L | 20 | 12/17/2020 06:23 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 840 | 7.0 | 100 | | mg/L | 200 | 12/18/2020 05:19 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1700 | 8.0 | 100 | | mg/L | 200 | 12/18/2020 05:19 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.60 | 10 | | mg/L | 20 | 12/17/2020 09:06 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 850 | 7.0 | 100 | | mg/L | 200 | 12/18/2020 11:54 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1700 | 8.0 | 100 | | mg/L | 200 | 12/18/2020 11:54 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-004

**Client Sample ID:** MW-68-240-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/17/2020 03:16 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 4900 | 70 | 1000 | | mg/L | 2000 | 12/18/2020 06:38 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 890 | 4.0 | 50 | | mg/L | 100 | 12/18/2020 09:00 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-005

**Client Sample ID:** MW-940-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/17/2020 09:23 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 4900 | 70 | 1000 | | mg/L | 2000 | 12/19/2020 01:45 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 880 | 4.0 | 50 | | mg/L | 100 | 12/19/2020 02:00 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/17/2020 05:34 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6900 | 70 | 1000 | | mg/L | 2000 | 12/18/2020 07:25 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 680 | 4.0 | 50 | | mg/L | 100 | 12/18/2020 10:19 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-007

**Client Sample ID:** MW-941-Q420
**Collection Date:** 12/16/2020 9:00:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/17/2020 10:28 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6700 | 70 | 1000 | | mg/L | 2000 | 12/19/2020 02:16 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 680 | 4.0 | 50 | | mg/L | 100 | 12/19/2020 02:32 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66BR-270-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/17/2020 07:12 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5600 | 70 | 1000 | | mg/L | 2000 | 12/18/2020 08:13 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 250 | 2.0 | 25 | | mg/L | 50 | 12/18/2020 11:06 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-011

**Client Sample ID:** MW-938-Q420
**Collection Date:** 12/16/2020 2:40:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/17/2020 10:12 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5600 | 70 | 1000 | | mg/L | 2000 | 12/19/2020 02:48 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 250 | 2.0 | 25 | | mg/L | 50 | 12/19/2020 03:04 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-013

**Client Sample ID:** MW-42-055-Q420
**Collection Date:** 12/16/2020 9:27:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/17/2020 09:39 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201228A** QC Batch: **R149705** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 87 | 0.70 | 10 | | mg/L | 20 | 12/28/2020 01:37 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 200 | 0.80 | 10 | | mg/L | 20 | 12/19/2020 03:51 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-065-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| **EPA 300.0** | | | | | | | |
| RunID: **NV00922-IC8_201217A** QC Batch: **R149508** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/17/2020 09:55 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| **EPA 300.0** | | | | | | | |
| RunID: **NV00922-IC8_201228A** QC Batch: **R149705** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 750 | 7.0 | 100 | | mg/L | 200 | 12/28/2020 02:26 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| **EPA 300.0** | | | | | | | |
| RunID: **NV00922-IC8_201218B** QC Batch: **R149550** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 350 | 2.0 | 25 | | mg/L | 50 | 12/19/2020 04:23 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149508_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149508** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149508** | TestNo: **EPA 300.0** | | Analysis Date: **12/17/2020** | SeqNo: **4049917** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149508_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149508** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149508** | TestNo: **EPA 300.0** | | Analysis Date: **12/17/2020** | SeqNo: **4049918** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.222 | 0.50 | 1.250 | 0 | 97.7 | 90 | 110 | | | | |

| Sample ID: **N043468-003ADUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149508** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149508** | TestNo: **EPA 300.0** | | Analysis Date: **12/17/2020** | SeqNo: **4049924** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 2.5 | | | | | | 0 | 0 | 20 | |

| Sample ID: **N043468-002AMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149508** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149508** | TestNo: **EPA 300.0** | | Analysis Date: **12/17/2020** | SeqNo: **4049925** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.420 | 2.5 | 6.250 | 0.2085 | 99.4 | 80 | 120 | | | | |

| Sample ID: **N043468-002AMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149508** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149508** | TestNo: **EPA 300.0** | | Analysis Date: **12/17/2020** | SeqNo: **4049926** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.357 | 2.5 | 6.250 | 0.2085 | 98.4 | 80 | 120 | 6.420 | 0.986 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

Sample ID: **N043469-004BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049928**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.887 | 2.5 | 6.250 | 0.6255 | 100 | 80 | 120 | | | | |

Sample ID: **N043469-004BMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049929**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.768 | 2.5 | 6.250 | 0.6255 | 98.3 | 80 | 120 | 6.886 | 1.74 | 20 | |

Sample ID: **N043469-006BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049933**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.320 | 2.5 | 6.250 | 0.2875 | 96.5 | 80 | 120 | | | | |

Sample ID: **N043469-006BMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049934**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.311 | 2.5 | 6.250 | 0.2875 | 96.4 | 80 | 120 | 6.320 | 0.143 | 20 | |

Sample ID: **N043469-002BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049936**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 26.948 | 10 | 25.00 | 1.410 | 102 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

Sample ID: **N043469-002BMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049937**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 26.394 | 10 | 25.00 | 1.410 | 99.9 | 80 | 120 | 26.95 | 2.08 | 20 | |

Sample ID: **N043469-010BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049939**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.709 | 5.0 | 12.50 | 0.3810 | 98.6 | 80 | 120 | | | | |

Sample ID: **N043469-010BMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049940**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.891 | 5.0 | 12.50 | 0.3810 | 100 | 80 | 120 | 12.71 | 1.42 | 20 | |

Sample ID: **N043469-001BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149508**
Client ID: **ZZZZZZ** Batch ID: **R149508** TestNo: **EPA 300.0** Analysis Date: **12/17/2020** SeqNo: **4049944**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.377 | 2.5 | 6.250 | 0.2645 | 97.8 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **MB-R149550_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052355** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149550_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052356** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.880 | 0.50 | 2.000 | 0 | 94.0 | 90 | 110 | | | | |

| Sample ID: **N043469-002BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052360** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1243.400 | 100 | 400.0 | 844.0 | 99.9 | 80 | 120 | | | | |

| Sample ID: **N043469-002BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052361** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1247.400 | 100 | 400.0 | 844.0 | 101 | 80 | 120 | 1243 | 0.321 | 20 | |

| Sample ID: **N043469-004BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052365** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 8689.000 | 1000 | 4000 | 4887 | 95.1 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **N043469-004BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052366**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 8763.800 | 1000 | 4000 | 4887 | 96.9 | 80 | 120 | 8689 | 0.857 | 20 | |

Sample ID: **N043469-006BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052368**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10787.800 | 1000 | 4000 | 6861 | 98.2 | 80 | 120 | | | | |

Sample ID: **N043469-006BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052369**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10841.000 | 1000 | 4000 | 6861 | 99.5 | 80 | 120 | 10790 | 0.492 | 20 | |

Sample ID: **N043469-010BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052371**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 9557.000 | 1000 | 4000 | 5588 | 99.2 | 80 | 120 | | | | |

Sample ID: **N043469-010BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052372**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 9541.200 | 1000 | 4000 | 5588 | 98.8 | 80 | 120 | 9557 | 0.165 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043469-003BDUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052376** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 848.400 | 100 | | | | | | 845.1 | 0.392 | 20 | |

| Sample ID: **N043469-003BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052379** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1253.400 | 100 | 400.0 | 845.1 | 102 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **MB-R149705_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149705** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149705** | TestNo: **EPA 300.0** | | Analysis Date: **12/28/2020** | SeqNo: **4059894** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149705_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149705** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149705** | TestNo: **EPA 300.0** | | Analysis Date: **12/28/2020** | SeqNo: **4059895** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.913 | 0.50 | 2.000 | 0 | 95.6 | 90 | 110 | | | | |

| Sample ID: **N043469-013BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149705** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149705** | TestNo: **EPA 300.0** | | Analysis Date: **12/28/2020** | SeqNo: **4059899** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 125.860 | 10 | 40.00 | 87.32 | 96.4 | 80 | 120 | | | | |

| Sample ID: **N043469-013BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149705** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149705** | TestNo: **EPA 300.0** | | Analysis Date: **12/28/2020** | SeqNo: **4059900** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 125.850 | 10 | 40.00 | 87.32 | 96.3 | 80 | 120 | 125.9 | 0.00795 | 20 | |

| Sample ID: **N043469-015BDUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149705** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149705** | TestNo: **EPA 300.0** | | Analysis Date: **12/28/2020** | SeqNo: **4059902** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 744.360 | 100 | | | | | | 749.0 | 0.616 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **MB-R149550_SO4** | SampType: **MBLK** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052392** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149550_SO4** | SampType: **LCS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052393** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.987 | 0.50 | 4.000 | 0 | 99.7 | 90 | 110 | | | | |

| Sample ID: **N043469-002BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052397** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2492.840 | 100 | 800.0 | 1678 | 102 | 80 | 120 | | | | |

| Sample ID: **N043469-002BMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052398** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2484.860 | 100 | 800.0 | 1678 | 101 | 80 | 120 | 2493 | 0.321 | 20 | |

| Sample ID: **N043469-004BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/18/2020** | SeqNo: **4052404** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1283.030 | 50 | 400.0 | 885.4 | 99.4 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043469-004BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052405**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1299.580 | 50 | 400.0 | 885.4 | 104 | 80 | 120 | 1283 | 1.28 | 20 | |

Sample ID: **N043469-006BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052407**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1083.160 | 50 | 400.0 | 678.3 | 101 | 80 | 120 | | | | |

Sample ID: **N043469-006BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052408**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1078.530 | 50 | 400.0 | 678.3 | 100 | 80 | 120 | 1083 | 0.428 | 20 | |

Sample ID: **N043469-010BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052410**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 454.155 | 25 | 200.0 | 247.2 | 104 | 80 | 120 | | | | |

Sample ID: **N043469-010BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149550**
Client ID: **ZZZZZZ** Batch ID: **R149550** TestNo: **EPA 300.0** Analysis Date: **12/18/2020** SeqNo: **4052411**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 450.475 | 25 | 200.0 | 247.2 | 102 | 80 | 120 | 454.2 | 0.814 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043469-003BDUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052413** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1709.320 | 100 | | | | | | 1689 | 1.21 | 20 | |

| Sample ID: **N043469-003BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149550** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149550** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052416** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2519.120 | 100 | 800.0 | 1689 | 104 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-180-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:18:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 24 | 1.6 | 2.5 | | mg/L | 50 | 12/22/2020 02:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201221B** | QC Batch: **R149583** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 10 | 0.32 | 0.50 | | mg/L | 10 | 12/21/2020 04:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-240-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:34:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201223E** | QC Batch: **R149668** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 3.7 | 0.16 | 0.25 | | mg/L | 5 | 12/23/2020 02:41 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:44:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201221B** | QC Batch: **R149583** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 4.0 | 0.16 | 0.25 | | mg/L | 5 | 12/21/2020 04:46 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201221B** | QC Batch: **R149583** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/21/2020 04:14 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66BR-270-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201223E** | QC Batch: **R149668** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/23/2020 04:23 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-938-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/22/2020 02:28 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-030-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | ND | 0.032 | 0.050 | | mg/L | 1 | 12/22/2020 03:42 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149583** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149583** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149583** | TestNo: **SM4500-NO3** | | Analysis Date: **12/21/2020** | SeqNo: **4054772** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R149583** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149583** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149583** | TestNo: **SM4500-NO3** | | Analysis Date: **12/21/2020** | SeqNo: **4054773** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.498 | 0.050 | 0.5000 | 0 | 99.6 | 85 | 115 | | | | |

| Sample ID: **N043399-004CDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149583** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149583** | TestNo: **SM4500-NO3** | | Analysis Date: **12/21/2020** | SeqNo: **4054775** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 2.800 | 0.25 | | | | | | 2.804 | 0.125 | 20 | |

| Sample ID: **N043399-004CMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149583** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149583** | TestNo: **SM4500-NO3** | | Analysis Date: **12/21/2020** | SeqNo: **4054776** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.453 | 0.25 | 2.500 | 2.804 | 106 | 75 | 125 | | | | |

| Sample ID: **N043399-004CMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149583** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149583** | TestNo: **SM4500-NO3** | | Analysis Date: **12/21/2020** | SeqNo: **4054777** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.576 | 0.25 | 2.500 | 2.804 | 111 | 75 | 125 | 5.453 | 2.22 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

Sample ID: **MB-R149636** SampType: **MBLK** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149636**
Client ID: **PBW** Batch ID: **R149636** TestNo: **SM4500-NO3** Analysis Date: **12/22/2020** SeqNo: **4057237**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

Sample ID: **LCS-R149636** SampType: **LCS** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149636**
Client ID: **LCSW** Batch ID: **R149636** TestNo: **SM4500-NO3** Analysis Date: **12/22/2020** SeqNo: **4057238**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.478 | 0.050 | 0.5000 | 0 | 95.5 | 85 | 115 | | | | |

Sample ID: **N043469-002DDUP** SampType: **DUP** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149636**
Client ID: **ZZZZZZ** Batch ID: **R149636** TestNo: **SM4500-NO3** Analysis Date: **12/22/2020** SeqNo: **4057240**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 23.715 | 2.5 | | | | | | 23.52 | 0.826 | 20 | |

Sample ID: **N043469-002DMS** SampType: **MS** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149636**
Client ID: **ZZZZZZ** Batch ID: **R149636** TestNo: **SM4500-NO3** Analysis Date: **12/22/2020** SeqNo: **4057241**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 48.200 | 2.5 | 25.00 | 23.52 | 98.7 | 75 | 125 | | | | |

Sample ID: **N043469-002DMSD** SampType: **MSD** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **149636**
Client ID: **ZZZZZZ** Batch ID: **R149636** TestNo: **SM4500-NO3** Analysis Date: **12/22/2020** SeqNo: **4057242**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 49.030 | 2.5 | 25.00 | 23.52 | 102 | 75 | 125 | 48.20 | 1.71 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149668** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149668** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149668** | TestNo: **SM4500-NO3** | | Analysis Date: **12/23/2020** | SeqNo: **4058520** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R149668** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149668** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149668** | TestNo: **SM4500-NO3** | | Analysis Date: **12/23/2020** | SeqNo: **4058521** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.497 | 0.050 | 0.5000 | 0 | 99.3 | 85 | 115 | | | | |

| Sample ID: **N043469-004DDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149668** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149668** | TestNo: **SM4500-NO3** | | Analysis Date: **12/23/2020** | SeqNo: **4058523** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 3.755 | 0.25 | | | | | | 3.680 | 1.99 | 20 | |

| Sample ID: **N043469-004DMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149668** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149668** | TestNo: **SM4500-NO3** | | Analysis Date: **12/23/2020** | SeqNo: **4058524** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.626 | 0.25 | 2.500 | 3.680 | 77.8 | 75 | 125 | | | | |

| Sample ID: **N043469-004DMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149668** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149668** | TestNo: **SM4500-NO3** | | Analysis Date: **12/23/2020** | SeqNo: **4058525** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.733 | 0.25 | 2.500 | 3.680 | 82.1 | 75 | 125 | 5.626 | 1.88 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **N043469-010DMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149668** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149668** | TestNo: **SM4500-NO3** | | Analysis Date: **12/23/2020** | SeqNo: **4058532** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.425 | 0.050 | 0.5000 | 0 | 84.9 | 75 | 125 | | | | |

| Sample ID: **N043469-010DMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149668** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149668** | TestNo: **SM4500-NO3** | | Analysis Date: **12/23/2020** | SeqNo: **4058533** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.442 | 0.050 | 0.5000 | 0 | 88.4 | 75 | 125 | 0.4246 | 3.97 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-001

**Client Sample ID:** MW-48-Q420
**Collection Date:** 12/16/2020 3:15:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 1000 | 74 | 100 | | ug/L | 1 | 1/2/2021 10:56 AM |
| Calcium | 350000 | 85 | 500 | | ug/L | 1 | 12/31/2020 03:08 PM |
| Iron | 25 | 18 | 20 | | ug/L | 1 | 12/31/2020 03:08 PM |
| Magnesium | 35000 | 48 | 100 | | ug/L | 1 | 12/31/2020 03:08 PM |
| Sodium | 3700000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 05:34 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-002

**Client Sample ID:** MW-68-180-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 680 | 370 | 500 | | ug/L | 5 | 1/2/2021 11:01 AM |
| Calcium | 590000 | 420 | 2500 | | ug/L | 5 | 12/31/2020 03:14 PM |
| Iron | 100 | 89 | 100 | | ug/L | 5 | 12/31/2020 03:14 PM |
| Magnesium | 62000 | 240 | 500 | | ug/L | 5 | 12/31/2020 03:14 PM |
| Sodium | 740000 | 4800 | 25000 | | ug/L | 50 | 1/5/2021 05:56 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-003

**Client Sample ID:** MW-939-Q420
**Collection Date:** 12/16/2020 10:28:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210104A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | ND | 370 | 500 | | ug/L | 5 | 1/4/2021 08:38 AM |
| Calcium | 580000 | 420 | 2500 | | ug/L | 5 | 12/31/2020 03:50 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/31/2020 03:50 PM |
| Magnesium | 60000 | 240 | 500 | | ug/L | 5 | 12/31/2020 03:50 PM |
| Sodium | 740000 | 4800 | 25000 | | ug/L | 50 | 1/5/2021 06:26 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-004

**Client Sample ID:** MW-68-240-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 2200 | 74 | 100 | | ug/L | 1 | 1/2/2021 11:38 AM |
| Calcium | 420000 | 420 | 2500 | | ug/L | 5 | 1/4/2021 12:04 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/31/2020 03:56 PM |
| Magnesium | 21000 | 48 | 100 | | ug/L | 1 | 12/31/2020 03:56 PM |
| Sodium | 2400000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 06:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-005

**Client Sample ID:** MW-940-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 2300 | 74 | 100 | | ug/L | 1 | 1/2/2021 12:03 PM |
| Calcium | 440000 | 420 | 2500 | | ug/L | 5 | 1/4/2021 12:30 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/31/2020 04:22 PM |
| Magnesium | 22000 | 48 | 100 | | ug/L | 1 | 12/31/2020 04:22 PM |
| Sodium | 3300000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 07:23 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | | PrepDate: | **12/17/2020** | Analyst: **DJ** |
| Boron | 2200 | 74 | 100 | | ug/L | 1 | 1/2/2021 12:08 PM |
| Calcium | 370000 | 85 | 500 | | ug/L | 1 | 12/31/2020 04:28 PM |
| Iron | 30 | 18 | 20 | | ug/L | 1 | 12/31/2020 04:28 PM |
| Magnesium | 3400 | 48 | 100 | | ug/L | 1 | 12/31/2020 04:28 PM |
| Sodium | 3800000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 07:36 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-007

**Client Sample ID:** MW-941-Q420
**Collection Date:** 12/16/2020 9:00:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 2500 | 74 | 100 | | ug/L | 1 | 1/2/2021 12:42 PM |
| Calcium | 400000 | 85 | 500 | | ug/L | 1 | 12/31/2020 05:12 PM |
| Iron | 27 | 18 | 20 | | ug/L | 1 | 12/31/2020 05:12 PM |
| Magnesium | 3700 | 48 | 100 | | ug/L | 1 | 12/31/2020 05:12 PM |
| Sodium | 4700000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 08:47 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-010

**Client Sample ID:** MW-66BR-270-Q420
**Collection Date:** 12/16/2020 2:30:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 3000 | 74 | 100 | | ug/L | 1 | 1/2/2021 12:47 PM |
| Calcium | 320000 | 85 | 500 | | ug/L | 1 | 12/31/2020 05:18 PM |
| Iron | 30000 | 18 | 20 | | ug/L | 1 | 12/31/2020 05:18 PM |
| Magnesium | 33000 | 48 | 100 | | ug/L | 1 | 12/31/2020 05:18 PM |
| Sodium | 3500000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 08:59 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-011

**Client Sample ID:** MW-938-Q420
**Collection Date:** 12/16/2020 2:40:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 2600 | 74 | 100 | | ug/L | 1 | 1/2/2021 02:07 PM |
| Calcium | 280000 | 85 | 500 | | ug/L | 1 | 12/31/2020 06:06 PM |
| Iron | 27000 | 18 | 20 | | ug/L | 1 | 12/31/2020 06:06 PM |
| Magnesium | 30000 | 48 | 100 | | ug/L | 1 | 12/31/2020 06:06 PM |
| Sodium | 3600000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 09:37 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-013

**Client Sample ID:** MW-42-055-Q420
**Collection Date:** 12/16/2020 9:27:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210104A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 100 | 74 | 100 | | ug/L | 1 | 1/4/2021 08:55 AM |
| Calcium | 87000 | 85 | 500 | | ug/L | 1 | 12/31/2020 06:12 PM |
| Iron | 530 | 18 | 20 | | ug/L | 1 | 12/31/2020 06:12 PM |
| Magnesium | 23000 | 48 | 100 | | ug/L | 1 | 12/31/2020 06:12 PM |
| Sodium | 100000 | 960 | 5000 | | ug/L | 10 | 1/5/2021 09:40 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-015

**Client Sample ID:** MW-42-065-Q420
**Collection Date:** 12/16/2020 8:51:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83536** | | | PrepDate: | **12/17/2020** | | Analyst: **DJ** |
| Boron | 470 | 74 | 100 | | ug/L | 1 | 1/2/2021 02:16 PM |
| Calcium | 110000 | 85 | 500 | | ug/L | 1 | 12/31/2020 06:16 PM |
| Iron | 53 | 18 | 20 | | ug/L | 1 | 12/31/2020 06:16 PM |
| Magnesium | 29000 | 48 | 100 | | ug/L | 1 | 12/31/2020 06:16 PM |
| Sodium | 560000 | 4800 | 25000 | | ug/L | 50 | 1/5/2021 09:43 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83536** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **PBW** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064714**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **N043469-002CMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064725**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 690376.023 | 2500 | 10000 | 587400 | 1030 | 75 | 125 | | | | S |
| Iron | 183.119 | 100 | 100.0 | 102.7 | 80.4 | 75 | 125 | | | | |
| Magnesium | 84916.804 | 500 | 10000 | 62410 | 225 | 75 | 125 | | | | S |

Sample ID: **N043469-002CMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064726**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 616495.490 | 2500 | 10000 | 587400 | 291 | 75 | 125 | 690400 | 11.3 | 20 | S |
| Iron | 155.871 | 100 | 100.0 | 102.7 | 53.2 | 75 | 125 | 183.1 | 16.1 | 20 | S |
| Magnesium | 74332.397 | 500 | 10000 | 62410 | 119 | 75 | 125 | 84920 | 13.3 | 20 | |

Sample ID: **N043469-004CMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064731**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 130.201 | 20 | 100.0 | 0 | 130 | 75 | 125 | | | | S |
| Magnesium | 32626.638 | 100 | 10000 | 20950 | 117 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043469-004CMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064732**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 120.583 | 20 | 100.0 | 0 | 121 | 75 | 125 | 130.2 | 7.67 | 20 | |
| Magnesium | 30707.602 | 100 | 10000 | 20950 | 97.5 | 75 | 125 | 32630 | 6.06 | 20 | |

Sample ID: **LCS1-83536** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **LCSW** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064737**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 9692.100 | 500 | 10000 | 0 | 96.9 | 85 | 115 | | | | |
| Iron | 107.342 | 20 | 100.0 | 0 | 107 | 85 | 115 | | | | |
| Magnesium | 9503.182 | 100 | 10000 | 0 | 95.0 | 85 | 115 | | | | |

Sample ID: **N043469-006CMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064740**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 375541.066 | 500 | 10000 | 369000 | 65.3 | 75 | 125 | | | | S |
| Iron | 136.367 | 20 | 100.0 | 30.01 | 106 | 75 | 125 | | | | |
| Magnesium | 12932.262 | 100 | 10000 | 3424 | 95.1 | 75 | 125 | | | | |

Sample ID: **N043469-006CMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064741**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 379053.900 | 500 | 10000 | 369000 | 100 | 75 | 125 | 375500 | 0.931 | 20 | |
| Iron | 136.813 | 20 | 100.0 | 30.01 | 107 | 75 | 125 | 136.4 | 0.326 | 20 | |
| Magnesium | 12840.435 | 100 | 10000 | 3424 | 94.2 | 75 | 125 | 12930 | 0.713 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043469-010CMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064746**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 330249.538 | 500 | 10000 | 317100 | 132 | 75 | 125 | | | | S |
| Iron | 30092.995 | 20 | 100.0 | 30020 | 69.0 | 75 | 125 | | | | S |
| Magnesium | 42758.467 | 100 | 10000 | 32980 | 97.8 | 75 | 125 | | | | |

Sample ID: **N043469-010CMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064751**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 293150.955 | 500 | 10000 | 317100 | -239 | 75 | 125 | 330200 | 11.9 | 20 | S |
| Iron | 26654.738 | 20 | 100.0 | 30020 | -3370 | 75 | 125 | 30090 | 12.1 | 20 | S |
| Magnesium | 38170.835 | 100 | 10000 | 32980 | 51.9 | 75 | 125 | 42760 | 11.3 | 20 | S |

Sample ID: **MB-83536** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149794**
Client ID: **PBW** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **1/2/2021** SeqNo: **4064998**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83536** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149794**
Client ID: **LCSW** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **1/2/2021** SeqNo: **4064999**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5546.779 | 100 | 5000 | 0 | 111 | 85 | 115 | | | | |

Sample ID: **N043469-002CMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/17/2020** RunNo: **149794**
Client ID: **ZZZZZZ** Batch ID: **83536** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **1/2/2021** SeqNo: **4065009**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5476.230 | 500 | 5000 | 683.8 | 95.8 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043469-002CMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065010** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5686.711 | 500 | 5000 | 683.8 | 100 | 75 | 125 | 5476 | 3.77 | 20 | |

| Sample ID: **N043469-004CMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065015** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 7720.830 | 100 | 5000 | 2198 | 110 | 75 | 125 | | | | |

| Sample ID: **N043469-004CMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065016** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 7676.608 | 100 | 5000 | 2198 | 110 | 75 | 125 | 7721 | 0.574 | 20 | |

| Sample ID: **N043469-006CMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065023** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 7631.547 | 100 | 5000 | 2194 | 109 | 75 | 125 | | | | |

| Sample ID: **N043469-006CMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065024** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 7588.834 | 100 | 5000 | 2194 | 108 | 75 | 125 | 7632 | 0.561 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043469-010CMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065029** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8790.565 | 100 | 5000 | 3000 | 116 | 75 | 125 | | | | |

| Sample ID: **N043469-010CMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065030** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 7807.503 | 100 | 5000 | 3000 | 96.2 | 75 | 125 | 8791 | 11.8 | 20 | |

| Sample ID: **N043469-004CMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149784** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/4/2021** | SeqNo: **4065602** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 621928.969 | 2500 | 10000 | 421800 | 2000 | 75 | 125 | | | | S |

| Sample ID: **N043469-004CMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149784** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/4/2021** | SeqNo: **4065603** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 514028.909 | 2500 | 10000 | 421800 | 922 | 75 | 125 | 621900 | 19.0 | 20 | S |

| Sample ID: **MB-83536** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066744** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS2-83536** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066745** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18976.323 | 500 | 20000 | 0 | 94.9 | 85 | 115 | | | | |

| Sample ID: **N043469-002CMS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066763** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 842916.144 | 25000 | 20000 | 738400 | 522 | 75 | 125 | | | | S |

| Sample ID: **N043469-002CMSD2** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066765** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 830172.670 | 25000 | 20000 | 738400 | 459 | 75 | 125 | 842900 | 1.52 | 20 | S |

| Sample ID: **N043469-004CMS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066776** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 3384781.155 | 120000 | 20000 | 2408000 | 4890 | 75 | 125 | | | | S |

| Sample ID: **N043469-004CMSD2** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066778** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 3388398.155 | 120000 | 20000 | 2408000 | 4900 | 75 | 125 | 3388000 | 0 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043469-006CMS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066789** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 4709139.483 | 120000 | 20000 | 3843000 | 4330 | 75 | 125 | | | | S |

| Sample ID: **N043469-006CMSD2** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066795** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 4485226.888 | 120000 | 20000 | 3843000 | 3210 | 75 | 125 | 4709000 | 4.87 | 20 | S |

| Sample ID: **N043469-010CMS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066804** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 3770101.255 | 120000 | 20000 | 3477000 | 1460 | 75 | 125 | | | | S |

| Sample ID: **N043469-010CMSD2** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/17/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83536** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066808** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 3693919.098 | 120000 | 20000 | 3477000 | 1080 | 75 | 125 | 3770000 | 2.04 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-48-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 3:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | Analyst: **CEI** |
| Manganese | 4.4 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 06:40 PM |
| Molybdenum | 9.4 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 06:40 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 06:40 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-180-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:18:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | Analyst: **CEI** |
| Arsenic | 3.1 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 06:50 PM |
| Manganese | 0.79 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 06:50 PM |
| Molybdenum | 53 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 06:50 PM |
| Selenium | 22 | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 06:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-003 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201222A** QC Batch: **83534** PrepDate: **12/17/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 3.1 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 08:05 PM |
| Manganese | 2.8 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 08:05 PM |
| Molybdenum | 54 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 08:05 PM |
| Selenium | 24 | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 08:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-240-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:34:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-004 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201222A** QC Batch: **83534** PrepDate: **12/17/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 1.7 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 08:38 PM |
| Manganese | 20 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 08:38 PM |
| Molybdenum | 24 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 08:38 PM |
| Selenium | 3.8 | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 08:38 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 12:44:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | Analyst: **CEI** |
| Arsenic | 1.9 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 09:48 PM |
| Manganese | 19 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 09:48 PM |
| Molybdenum | 24 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 09:48 PM |
| Selenium | 3.3 | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 09:48 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201230A** | QC Batch: **83534** | | | PrepDate: | | **12/17/2020** | Analyst: **CEI** |
| Arsenic | 0.35 | 0.081 | 0.10 | | µg/L | 1 | 12/30/2020 01:31 PM |
| Manganese | 59 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 10:02 PM |
| Molybdenum | 17 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 10:02 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 10:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | Analyst: **CEI** |
| Arsenic | 0.46 | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 10:54 PM |
| Manganese | 60 | 0.26 | 0.50 | | µg/L | 1 | 12/22/2020 10:54 PM |
| Molybdenum | 18 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 10:54 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 10:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66BR-270-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/22/2020 11:03 PM |
| Manganese | 2700 | 6.4 | 12 | | µg/L | 25 | 12/22/2020 11:31 PM |
| Molybdenum | 3.1 | 0.21 | 0.50 | | µg/L | 1 | 12/22/2020 11:03 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/22/2020 11:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-938-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 2:40:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/23/2020 12:04 AM |
| Manganese | 2800 | 6.4 | 12 | | µg/L | 25 | 12/30/2020 03:59 PM |
| Molybdenum | 3.0 | 0.21 | 0.50 | | µg/L | 1 | 12/23/2020 12:04 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/23/2020 12:04 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-030-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:55:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | Analyst: **CEI** |
| Arsenic | 2.0 | 0.081 | 0.10 | | µg/L | 1 | 12/23/2020 12:28 AM |
| Manganese | 110 | 0.26 | 0.50 | | µg/L | 1 | 12/23/2020 12:28 AM |
| Molybdenum | 27 | 0.21 | 0.50 | | µg/L | 1 | 12/23/2020 12:28 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/23/2020 12:28 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-055-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 9:27:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201222A** | QC Batch: **83534** | | | | PrepDate: | **12/17/2020** | Analyst: **CEI** |
| Arsenic | 16 | 0.081 | 0.10 | | µg/L | 1 | 12/23/2020 12:32 AM |
| Manganese | 300 | 1.3 | 2.5 | | µg/L | 5 | 12/23/2020 12:37 AM |
| Molybdenum | 3.9 | 0.21 | 0.50 | | µg/L | 1 | 12/23/2020 12:32 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/23/2020 12:32 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-42-065-Q420 |
| **Lab Order:** | N043469 | **Collection Date:** | 12/16/2020 8:51:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043469-015 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201222A** QC Batch: **83534** PrepDate: **12/17/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 6.0 | 0.081 | 0.10 | | µg/L | 1 | 12/23/2020 12:42 AM |
| Manganese | 1300 | 6.4 | 12 | | µg/L | 25 | 12/30/2020 04:05 PM |
| Molybdenum | 9.5 | 0.21 | 0.50 | | µg/L | 1 | 12/23/2020 12:42 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/23/2020 12:42 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **LCS-83534** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060795** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.883 | 0.10 | 10.00 | 0 | 98.8 | 85 | 115 | | | | |
| Manganese | 98.904 | 0.50 | 100.0 | 0 | 98.9 | 85 | 115 | | | | |
| Molybdenum | 10.342 | 0.50 | 10.00 | 0 | 103 | 85 | 115 | | | | |
| Selenium | 9.284 | 0.50 | 10.00 | 0 | 92.8 | 85 | 115 | | | | |

| Sample ID: **MB-83534** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060803** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

| Sample ID: **N043469-002CMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060817** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13.516 | 0.10 | 10.00 | 3.058 | 105 | 75 | 125 | | | | |
| Manganese | 92.206 | 0.50 | 100.0 | 0.7879 | 91.4 | 75 | 125 | | | | |
| Molybdenum | 63.937 | 0.50 | 10.00 | 53.31 | 106 | 75 | 125 | | | | |
| Selenium | 33.004 | 0.50 | 10.00 | 21.57 | 114 | 75 | 125 | | | | |

| Sample ID: **N043469-002CMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060820** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13.668 | 0.10 | 10.00 | 3.058 | 106 | 75 | 125 | 13.52 | 1.12 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043469-002CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060820**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 92.371 | 0.50 | 100.0 | 0.7879 | 91.6 | 75 | 125 | 92.21 | 0.178 | 20 | |
| Molybdenum | 63.909 | 0.50 | 10.00 | 53.31 | 106 | 75 | 125 | 63.94 | 0.0438 | 20 | |
| Selenium | 33.521 | 0.50 | 10.00 | 21.57 | 119 | 75 | 125 | 33.00 | 1.55 | 20 | |

Sample ID: **N043469-004CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060837**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.744 | 0.10 | 10.00 | 1.742 | 100 | 75 | 125 | | | | |
| Manganese | 107.057 | 0.50 | 100.0 | 20.10 | 87.0 | 75 | 125 | | | | |
| Molybdenum | 34.694 | 0.50 | 10.00 | 24.08 | 106 | 75 | 125 | | | | |
| Selenium | 12.932 | 0.50 | 10.00 | 3.818 | 91.1 | 75 | 125 | | | | |

Sample ID: **N043469-004CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060842**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.852 | 0.10 | 10.00 | 1.742 | 101 | 75 | 125 | 11.74 | 0.918 | 20 | |
| Manganese | 107.469 | 0.50 | 100.0 | 20.10 | 87.4 | 75 | 125 | 107.1 | 0.384 | 20 | |
| Molybdenum | 34.704 | 0.50 | 10.00 | 24.08 | 106 | 75 | 125 | 34.69 | 0.0292 | 20 | |
| Selenium | 11.924 | 0.50 | 10.00 | 3.818 | 81.1 | 75 | 125 | 12.93 | 8.12 | 20 | |

Sample ID: **N043469-006CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060855**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 147.942 | 0.50 | 100.0 | 58.70 | 89.2 | 75 | 125 | | | | |
| Molybdenum | 29.516 | 0.50 | 10.00 | 17.43 | 121 | 75 | 125 | | | | |
| Selenium | 9.484 | 0.50 | 10.00 | 0 | 94.8 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043469-006CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060857**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 145.650 | 0.50 | 100.0 | 58.70 | 87.0 | 75 | 125 | 147.9 | 1.56 | 20 | |
| Molybdenum | 29.309 | 0.50 | 10.00 | 17.43 | 119 | 75 | 125 | 29.52 | 0.705 | 20 | |
| Selenium | 7.980 | 0.50 | 10.00 | 0 | 79.8 | 75 | 125 | 9.484 | 17.2 | 20 | |

Sample ID: **N043469-010CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060870**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.726 | 0.10 | 10.00 | 0 | 97.3 | 75 | 125 | | | | |
| Molybdenum | 14.428 | 0.50 | 10.00 | 3.061 | 114 | 75 | 125 | | | | |
| Selenium | 8.708 | 0.50 | 10.00 | 0 | 87.1 | 75 | 125 | | | | |

Sample ID: **N043469-010CMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060872**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.761 | 0.10 | 10.00 | 0 | 97.6 | 75 | 125 | 9.726 | 0.351 | 20 | |
| Molybdenum | 14.526 | 0.50 | 10.00 | 3.061 | 115 | 75 | 125 | 14.43 | 0.675 | 20 | |
| Selenium | 8.604 | 0.50 | 10.00 | 0 | 86.0 | 75 | 125 | 8.708 | 1.20 | 20 | |

Sample ID: **N043469-010CMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/17/2020** RunNo: **149760**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/30/2020** SeqNo: **4063988**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2916.963 | 12 | 100.0 | 2680 | 237 | 75 | 125 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **N043469-010CMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149760** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063991** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2913.880 | 12 | 100.0 | 2680 | 234 | 75 | 125 | 2917 | 0.106 | 20 | S |

| Sample ID: **N043469-006CMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4064302** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.225 | 0.10 | 10.00 | 0.3548 | 98.7 | 75 | 125 | | | | |

| Sample ID: **N043469-006CMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/17/2020** | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4064303** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.208 | 0.10 | 10.00 | 0.3548 | 98.5 | 75 | 125 | 10.23 | 0.164 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043469-002C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060815**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 13.312 | 0.10 | 10.00 | 3.058 | 103 | 80 | 120 | | | | |
| Manganese | 92.516 | 0.50 | 100.0 | 0.7879 | 91.7 | 80 | 120 | | | | |
| Molybdenum | 62.928 | 0.50 | 10.00 | 53.31 | 96.2 | 80 | 120 | | | | |
| Selenium | 33.490 | 0.50 | 10.00 | 21.57 | 119 | 80 | 120 | | | | |

Sample ID: **N043469-004C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060834**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.825 | 0.10 | 10.00 | 1.742 | 101 | 80 | 120 | | | | |
| Manganese | 108.473 | 0.50 | 100.0 | 20.10 | 88.4 | 80 | 120 | | | | |
| Molybdenum | 34.729 | 0.50 | 10.00 | 24.08 | 106 | 80 | 120 | | | | |
| Selenium | 13.464 | 0.50 | 10.00 | 3.818 | 96.5 | 80 | 120 | | | | |

Sample ID: **N043469-006C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060853**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 147.593 | 0.50 | 100.0 | 58.70 | 88.9 | 80 | 120 | | | | |
| Molybdenum | 29.462 | 0.50 | 10.00 | 17.43 | 120 | 80 | 120 | | | | S |
| Selenium | 9.457 | 0.50 | 10.00 | 0 | 94.6 | 80 | 120 | | | | |

Sample ID: **N043469-010C-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149694**
Client ID: **ZZZZZZ** Batch ID: **83534** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/22/2020** SeqNo: **4060868**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.168 | 0.10 | 10.00 | 0 | 91.7 | 80 | 120 | | | | |
| Molybdenum | 14.471 | 0.50 | 10.00 | 3.061 | 114 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **N043469-010C-PS** | SampType: **PS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4060868** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 8.987 | 0.50 | 10.00 | 0 | 89.9 | 80 | 120 | | | | |

| Sample ID: **N043469-010C-PS** | SampType: **PS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: | RunNo: **149760** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/30/2020** | SeqNo: **4063983** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2962.324 | 12 | 100.0 | 2680 | 282 | 80 | 120 | | | | S |

| Sample ID: **N043469-006C-PS** | SampType: **PS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: | RunNo: **149694** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83534** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/22/2020** | SeqNo: **4064301** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.756 | 0.10 | 10.00 | 0.3548 | 104 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-010

**Client Sample ID:** MW-66BR-270-Q420
**Collection Date:** 12/16/2020 2:30:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Acetone | 27 | 4.6 | 10 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-010

**Client Sample ID:** MW-66BR-270-Q420
**Collection Date:** 12/16/2020 2:30:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/28/2020 10:33 PM |
| Surr: 1,2-Dichloroethane-d4 | 113 | 0 | 72-119 | | %REC | 1 | 12/28/2020 10:33 PM |
| Surr: 4-Bromofluorobenzene | 98.6 | 0 | 76-119 | | %REC | 1 | 12/28/2020 10:33 PM |
| Surr: Dibromofluoromethane | 121 | 0 | 85-115 | S | %REC | 1 | 12/28/2020 10:33 PM |
| Surr: Toluene-d8 | 103 | 0 | 81-120 | | %REC | 1 | 12/28/2020 10:33 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-011

**Client Sample ID:** MW-938-Q420
**Collection Date:** 12/16/2020 2:40:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Acetone | 26 | 4.6 | 10 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043469
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043469-011

**Client Sample ID:** MW-938-Q420
**Collection Date:** 12/16/2020 2:40:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/28/2020 10:10 PM |
| Surr: 1,2-Dichloroethane-d4 | 112 | 0 | 72-119 | | %REC | 1 | 12/28/2020 10:10 PM |
| Surr: 4-Bromofluorobenzene | 96.8 | 0 | 76-119 | | %REC | 1 | 12/28/2020 10:10 PM |
| Surr: Dibromofluoromethane | 119 | 0 | 85-115 | S | %REC | 1 | 12/28/2020 10:10 PM |
| Surr: Toluene-d8 | 102 | 0 | 81-120 | | %REC | 1 | 12/28/2020 10:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **LCSW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060110**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.730 | 0.50 | 20.00 | 0 | 98.6 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.630 | 1.0 | 20.00 | 0 | 108 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.290 | 0.50 | 20.00 | 0 | 101 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 20.750 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.320 | 1.0 | 20.00 | 0 | 102 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 21.140 | 1.0 | 20.00 | 0 | 106 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 21.030 | 1.0 | 20.00 | 0 | 105 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 22.630 | 1.0 | 20.00 | 0 | 113 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.040 | 1.0 | 20.00 | 0 | 105 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 21.300 | 1.0 | 20.00 | 0 | 106 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 23.030 | 1.0 | 20.00 | 0 | 115 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 24.520 | 2.0 | 20.00 | 0 | 123 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.750 | 1.0 | 20.00 | 0 | 109 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.530 | 1.0 | 20.00 | 0 | 103 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.820 | 0.50 | 20.00 | 0 | 99.1 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.150 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 23.060 | 1.0 | 20.00 | 0 | 115 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 21.350 | 1.0 | 20.00 | 0 | 107 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.250 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 20.120 | 0.50 | 20.00 | 0 | 101 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 20.800 | 1.0 | 20.00 | 0 | 104 | 69 | 137 | | | | |
| 2-Butanone | 212.630 | 10 | 200.0 | 0 | 106 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.120 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.080 | 1.0 | 20.00 | 0 | 110 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 22.250 | 1.0 | 20.00 | 0 | 111 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 232.470 | 10 | 200.0 | 0 | 116 | 58 | 134 | | | | |
| Acetone | 209.980 | 10 | 200.0 | 0 | 105 | 40 | 135 | | | | |
| Acrolein | 216.860 | 20 | 200.0 | 0 | 108 | 75 | 125 | | | | |
| Acrylonitrile | 220.410 | 20 | 200.0 | 0 | 110 | 75 | 125 | | | | |
| Benzene | 20.810 | 0.50 | 20.00 | 0 | 104 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **LCSW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060110**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 76 | 124 | | | | |
| Bromochloromethane | 21.690 | 1.0 | 20.00 | 0 | 108 | 65 | 129 | | | | |
| Bromodichloromethane | 20.120 | 0.50 | 20.00 | 0 | 101 | 76 | 121 | | | | |
| Bromoform | 21.720 | 1.0 | 20.00 | 0 | 109 | 69 | 128 | | | | |
| Bromomethane | 23.220 | 1.0 | 20.00 | 0 | 116 | 53 | 141 | | | | |
| Carbon disulfide | 21.100 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| Carbon tetrachloride | 21.000 | 0.50 | 20.00 | 0 | 105 | 66 | 138 | | | | |
| Chlorobenzene | 20.680 | 0.50 | 20.00 | 0 | 103 | 81 | 122 | | | | |
| Chloroethane | 23.290 | 1.0 | 20.00 | 0 | 116 | 58 | 133 | | | | |
| Chloroform | 20.400 | 1.0 | 20.00 | 0 | 102 | 69 | 128 | | | | |
| Chloromethane | 23.060 | 1.0 | 20.00 | 0 | 115 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.830 | 1.0 | 20.00 | 0 | 104 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.460 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | | | | |
| Dibromochloromethane | 19.810 | 0.50 | 20.00 | 0 | 99.0 | 66 | 133 | | | | |
| Dibromomethane | 20.450 | 1.0 | 20.00 | 0 | 102 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 21.840 | 1.0 | 20.00 | 0 | 109 | 53 | 153 | | | | |
| Ethylbenzene | 20.300 | 1.0 | 20.00 | 0 | 102 | 73 | 127 | | | | |
| Freon-113 | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 75 | 125 | | | | |
| Hexachlorobutadiene | 21.610 | 0.50 | 20.00 | 0 | 108 | 67 | 131 | | | | |
| Isopropylbenzene | 21.640 | 1.0 | 20.00 | 0 | 108 | 75 | 127 | | | | |
| m,p-Xylene | 43.820 | 1.0 | 40.00 | 0 | 110 | 76 | 128 | | | | |
| Methylene chloride | 23.250 | 1.0 | 20.00 | 0 | 116 | 63 | 137 | | | | |
| MTBE | 22.870 | 1.0 | 20.00 | 0 | 114 | 65 | 123 | | | | |
| n-Butylbenzene | 22.020 | 1.0 | 20.00 | 0 | 110 | 69 | 137 | | | | |
| n-Propylbenzene | 22.290 | 1.0 | 20.00 | 0 | 111 | 72 | 129 | | | | |
| Naphthalene | 20.630 | 1.0 | 20.00 | 0 | 103 | 54 | 138 | | | | |
| o-Xylene | 21.720 | 1.0 | 20.00 | 0 | 109 | 80 | 121 | | | | |
| sec-Butylbenzene | 22.040 | 1.0 | 20.00 | 0 | 110 | 72 | 127 | | | | |
| Styrene | 22.060 | 1.0 | 20.00 | 0 | 110 | 65 | 134 | | | | |
| tert-Butylbenzene | 22.130 | 1.0 | 20.00 | 0 | 111 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **LCSW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060110**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 21.030 | 1.0 | 20.00 | 0 | 105 | 66 | 128 | | | | |
| Toluene | 20.780 | 0.50 | 20.00 | 0 | 104 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 20.620 | 1.0 | 20.00 | 0 | 103 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 21.530 | 1.0 | 20.00 | 0 | 108 | 59 | 135 | | | | |
| Trichloroethene | 20.270 | 1.0 | 20.00 | 0 | 101 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.440 | 1.0 | 20.00 | 0 | 97.2 | 57 | 129 | | | | |
| Vinyl chloride | 22.100 | 0.50 | 20.00 | 0 | 110 | 50 | 134 | | | | |
| Xylenes, Total | 65.540 | 2.0 | 60.00 | 0 | 109 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.510 | | 25.00 | | 106 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 27.300 | | 25.00 | | 109 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.590 | | 25.00 | | 106 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.430 | | 25.00 | | 106 | 81 | 120 | | | | |

Sample ID: **P201228MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **PBW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060113**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **PBW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060113**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 0.50 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 0.50 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.50 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **PBW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060113**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | ND | 0.50 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.50 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | ND | 1.0 | | | | | | | | | |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.100 | | 25.00 | | 108 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 24.070 | | 25.00 | | 96.3 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.940 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.540 | | 25.00 | | 102 | 81 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060379**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.980 | 0.50 | 20.00 | 0 | 99.9 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.740 | 1.0 | 20.00 | 0 | 104 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.350 | 0.50 | 20.00 | 0 | 107 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.150 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.040 | 1.0 | 20.00 | 0 | 100 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.940 | 1.0 | 20.00 | 0 | 99.7 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.160 | 1.0 | 20.00 | 0 | 101 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.000 | 1.0 | 20.00 | 0 | 105 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 18.840 | 1.0 | 20.00 | 0 | 94.2 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 22.250 | 1.0 | 20.00 | 0.3800 | 109 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 23.380 | 2.0 | 20.00 | 0 | 117 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.240 | 1.0 | 20.00 | 0 | 101 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.540 | 0.50 | 20.00 | 0 | 97.7 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 19.510 | 1.0 | 20.00 | 0 | 97.6 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 21.580 | 1.0 | 20.00 | 0 | 108 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 19.080 | 1.0 | 20.00 | 0 | 95.4 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.300 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.280 | 0.50 | 20.00 | 0 | 96.4 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.190 | 1.0 | 20.00 | 0 | 91.0 | 69 | 137 | | | | |
| 2-Butanone | 233.460 | 10 | 200.0 | 0 | 117 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.010 | 1.0 | 20.00 | 0 | 95.1 | 73 | 126 | | | | |
| 4-Chlorotoluene | 20.540 | 1.0 | 20.00 | 0 | 103 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 20.000 | 1.0 | 20.00 | 0 | 100 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 255.210 | 10 | 200.0 | 0 | 128 | 58 | 134 | | | | |
| Acetone | 285.720 | 10 | 200.0 | 26.54 | 130 | 40 | 135 | | | | |
| Acrolein | 208.510 | 20 | 200.0 | 0 | 104 | 75 | 125 | | | | |
| Acrylonitrile | 223.420 | 20 | 200.0 | 0 | 112 | 75 | 125 | | | | |
| Benzene | 19.560 | 0.50 | 20.00 | 0 | 97.8 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060379**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 19.640 | 1.0 | 20.00 | 0 | 98.2 | 76 | 124 | | | | |
| Bromochloromethane | 22.000 | 1.0 | 20.00 | 0 | 110 | 65 | 129 | | | | |
| Bromodichloromethane | 19.160 | 0.50 | 20.00 | 0 | 95.8 | 76 | 121 | | | | |
| Bromoform | 21.170 | 1.0 | 20.00 | 0 | 106 | 69 | 128 | | | | |
| Bromomethane | 19.070 | 1.0 | 20.00 | 0 | 95.4 | 53 | 141 | | | | |
| Carbon disulfide | 21.720 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.390 | 0.50 | 20.00 | 0 | 102 | 66 | 138 | | | | |
| Chlorobenzene | 19.520 | 0.50 | 20.00 | 0 | 97.6 | 81 | 122 | | | | |
| Chloroethane | 23.500 | 1.0 | 20.00 | 0 | 118 | 58 | 133 | | | | |
| Chloroform | 19.780 | 1.0 | 20.00 | 0.7700 | 95.1 | 69 | 128 | | | | |
| Chloromethane | 21.220 | 1.0 | 20.00 | 0 | 106 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.080 | 1.0 | 20.00 | 0 | 100 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.310 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | | | | |
| Dibromochloromethane | 20.000 | 0.50 | 20.00 | 0 | 100 | 66 | 133 | | | | |
| Dibromomethane | 20.000 | 1.0 | 20.00 | 0 | 100 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.380 | 1.0 | 20.00 | 0 | 86.9 | 53 | 153 | | | | |
| Ethylbenzene | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 73 | 127 | | | | |
| Freon-113 | 21.150 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.320 | 0.50 | 20.00 | 0 | 102 | 67 | 131 | | | | |
| Isopropylbenzene | 19.530 | 1.0 | 20.00 | 0 | 97.6 | 75 | 127 | | | | |
| m,p-Xylene | 42.690 | 1.0 | 40.00 | 0 | 107 | 76 | 128 | | | | |
| Methylene chloride | 22.330 | 1.0 | 20.00 | 0 | 112 | 63 | 137 | | | | |
| MTBE | 21.040 | 1.0 | 20.00 | 0 | 105 | 65 | 123 | | | | |
| n-Butylbenzene | 20.660 | 1.0 | 20.00 | 0 | 103 | 69 | 137 | | | | |
| n-Propylbenzene | 20.860 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | | | | |
| Naphthalene | 18.700 | 1.0 | 20.00 | 0 | 93.5 | 54 | 138 | | | | |
| o-Xylene | 20.360 | 1.0 | 20.00 | 0 | 102 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 72 | 127 | | | | |
| Styrene | 21.400 | 1.0 | 20.00 | 0 | 107 | 65 | 134 | | | | |
| tert-Butylbenzene | 21.190 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060379**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.960 | 1.0 | 20.00 | 0 | 94.8 | 66 | 128 | | | | |
| Toluene | 19.920 | 0.50 | 20.00 | 0 | 99.6 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 18.280 | 1.0 | 20.00 | 0 | 91.4 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.500 | 1.0 | 20.00 | 0 | 112 | 59 | 135 | | | | |
| Trichloroethene | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 57 | 129 | | | | |
| Vinyl chloride | 20.170 | 0.50 | 20.00 | 0 | 101 | 50 | 134 | | | | |
| Xylenes, Total | 63.050 | 2.0 | 60.00 | 0 | 105 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.230 | | 25.00 | | 105 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.960 | | 25.00 | | 104 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 27.370 | | 25.00 | | 109 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.610 | | 25.00 | | 102 | 81 | 120 | | | | |

Sample ID: **N043469-010EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060380**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.040 | 0.50 | 20.00 | 0 | 95.2 | 81 | 129 | 19.98 | 4.82 | 20 | |
| 1,1,1-Trichloroethane | 22.390 | 1.0 | 20.00 | 0 | 112 | 67 | 132 | 20.74 | 7.65 | 20 | |
| 1,1,2,2-Tetrachloroethane | 21.340 | 0.50 | 20.00 | 0 | 107 | 63 | 128 | 21.35 | 0.0468 | 20 | |
| 1,1,2-Trichloroethane | 20.130 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 21.15 | 4.94 | 20 | |
| 1,1-Dichloroethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 69 | 133 | 20.04 | 3.96 | 20 | |
| 1,1-Dichloroethene | 21.360 | 1.0 | 20.00 | 0 | 107 | 68 | 130 | 19.73 | 7.93 | 20 | |
| 1,1-Dichloropropene | 20.680 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | 19.94 | 3.64 | 20 | |
| 1,2,3-Trichlorobenzene | 21.810 | 1.0 | 20.00 | 0 | 109 | 67 | 137 | 20.16 | 7.86 | 20 | |
| 1,2,3-Trichloropropane | 20.960 | 1.0 | 20.00 | 0 | 105 | 73 | 124 | 21.00 | 0.191 | 20 | |
| 1,2,4-Trichlorobenzene | 18.940 | 1.0 | 20.00 | 0 | 94.7 | 66 | 134 | 18.84 | 0.529 | 20 | |
| 1,2,4-Trimethylbenzene | 22.660 | 1.0 | 20.00 | 0.3800 | 111 | 74 | 132 | 22.25 | 1.83 | 20 | |
| 1,2-Dibromo-3-chloropropane | 23.060 | 2.0 | 20.00 | 0 | 115 | 50 | 132 | 23.38 | 1.38 | 20 | |
| 1,2-Dibromoethane | 22.100 | 1.0 | 20.00 | 0 | 110 | 80 | 121 | 20.24 | 8.79 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060380**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 19.850 | 1.0 | 20.00 | 0 | 99.2 | 71 | 122 | 19.20 | 3.33 | 20 | |
| 1,2-Dichloroethane | 19.690 | 0.50 | 20.00 | 0 | 98.4 | 69 | 132 | 19.54 | 0.765 | 20 | |
| 1,2-Dichloropropane | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 75 | 125 | 19.51 | 2.39 | 20 | |
| 1,3,5-Trimethylbenzene | 21.130 | 1.0 | 20.00 | 0 | 106 | 74 | 131 | 21.58 | 2.11 | 20 | |
| 1,3-Dichlorobenzene | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 75 | 124 | 19.08 | 0.473 | 20 | |
| 1,3-Dichloropropane | 21.750 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | 21.30 | 2.09 | 20 | |
| 1,4-Dichlorobenzene | 19.340 | 0.50 | 20.00 | 0 | 96.7 | 74 | 123 | 19.28 | 0.311 | 20 | |
| 2,2-Dichloropropane | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 69 | 137 | 18.19 | 6.70 | 20 | |
| 2-Butanone | 250.730 | 10 | 200.0 | 0 | 125 | 49 | 136 | 233.5 | 7.13 | 20 | |
| 2-Chlorotoluene | 19.150 | 1.0 | 20.00 | 0 | 95.8 | 73 | 126 | 19.01 | 0.734 | 20 | |
| 4-Chlorotoluene | 20.080 | 1.0 | 20.00 | 0 | 100 | 74 | 128 | 20.54 | 2.26 | 20 | |
| 4-Isopropyltoluene | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 73 | 130 | 20.00 | 0.351 | 20 | |
| 4-Methyl-2-pentanone | 268.040 | 10 | 200.0 | 0 | 134 | 58 | 134 | 255.2 | 4.90 | 20 | S |
| Acetone | 253.910 | 10 | 200.0 | 26.54 | 114 | 40 | 135 | 285.7 | 11.8 | 20 | |
| Acrolein | 241.040 | 20 | 200.0 | 0 | 121 | 75 | 125 | 208.5 | 14.5 | 20 | |
| Acrylonitrile | 240.680 | 20 | 200.0 | 0 | 120 | 75 | 125 | 223.4 | 7.44 | 20 | |
| Benzene | 20.120 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 19.56 | 2.82 | 20 | |
| Bromobenzene | 18.860 | 1.0 | 20.00 | 0 | 94.3 | 76 | 124 | 19.64 | 4.05 | 20 | |
| Bromochloromethane | 22.360 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | 22.00 | 1.62 | 20 | |
| Bromodichloromethane | 19.220 | 0.50 | 20.00 | 0 | 96.1 | 76 | 121 | 19.16 | 0.313 | 20 | |
| Bromoform | 22.160 | 1.0 | 20.00 | 0 | 111 | 69 | 128 | 21.17 | 4.57 | 20 | |
| Bromomethane | 20.500 | 1.0 | 20.00 | 0 | 103 | 53 | 141 | 19.07 | 7.23 | 20 | |
| Carbon disulfide | 22.970 | 1.0 | 20.00 | 0 | 115 | 75 | 125 | 21.72 | 5.59 | 20 | |
| Carbon tetrachloride | 21.650 | 0.50 | 20.00 | 0 | 108 | 66 | 138 | 20.39 | 5.99 | 20 | |
| Chlorobenzene | 19.550 | 0.50 | 20.00 | 0 | 97.8 | 81 | 122 | 19.52 | 0.154 | 20 | |
| Chloroethane | 25.650 | 1.0 | 20.00 | 0 | 128 | 58 | 133 | 23.50 | 8.75 | 20 | |
| Chloroform | 20.720 | 1.0 | 20.00 | 0.7700 | 99.8 | 69 | 128 | 19.78 | 4.64 | 20 | |
| Chloromethane | 22.300 | 1.0 | 20.00 | 0 | 112 | 56 | 131 | 21.22 | 4.96 | 20 | |
| cis-1,2-Dichloroethene | 20.980 | 1.0 | 20.00 | 0 | 105 | 72 | 126 | 20.08 | 4.38 | 20 | |
| cis-1,3-Dichloropropene | 21.360 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | 21.31 | 0.234 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060380**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 20.280 | 0.50 | 20.00 | 0 | 101 | 66 | 133 | 20.00 | 1.39 | 20 | |
| Dibromomethane | 19.990 | 1.0 | 20.00 | 0 | 100 | 76 | 125 | 20.00 | 0.0500 | 20 | |
| Dichlorodifluoromethane | 17.960 | 1.0 | 20.00 | 0 | 89.8 | 53 | 153 | 17.38 | 3.28 | 20 | |
| Ethylbenzene | 19.620 | 1.0 | 20.00 | 0 | 98.1 | 73 | 127 | 19.84 | 1.12 | 20 | |
| Freon-113 | 22.670 | 1.0 | 20.00 | 0 | 113 | 75 | 125 | 21.15 | 6.94 | 20 | |
| Hexachlorobutadiene | 19.900 | 0.50 | 20.00 | 0 | 99.5 | 67 | 131 | 20.32 | 2.09 | 20 | |
| Isopropylbenzene | 19.570 | 1.0 | 20.00 | 0 | 97.9 | 75 | 127 | 19.53 | 0.205 | 20 | |
| m,p-Xylene | 42.240 | 1.0 | 40.00 | 0 | 106 | 76 | 128 | 42.69 | 1.06 | 20 | |
| Methylene chloride | 23.810 | 1.0 | 20.00 | 0 | 119 | 63 | 137 | 22.33 | 6.42 | 20 | |
| MTBE | 23.020 | 1.0 | 20.00 | 0 | 115 | 65 | 123 | 21.04 | 8.99 | 20 | |
| n-Butylbenzene | 20.940 | 1.0 | 20.00 | 0 | 105 | 69 | 137 | 20.66 | 1.35 | 20 | |
| n-Propylbenzene | 20.520 | 1.0 | 20.00 | 0 | 103 | 72 | 129 | 20.86 | 1.64 | 20 | |
| Naphthalene | 21.650 | 1.0 | 20.00 | 0 | 108 | 54 | 138 | 18.70 | 14.6 | 20 | |
| o-Xylene | 20.620 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | 20.36 | 1.27 | 20 | |
| sec-Butylbenzene | 20.330 | 1.0 | 20.00 | 0 | 102 | 72 | 127 | 19.90 | 2.14 | 20 | |
| Styrene | 21.060 | 1.0 | 20.00 | 0 | 105 | 65 | 134 | 21.40 | 1.60 | 20 | |
| tert-Butylbenzene | 21.210 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | 21.19 | 0.0943 | 20 | |
| Tetrachloroethene | 18.850 | 1.0 | 20.00 | 0 | 94.3 | 66 | 128 | 18.96 | 0.582 | 20 | |
| Toluene | 20.030 | 0.50 | 20.00 | 0 | 100 | 77 | 122 | 19.92 | 0.551 | 20 | |
| trans-1,2-Dichloroethene | 19.290 | 1.0 | 20.00 | 0 | 96.5 | 63 | 137 | 18.28 | 5.38 | 20 | |
| trans-1,3-Dichloropropene | 21.810 | 1.0 | 20.00 | 0 | 109 | 59 | 135 | 22.50 | 3.11 | 20 | |
| Trichloroethene | 18.850 | 1.0 | 20.00 | 0 | 94.3 | 70 | 127 | 19.20 | 1.84 | 20 | |
| Trichlorofluoromethane | 20.280 | 1.0 | 20.00 | 0 | 101 | 57 | 129 | 19.28 | 5.06 | 20 | |
| Vinyl chloride | 22.410 | 0.50 | 20.00 | 0 | 112 | 50 | 134 | 20.17 | 10.5 | 20 | |
| Xylenes, Total | 62.860 | 2.0 | 60.00 | 0 | 105 | 75 | 125 | 63.05 | 0.302 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 28.690 | | 25.00 | | 115 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 26.150 | | 25.00 | | 105 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 28.510 | | 25.00 | | 114 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.540 | | 25.00 | | 102 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060381**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.090 | 0.50 | 20.00 | 0 | 95.4 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.030 | 1.0 | 20.00 | 0 | 100 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.490 | 0.50 | 20.00 | 0 | 102 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 20.690 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.070 | 1.0 | 20.00 | 0 | 100 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 20.120 | 1.0 | 20.00 | 0 | 101 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.940 | 1.0 | 20.00 | 0 | 99.7 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.790 | 1.0 | 20.00 | 0 | 104 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 20.160 | 1.0 | 20.00 | 0 | 101 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 18.810 | 1.0 | 20.00 | 0 | 94.1 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.670 | 1.0 | 20.00 | 0 | 103 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 24.740 | 2.0 | 20.00 | 0 | 124 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.780 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 18.450 | 1.0 | 20.00 | 0 | 92.2 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.690 | 0.50 | 20.00 | 0 | 98.4 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 19.680 | 1.0 | 20.00 | 0 | 98.4 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.610 | 1.0 | 20.00 | 0 | 103 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 18.110 | 1.0 | 20.00 | 0 | 90.6 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 20.780 | 1.0 | 20.00 | 0 | 104 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 18.760 | 0.50 | 20.00 | 0 | 93.8 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.480 | 1.0 | 20.00 | 0 | 92.4 | 69 | 137 | | | | |
| 2-Butanone | 239.080 | 10 | 200.0 | 0 | 120 | 49 | 136 | | | | |
| 2-Chlorotoluene | 18.430 | 1.0 | 20.00 | 0 | 92.2 | 73 | 126 | | | | |
| 4-Chlorotoluene | 19.440 | 1.0 | 20.00 | 0 | 97.2 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.140 | 1.0 | 20.00 | 0 | 95.7 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 251.540 | 10 | 200.0 | 0 | 126 | 58 | 134 | | | | |
| Acetone | 257.520 | 10 | 200.0 | 7.450 | 125 | 40 | 135 | | | | |
| Acrolein | 203.580 | 20 | 200.0 | 0 | 102 | 75 | 125 | | | | |
| Acrylonitrile | 223.400 | 20 | 200.0 | 0 | 112 | 75 | 125 | | | | |
| Benzene | 19.460 | 0.50 | 20.00 | 0 | 97.3 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060381**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 18.770 | 1.0 | 20.00 | 0 | 93.8 | 76 | 124 | | | | |
| Bromochloromethane | 21.120 | 1.0 | 20.00 | 0 | 106 | 65 | 129 | | | | |
| Bromodichloromethane | 18.360 | 0.50 | 20.00 | 0.3100 | 90.3 | 76 | 121 | | | | |
| Bromoform | 20.900 | 1.0 | 20.00 | 0 | 104 | 69 | 128 | | | | |
| Bromomethane | 20.900 | 1.0 | 20.00 | 0 | 104 | 53 | 141 | | | | |
| Carbon disulfide | 21.640 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.960 | 0.50 | 20.00 | 0 | 99.8 | 66 | 138 | | | | |
| Chlorobenzene | 18.940 | 0.50 | 20.00 | 0 | 94.7 | 81 | 122 | | | | |
| Chloroethane | 21.510 | 1.0 | 20.00 | 0 | 108 | 58 | 133 | | | | |
| Chloroform | 18.910 | 1.0 | 20.00 | 0 | 94.6 | 69 | 128 | | | | |
| Chloromethane | 21.770 | 1.0 | 20.00 | 0 | 109 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 19.530 | 1.0 | 20.00 | 0 | 97.6 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 20.830 | 0.50 | 20.00 | 0 | 104 | 69 | 131 | | | | |
| Dibromochloromethane | 19.840 | 0.50 | 20.00 | 0 | 99.2 | 66 | 133 | | | | |
| Dibromomethane | 18.670 | 1.0 | 20.00 | 0 | 93.4 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.210 | 1.0 | 20.00 | 0 | 86.1 | 53 | 153 | | | | |
| Ethylbenzene | 19.470 | 1.0 | 20.00 | 0 | 97.4 | 73 | 127 | | | | |
| Freon-113 | 20.840 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| Hexachlorobutadiene | 18.390 | 0.50 | 20.00 | 0 | 92.0 | 67 | 131 | | | | |
| Isopropylbenzene | 18.770 | 1.0 | 20.00 | 0 | 93.8 | 75 | 127 | | | | |
| m,p-Xylene | 41.990 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | | | | |
| Methylene chloride | 21.630 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | | | | |
| MTBE | 21.790 | 1.0 | 20.00 | 0 | 109 | 65 | 123 | | | | |
| n-Butylbenzene | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 69 | 137 | | | | |
| n-Propylbenzene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 72 | 129 | | | | |
| Naphthalene | 18.250 | 1.0 | 20.00 | 0 | 91.2 | 54 | 138 | | | | |
| o-Xylene | 20.280 | 1.0 | 20.00 | 0 | 101 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.770 | 1.0 | 20.00 | 0 | 98.8 | 72 | 127 | | | | |
| Styrene | 15.210 | 1.0 | 20.00 | 0 | 76.1 | 65 | 134 | | | | |
| tert-Butylbenzene | 19.500 | 1.0 | 20.00 | 0 | 97.5 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060381**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.770 | 1.0 | 20.00 | 0 | 93.8 | 66 | 128 | | | | |
| Toluene | 19.520 | 0.50 | 20.00 | 0 | 97.6 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 18.470 | 1.0 | 20.00 | 0 | 92.4 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 20.880 | 1.0 | 20.00 | 0 | 104 | 59 | 135 | | | | |
| Trichloroethene | 18.100 | 1.0 | 20.00 | 0 | 90.5 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.170 | 1.0 | 20.00 | 0 | 95.9 | 57 | 129 | | | | |
| Vinyl chloride | 20.960 | 0.50 | 20.00 | 0 | 105 | 50 | 134 | | | | |
| Xylenes, Total | 62.270 | 2.0 | 60.00 | 0 | 104 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.400 | | 25.00 | | 106 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 26.110 | | 25.00 | | 104 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.810 | | 25.00 | | 107 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.410 | | 25.00 | | 102 | 81 | 120 | | | | |

Sample ID: **N043470-003DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060382**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.160 | 0.50 | 20.00 | 0 | 95.8 | 81 | 129 | 19.09 | 0.366 | 20 | |
| 1,1,1-Trichloroethane | 20.090 | 1.0 | 20.00 | 0 | 100 | 67 | 132 | 20.03 | 0.299 | 20 | |
| 1,1,2,2-Tetrachloroethane | 21.650 | 0.50 | 20.00 | 0 | 108 | 63 | 128 | 20.49 | 5.51 | 20 | |
| 1,1,2-Trichloroethane | 20.320 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | 20.69 | 1.80 | 20 | |
| 1,1-Dichloroethane | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 69 | 133 | 20.07 | 1.30 | 20 | |
| 1,1-Dichloroethene | 19.320 | 1.0 | 20.00 | 0 | 96.6 | 68 | 130 | 20.12 | 4.06 | 20 | |
| 1,1-Dichloropropene | 19.100 | 1.0 | 20.00 | 0 | 95.5 | 73 | 132 | 19.94 | 4.30 | 20 | |
| 1,2,3-Trichlorobenzene | 21.060 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | 20.79 | 1.29 | 20 | |
| 1,2,3-Trichloropropane | 21.160 | 1.0 | 20.00 | 0 | 106 | 73 | 124 | 20.16 | 4.84 | 20 | |
| 1,2,4-Trichlorobenzene | 19.090 | 1.0 | 20.00 | 0 | 95.4 | 66 | 134 | 18.81 | 1.48 | 20 | |
| 1,2,4-Trimethylbenzene | 21.840 | 1.0 | 20.00 | 0 | 109 | 74 | 132 | 20.67 | 5.50 | 20 | |
| 1,2-Dibromo-3-chloropropane | 24.650 | 2.0 | 20.00 | 0 | 123 | 50 | 132 | 24.74 | 0.364 | 20 | |
| 1,2-Dibromoethane | 20.730 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | 20.78 | 0.241 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060382**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 71 | 122 | 18.45 | 6.86 | 20 | |
| 1,2-Dichloroethane | 19.880 | 0.50 | 20.00 | 0 | 99.4 | 69 | 132 | 19.69 | 0.960 | 20 | |
| 1,2-Dichloropropane | 18.890 | 1.0 | 20.00 | 0 | 94.4 | 75 | 125 | 19.68 | 4.10 | 20 | |
| 1,3,5-Trimethylbenzene | 21.220 | 1.0 | 20.00 | 0 | 106 | 74 | 131 | 20.61 | 2.92 | 20 | |
| 1,3-Dichlorobenzene | 19.010 | 1.0 | 20.00 | 0 | 95.1 | 75 | 124 | 18.11 | 4.85 | 20 | |
| 1,3-Dichloropropane | 22.320 | 1.0 | 20.00 | 0 | 112 | 73 | 126 | 20.78 | 7.15 | 20 | |
| 1,4-Dichlorobenzene | 19.400 | 0.50 | 20.00 | 0 | 97.0 | 74 | 123 | 18.76 | 3.35 | 20 | |
| 2,2-Dichloropropane | 18.880 | 1.0 | 20.00 | 0 | 94.4 | 69 | 137 | 18.48 | 2.14 | 20 | |
| 2-Butanone | 238.360 | 10 | 200.0 | 0 | 119 | 49 | 136 | 239.1 | 0.302 | 20 | |
| 2-Chlorotoluene | 19.230 | 1.0 | 20.00 | 0 | 96.2 | 73 | 126 | 18.43 | 4.25 | 20 | |
| 4-Chlorotoluene | 20.330 | 1.0 | 20.00 | 0 | 102 | 74 | 128 | 19.44 | 4.48 | 20 | |
| 4-Isopropyltoluene | 19.670 | 1.0 | 20.00 | 0 | 98.4 | 73 | 130 | 19.14 | 2.73 | 20 | |
| 4-Methyl-2-pentanone | 245.060 | 10 | 200.0 | 0 | 123 | 58 | 134 | 251.5 | 2.61 | 20 | |
| Acetone | 230.040 | 10 | 200.0 | 7.450 | 111 | 40 | 135 | 257.5 | 11.3 | 20 | |
| Acrolein | 214.470 | 20 | 200.0 | 0 | 107 | 75 | 125 | 203.6 | 5.21 | 20 | |
| Acrylonitrile | 224.720 | 20 | 200.0 | 0 | 112 | 75 | 125 | 223.4 | 0.589 | 20 | |
| Benzene | 19.070 | 0.50 | 20.00 | 0 | 95.4 | 81 | 122 | 19.46 | 2.02 | 20 | |
| Bromobenzene | 18.520 | 1.0 | 20.00 | 0 | 92.6 | 76 | 124 | 18.77 | 1.34 | 20 | |
| Bromochloromethane | 21.000 | 1.0 | 20.00 | 0 | 105 | 65 | 129 | 21.12 | 0.570 | 20 | |
| Bromodichloromethane | 18.770 | 0.50 | 20.00 | 0.3100 | 92.3 | 76 | 121 | 18.36 | 2.21 | 20 | |
| Bromoform | 20.190 | 1.0 | 20.00 | 0 | 101 | 69 | 128 | 20.90 | 3.46 | 20 | |
| Bromomethane | 21.580 | 1.0 | 20.00 | 0 | 108 | 53 | 141 | 20.90 | 3.20 | 20 | |
| Carbon disulfide | 21.520 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | 21.64 | 0.556 | 20 | |
| Carbon tetrachloride | 19.480 | 0.50 | 20.00 | 0 | 97.4 | 66 | 138 | 19.96 | 2.43 | 20 | |
| Chlorobenzene | 18.850 | 0.50 | 20.00 | 0 | 94.3 | 81 | 122 | 18.94 | 0.476 | 20 | |
| Chloroethane | 21.950 | 1.0 | 20.00 | 0 | 110 | 58 | 133 | 21.51 | 2.02 | 20 | |
| Chloroform | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 69 | 128 | 18.91 | 4.24 | 20 | |
| Chloromethane | 21.450 | 1.0 | 20.00 | 0 | 107 | 56 | 131 | 21.77 | 1.48 | 20 | |
| cis-1,2-Dichloroethene | 20.410 | 1.0 | 20.00 | 0 | 102 | 72 | 126 | 19.53 | 4.41 | 20 | |
| cis-1,3-Dichloropropene | 20.820 | 0.50 | 20.00 | 0 | 104 | 69 | 131 | 20.83 | 0.0480 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060382**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.400 | 0.50 | 20.00 | 0 | 97.0 | 66 | 133 | 19.84 | 2.24 | 20 | |
| Dibromomethane | 19.780 | 1.0 | 20.00 | 0 | 98.9 | 76 | 125 | 18.67 | 5.77 | 20 | |
| Dichlorodifluoromethane | 17.680 | 1.0 | 20.00 | 0 | 88.4 | 53 | 153 | 17.21 | 2.69 | 20 | |
| Ethylbenzene | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 73 | 127 | 19.47 | 0.0513 | 20 | |
| Freon-113 | 20.380 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | 20.84 | 2.23 | 20 | |
| Hexachlorobutadiene | 18.810 | 0.50 | 20.00 | 0 | 94.1 | 67 | 131 | 18.39 | 2.26 | 20 | |
| Isopropylbenzene | 20.190 | 1.0 | 20.00 | 0 | 101 | 75 | 127 | 18.77 | 7.29 | 20 | |
| m,p-Xylene | 41.840 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | 41.99 | 0.358 | 20 | |
| Methylene chloride | 21.520 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | 21.63 | 0.510 | 20 | |
| MTBE | 22.560 | 1.0 | 20.00 | 0 | 113 | 65 | 123 | 21.79 | 3.47 | 20 | |
| n-Butylbenzene | 20.400 | 1.0 | 20.00 | 0 | 102 | 69 | 137 | 19.97 | 2.13 | 20 | |
| n-Propylbenzene | 20.640 | 1.0 | 20.00 | 0 | 103 | 72 | 129 | 19.89 | 3.70 | 20 | |
| Naphthalene | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 54 | 138 | 18.25 | 6.37 | 20 | |
| o-Xylene | 20.000 | 1.0 | 20.00 | 0 | 100 | 80 | 121 | 20.28 | 1.39 | 20 | |
| sec-Butylbenzene | 19.960 | 1.0 | 20.00 | 0 | 99.8 | 72 | 127 | 19.77 | 0.956 | 20 | |
| Styrene | 16.610 | 1.0 | 20.00 | 0 | 83.0 | 65 | 134 | 15.21 | 8.80 | 20 | |
| tert-Butylbenzene | 20.400 | 1.0 | 20.00 | 0 | 102 | 70 | 129 | 19.50 | 4.51 | 20 | |
| Tetrachloroethene | 17.990 | 1.0 | 20.00 | 0 | 90.0 | 66 | 128 | 18.77 | 4.24 | 20 | |
| Toluene | 19.140 | 0.50 | 20.00 | 0 | 95.7 | 77 | 122 | 19.52 | 1.97 | 20 | |
| trans-1,2-Dichloroethene | 18.970 | 1.0 | 20.00 | 0 | 94.8 | 63 | 137 | 18.47 | 2.67 | 20 | |
| trans-1,3-Dichloropropene | 20.920 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | 20.88 | 0.191 | 20 | |
| Trichloroethene | 18.540 | 1.0 | 20.00 | 0 | 92.7 | 70 | 127 | 18.10 | 2.40 | 20 | |
| Trichlorofluoromethane | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 57 | 129 | 19.17 | 1.50 | 20 | |
| Vinyl chloride | 20.760 | 0.50 | 20.00 | 0 | 104 | 50 | 134 | 20.96 | 0.959 | 20 | |
| Xylenes, Total | 61.840 | 2.0 | 60.00 | 0 | 103 | 75 | 125 | 62.27 | 0.693 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 26.690 | | 25.00 | | 107 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 26.670 | | 25.00 | | 107 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 27.510 | | 25.00 | | 110 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.200 | | 25.00 | | 101 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060383**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.540 | 0.50 | 20.00 | 0 | 92.7 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.140 | 1.0 | 20.00 | 0 | 106 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.760 | 0.50 | 20.00 | 0 | 104 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 19.700 | 1.0 | 20.00 | 0 | 98.5 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.270 | 1.0 | 20.00 | 0 | 101 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 20.160 | 1.0 | 20.00 | 0 | 101 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.830 | 1.0 | 20.00 | 0 | 99.2 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.660 | 1.0 | 20.00 | 0 | 103 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 19.120 | 1.0 | 20.00 | 0 | 95.6 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 18.890 | 1.0 | 20.00 | 0 | 94.4 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 21.140 | 1.0 | 20.00 | 0 | 106 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.040 | 2.0 | 20.00 | 0 | 105 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 19.040 | 1.0 | 20.00 | 0 | 95.2 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.880 | 0.50 | 20.00 | 0 | 99.4 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 18.890 | 1.0 | 20.00 | 0 | 94.4 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.780 | 1.0 | 20.00 | 0 | 104 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 18.330 | 1.0 | 20.00 | 0 | 91.7 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.620 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 18.600 | 0.50 | 20.00 | 0 | 93.0 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.330 | 1.0 | 20.00 | 0 | 91.7 | 69 | 137 | | | | |
| 2-Butanone | 235.980 | 10 | 200.0 | 0 | 118 | 49 | 136 | | | | |
| 2-Chlorotoluene | 18.920 | 1.0 | 20.00 | 0 | 94.6 | 73 | 126 | | | | |
| 4-Chlorotoluene | 19.520 | 1.0 | 20.00 | 0 | 97.6 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.080 | 1.0 | 20.00 | 0 | 95.4 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 251.650 | 10 | 200.0 | 0 | 126 | 58 | 134 | | | | |
| Acetone | 267.430 | 10 | 200.0 | 12.64 | 127 | 40 | 135 | | | | |
| Acrolein | 211.180 | 20 | 200.0 | 0 | 106 | 75 | 125 | | | | |
| Acrylonitrile | 229.320 | 20 | 200.0 | 0 | 115 | 75 | 125 | | | | |
| Benzene | 19.640 | 0.50 | 20.00 | 0 | 98.2 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060383**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 18.570 | 1.0 | 20.00 | 0 | 92.8 | 76 | 124 | | | | |
| Bromochloromethane | 22.310 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | | | | |
| Bromodichloromethane | 18.860 | 0.50 | 20.00 | 0 | 94.3 | 76 | 121 | | | | |
| Bromoform | 20.750 | 1.0 | 20.00 | 0 | 104 | 69 | 128 | | | | |
| Bromomethane | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 53 | 141 | | | | |
| Carbon disulfide | 22.060 | 1.0 | 20.00 | 0 | 110 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.860 | 0.50 | 20.00 | 0 | 99.3 | 66 | 138 | | | | |
| Chlorobenzene | 19.390 | 0.50 | 20.00 | 0 | 97.0 | 81 | 122 | | | | |
| Chloroethane | 23.070 | 1.0 | 20.00 | 0 | 115 | 58 | 133 | | | | |
| Chloroform | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 69 | 128 | | | | |
| Chloromethane | 21.190 | 1.0 | 20.00 | 0 | 106 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.570 | 1.0 | 20.00 | 0 | 103 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 20.850 | 0.50 | 20.00 | 0 | 104 | 69 | 131 | | | | |
| Dibromochloromethane | 19.230 | 0.50 | 20.00 | 0 | 96.2 | 66 | 133 | | | | |
| Dibromomethane | 20.310 | 1.0 | 20.00 | 0 | 102 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.290 | 1.0 | 20.00 | 0 | 86.5 | 53 | 153 | | | | |
| Ethylbenzene | 19.370 | 1.0 | 20.00 | 0 | 96.9 | 73 | 127 | | | | |
| Freon-113 | 21.170 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| Hexachlorobutadiene | 18.240 | 0.50 | 20.00 | 0 | 91.2 | 67 | 131 | | | | |
| Isopropylbenzene | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 75 | 127 | | | | |
| m,p-Xylene | 41.320 | 1.0 | 40.00 | 0 | 103 | 76 | 128 | | | | |
| Methylene chloride | 23.220 | 1.0 | 20.00 | 0 | 116 | 63 | 137 | | | | |
| MTBE | 22.670 | 1.0 | 20.00 | 0 | 113 | 65 | 123 | | | | |
| n-Butylbenzene | 19.960 | 1.0 | 20.00 | 0 | 99.8 | 69 | 137 | | | | |
| n-Propylbenzene | 20.480 | 1.0 | 20.00 | 0 | 102 | 72 | 129 | | | | |
| Naphthalene | 19.960 | 1.0 | 20.00 | 0 | 99.8 | 54 | 138 | | | | |
| o-Xylene | 20.190 | 1.0 | 20.00 | 0 | 101 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.400 | 1.0 | 20.00 | 0 | 97.0 | 72 | 127 | | | | |
| Styrene | 20.240 | 1.0 | 20.00 | 0 | 101 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.570 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
E Value above quantitation range
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
R RPD outside accepted recovery limits
S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out
Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060383**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 17.480 | 1.0 | 20.00 | 0 | 87.4 | 66 | 128 | | | | |
| Toluene | 19.220 | 0.50 | 20.00 | 0 | 96.1 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.080 | 1.0 | 20.00 | 0 | 95.4 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 21.640 | 1.0 | 20.00 | 0 | 108 | 59 | 135 | | | | |
| Trichloroethene | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.560 | 1.0 | 20.00 | 0 | 97.8 | 57 | 129 | | | | |
| Vinyl chloride | 20.650 | 0.50 | 20.00 | 0 | 103 | 50 | 134 | | | | |
| Xylenes, Total | 61.510 | 2.0 | 60.00 | 0 | 103 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.010 | | 25.00 | | 108 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.660 | | 25.00 | | 103 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 28.610 | | 25.00 | | 114 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.100 | | 25.00 | | 104 | 81 | 120 | | | | |

Sample ID: **N043470-006DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060384**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.910 | 0.50 | 20.00 | 0 | 94.6 | 81 | 129 | 18.54 | 1.98 | 20 | |
| 1,1,1-Trichloroethane | 22.170 | 1.0 | 20.00 | 0 | 111 | 67 | 132 | 21.14 | 4.76 | 20 | |
| 1,1,2,2-Tetrachloroethane | 21.400 | 0.50 | 20.00 | 0 | 107 | 63 | 128 | 20.76 | 3.04 | 20 | |
| 1,1,2-Trichloroethane | 20.730 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | 19.70 | 5.10 | 20 | |
| 1,1-Dichloroethane | 20.680 | 1.0 | 20.00 | 0 | 103 | 69 | 133 | 20.27 | 2.00 | 20 | |
| 1,1-Dichloroethene | 20.030 | 1.0 | 20.00 | 0 | 100 | 68 | 130 | 20.16 | 0.647 | 20 | |
| 1,1-Dichloropropene | 20.400 | 1.0 | 20.00 | 0 | 102 | 73 | 132 | 19.83 | 2.83 | 20 | |
| 1,2,3-Trichlorobenzene | 22.050 | 1.0 | 20.00 | 0 | 110 | 67 | 137 | 20.66 | 6.51 | 20 | |
| 1,2,3-Trichloropropane | 20.240 | 1.0 | 20.00 | 0 | 101 | 73 | 124 | 19.12 | 5.69 | 20 | |
| 1,2,4-Trichlorobenzene | 20.050 | 1.0 | 20.00 | 0 | 100 | 66 | 134 | 18.89 | 5.96 | 20 | |
| 1,2,4-Trimethylbenzene | 22.240 | 1.0 | 20.00 | 0 | 111 | 74 | 132 | 21.14 | 5.07 | 20 | |
| 1,2-Dibromo-3-chloropropane | 22.940 | 2.0 | 20.00 | 0 | 115 | 50 | 132 | 21.04 | 8.64 | 20 | |
| 1,2-Dibromoethane | 20.390 | 1.0 | 20.00 | 0 | 102 | 80 | 121 | 20.85 | 2.23 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060384**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 71 | 122 | 19.04 | 3.56 | 20 | |
| 1,2-Dichloroethane | 19.460 | 0.50 | 20.00 | 0 | 97.3 | 69 | 132 | 19.88 | 2.14 | 20 | |
| 1,2-Dichloropropane | 20.410 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | 18.89 | 7.74 | 20 | |
| 1,3,5-Trimethylbenzene | 21.670 | 1.0 | 20.00 | 0 | 108 | 74 | 131 | 20.78 | 4.19 | 20 | |
| 1,3-Dichlorobenzene | 19.060 | 1.0 | 20.00 | 0 | 95.3 | 75 | 124 | 18.33 | 3.90 | 20 | |
| 1,3-Dichloropropane | 21.340 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | 21.62 | 1.30 | 20 | |
| 1,4-Dichlorobenzene | 19.660 | 0.50 | 20.00 | 0 | 98.3 | 74 | 123 | 18.60 | 5.54 | 20 | |
| 2,2-Dichloropropane | 18.750 | 1.0 | 20.00 | 0 | 93.8 | 69 | 137 | 18.33 | 2.27 | 20 | |
| 2-Butanone | 234.850 | 10 | 200.0 | 0 | 117 | 49 | 136 | 236.0 | 0.480 | 20 | |
| 2-Chlorotoluene | 19.240 | 1.0 | 20.00 | 0 | 96.2 | 73 | 126 | 18.92 | 1.68 | 20 | |
| 4-Chlorotoluene | 20.670 | 1.0 | 20.00 | 0 | 103 | 74 | 128 | 19.52 | 5.72 | 20 | |
| 4-Isopropyltoluene | 20.250 | 1.0 | 20.00 | 0 | 101 | 73 | 130 | 19.08 | 5.95 | 20 | |
| 4-Methyl-2-pentanone | 255.640 | 10 | 200.0 | 0 | 128 | 58 | 134 | 251.6 | 1.57 | 20 | |
| Acetone | 227.160 | 10 | 200.0 | 12.64 | 107 | 40 | 135 | 267.4 | 16.3 | 20 | |
| Acrolein | 216.900 | 20 | 200.0 | 0 | 108 | 75 | 125 | 211.2 | 2.67 | 20 | |
| Acrylonitrile | 229.170 | 20 | 200.0 | 0 | 115 | 75 | 125 | 229.3 | 0.0654 | 20 | |
| Benzene | 20.160 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 19.64 | 2.61 | 20 | |
| Bromobenzene | 19.290 | 1.0 | 20.00 | 0 | 96.5 | 76 | 124 | 18.57 | 3.80 | 20 | |
| Bromochloromethane | 22.410 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | 22.31 | 0.447 | 20 | |
| Bromodichloromethane | 19.440 | 0.50 | 20.00 | 0 | 97.2 | 76 | 121 | 18.86 | 3.03 | 20 | |
| Bromoform | 21.340 | 1.0 | 20.00 | 0 | 107 | 69 | 128 | 20.75 | 2.80 | 20 | |
| Bromomethane | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 53 | 141 | 19.61 | 0.665 | 20 | |
| Carbon disulfide | 22.710 | 1.0 | 20.00 | 0 | 114 | 75 | 125 | 22.06 | 2.90 | 20 | |
| Carbon tetrachloride | 20.490 | 0.50 | 20.00 | 0 | 102 | 66 | 138 | 19.86 | 3.12 | 20 | |
| Chlorobenzene | 19.160 | 0.50 | 20.00 | 0 | 95.8 | 81 | 122 | 19.39 | 1.19 | 20 | |
| Chloroethane | 23.400 | 1.0 | 20.00 | 0 | 117 | 58 | 133 | 23.07 | 1.42 | 20 | |
| Chloroform | 20.720 | 1.0 | 20.00 | 0 | 104 | 69 | 128 | 19.84 | 4.34 | 20 | |
| Chloromethane | 22.280 | 1.0 | 20.00 | 0 | 111 | 56 | 131 | 21.19 | 5.01 | 20 | |
| cis-1,2-Dichloroethene | 21.200 | 1.0 | 20.00 | 0 | 106 | 72 | 126 | 20.57 | 3.02 | 20 | |
| cis-1,3-Dichloropropene | 20.620 | 0.50 | 20.00 | 0 | 103 | 69 | 131 | 20.85 | 1.11 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060384**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.660 | 0.50 | 20.00 | 0 | 98.3 | 66 | 133 | 19.23 | 2.21 | 20 | |
| Dibromomethane | 20.220 | 1.0 | 20.00 | 0 | 101 | 76 | 125 | 20.31 | 0.444 | 20 | |
| Dichlorodifluoromethane | 17.880 | 1.0 | 20.00 | 0 | 89.4 | 53 | 153 | 17.29 | 3.36 | 20 | |
| Ethylbenzene | 19.470 | 1.0 | 20.00 | 0 | 97.4 | 73 | 127 | 19.37 | 0.515 | 20 | |
| Freon-113 | 21.570 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | 21.17 | 1.87 | 20 | |
| Hexachlorobutadiene | 20.560 | 0.50 | 20.00 | 0 | 103 | 67 | 131 | 18.24 | 12.0 | 20 | |
| Isopropylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 75 | 127 | 19.35 | 2.80 | 20 | |
| m,p-Xylene | 42.250 | 1.0 | 40.00 | 0 | 106 | 76 | 128 | 41.32 | 2.23 | 20 | |
| Methylene chloride | 23.800 | 1.0 | 20.00 | 0 | 119 | 63 | 137 | 23.22 | 2.47 | 20 | |
| MTBE | 22.880 | 1.0 | 20.00 | 0 | 114 | 65 | 123 | 22.67 | 0.922 | 20 | |
| n-Butylbenzene | 20.940 | 1.0 | 20.00 | 0 | 105 | 69 | 137 | 19.96 | 4.79 | 20 | |
| n-Propylbenzene | 20.740 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | 20.48 | 1.26 | 20 | |
| Naphthalene | 20.430 | 1.0 | 20.00 | 0 | 102 | 54 | 138 | 19.96 | 2.33 | 20 | |
| o-Xylene | 20.480 | 1.0 | 20.00 | 0 | 102 | 80 | 121 | 20.19 | 1.43 | 20 | |
| sec-Butylbenzene | 20.130 | 1.0 | 20.00 | 0 | 101 | 72 | 127 | 19.40 | 3.69 | 20 | |
| Styrene | 20.730 | 1.0 | 20.00 | 0 | 104 | 65 | 134 | 20.24 | 2.39 | 20 | |
| tert-Butylbenzene | 21.110 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | 20.57 | 2.59 | 20 | |
| Tetrachloroethene | 18.550 | 1.0 | 20.00 | 0 | 92.8 | 66 | 128 | 17.48 | 5.94 | 20 | |
| Toluene | 19.690 | 0.50 | 20.00 | 0 | 98.4 | 77 | 122 | 19.22 | 2.42 | 20 | |
| trans-1,2-Dichloroethene | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 63 | 137 | 19.08 | 2.07 | 20 | |
| trans-1,3-Dichloropropene | 22.200 | 1.0 | 20.00 | 0 | 111 | 59 | 135 | 21.64 | 2.55 | 20 | |
| Trichloroethene | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 70 | 127 | 19.00 | 0 | 20 | |
| Trichlorofluoromethane | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 57 | 129 | 19.56 | 1.27 | 20 | |
| Vinyl chloride | 21.420 | 0.50 | 20.00 | 0 | 107 | 50 | 134 | 20.65 | 3.66 | 20 | |
| Xylenes, Total | 62.730 | 2.0 | 60.00 | 0 | 105 | 75 | 125 | 61.51 | 1.96 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 27.390 | | 25.00 | | 110 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 25.740 | | 25.00 | | 103 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 29.680 | | 25.00 | | 119 | 85 | 115 | | 0 | | S |
| Surr: Toluene-d8 | 26.370 | | 25.00 | | 105 | 81 | 120 | | 0 | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060385**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.900 | 0.50 | 20.00 | 0 | 94.5 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.240 | 1.0 | 20.00 | 0 | 106 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.070 | 0.50 | 20.00 | 0 | 100 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 20.240 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.550 | 1.0 | 20.00 | 0 | 103 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 20.020 | 1.0 | 20.00 | 0 | 100 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.950 | 1.0 | 20.00 | 0 | 105 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.540 | 1.0 | 20.00 | 0 | 103 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 20.470 | 1.0 | 20.00 | 0 | 102 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 19.240 | 1.0 | 20.00 | 0 | 96.2 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 21.840 | 1.0 | 20.00 | 0 | 109 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.690 | 2.0 | 20.00 | 0 | 108 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.570 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 19.130 | 1.0 | 20.00 | 0 | 95.7 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.010 | 0.50 | 20.00 | 0 | 100 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 21.500 | 1.0 | 20.00 | 0 | 108 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 18.800 | 1.0 | 20.00 | 0 | 94.0 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 20.450 | 1.0 | 20.00 | 0 | 102 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.360 | 0.50 | 20.00 | 0 | 96.8 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.030 | 1.0 | 20.00 | 0 | 90.2 | 69 | 137 | | | | |
| 2-Butanone | 231.380 | 10 | 200.0 | 0 | 116 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.400 | 1.0 | 20.00 | 0 | 97.0 | 73 | 126 | | | | |
| 4-Chlorotoluene | 19.780 | 1.0 | 20.00 | 0 | 98.9 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 20.110 | 1.0 | 20.00 | 0 | 101 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 245.440 | 10 | 200.0 | 0 | 123 | 58 | 134 | | | | |
| Acetone | 265.310 | 10 | 200.0 | 14.47 | 125 | 40 | 135 | | | | |
| Acrolein | 206.490 | 20 | 200.0 | 0 | 103 | 75 | 125 | | | | |
| Acrylonitrile | 226.050 | 20 | 200.0 | 0 | 113 | 75 | 125 | | | | |
| Benzene | 20.000 | 0.50 | 20.00 | 0 | 100 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060385**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 18.500 | 1.0 | 20.00 | 0 | 92.5 | 76 | 124 | | | | |
| Bromochloromethane | 20.290 | 1.0 | 20.00 | 0 | 101 | 65 | 129 | | | | |
| Bromodichloromethane | 19.390 | 0.50 | 20.00 | 0 | 97.0 | 76 | 121 | | | | |
| Bromoform | 19.880 | 1.0 | 20.00 | 0 | 99.4 | 69 | 128 | | | | |
| Bromomethane | 20.480 | 1.0 | 20.00 | 0 | 102 | 53 | 141 | | | | |
| Carbon disulfide | 21.660 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.180 | 0.50 | 20.00 | 0 | 101 | 66 | 138 | | | | |
| Chlorobenzene | 18.880 | 0.50 | 20.00 | 0 | 94.4 | 81 | 122 | | | | |
| Chloroethane | 22.350 | 1.0 | 20.00 | 0 | 112 | 58 | 133 | | | | |
| Chloroform | 19.960 | 1.0 | 20.00 | 0.7200 | 96.2 | 69 | 128 | | | | |
| Chloromethane | 21.520 | 1.0 | 20.00 | 0 | 108 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 19.920 | 1.0 | 20.00 | 0 | 99.6 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.100 | 0.50 | 20.00 | 0 | 106 | 69 | 131 | | | | |
| Dibromochloromethane | 18.840 | 0.50 | 20.00 | 0 | 94.2 | 66 | 133 | | | | |
| Dibromomethane | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.640 | 1.0 | 20.00 | 0 | 88.2 | 53 | 153 | | | | |
| Ethylbenzene | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 73 | 127 | | | | |
| Freon-113 | 21.400 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.190 | 0.50 | 20.00 | 0 | 96.0 | 67 | 131 | | | | |
| Isopropylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 75 | 127 | | | | |
| m,p-Xylene | 41.350 | 1.0 | 40.00 | 0 | 103 | 76 | 128 | | | | |
| Methylene chloride | 22.650 | 1.0 | 20.00 | 0 | 113 | 63 | 137 | | | | |
| MTBE | 22.100 | 1.0 | 20.00 | 0 | 110 | 65 | 123 | | | | |
| n-Butylbenzene | 21.080 | 1.0 | 20.00 | 0 | 105 | 69 | 137 | | | | |
| n-Propylbenzene | 20.690 | 1.0 | 20.00 | 0 | 103 | 72 | 129 | | | | |
| Naphthalene | 18.700 | 1.0 | 20.00 | 0 | 93.5 | 54 | 138 | | | | |
| o-Xylene | 20.380 | 1.0 | 20.00 | 0 | 102 | 80 | 121 | | | | |
| sec-Butylbenzene | 20.410 | 1.0 | 20.00 | 0 | 102 | 72 | 127 | | | | |
| Styrene | 17.480 | 1.0 | 20.00 | 0 | 87.4 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.660 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060385**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.760 | 1.0 | 20.00 | 0 | 93.8 | 66 | 128 | | | | |
| Toluene | 19.720 | 0.50 | 20.00 | 0 | 98.6 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.550 | 1.0 | 20.00 | 0 | 97.8 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 21.420 | 1.0 | 20.00 | 0 | 107 | 59 | 135 | | | | |
| Trichloroethene | 18.960 | 1.0 | 20.00 | 0 | 94.8 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.790 | 1.0 | 20.00 | 0 | 99.0 | 57 | 129 | | | | |
| Vinyl chloride | 21.270 | 0.50 | 20.00 | 0 | 106 | 50 | 134 | | | | |
| Xylenes, Total | 61.730 | 2.0 | 60.00 | 0 | 103 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.660 | | 25.00 | | 107 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 26.270 | | 25.00 | | 105 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 28.100 | | 25.00 | | 112 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.910 | | 25.00 | | 108 | 81 | 120 | | | | |

Sample ID: **N043470-001DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060386**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.810 | 0.50 | 20.00 | 0 | 99.0 | 81 | 129 | 18.90 | 4.70 | 20 | |
| 1,1,1-Trichloroethane | 21.290 | 1.0 | 20.00 | 0 | 106 | 67 | 132 | 21.24 | 0.235 | 20 | |
| 1,1,2,2-Tetrachloroethane | 22.050 | 0.50 | 20.00 | 0 | 110 | 63 | 128 | 20.07 | 9.40 | 20 | |
| 1,1,2-Trichloroethane | 20.170 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 20.24 | 0.346 | 20 | |
| 1,1-Dichloroethane | 20.130 | 1.0 | 20.00 | 0 | 101 | 69 | 133 | 20.55 | 2.06 | 20 | |
| 1,1-Dichloroethene | 20.530 | 1.0 | 20.00 | 0 | 103 | 68 | 130 | 20.02 | 2.52 | 20 | |
| 1,1-Dichloropropene | 20.020 | 1.0 | 20.00 | 0 | 100 | 73 | 132 | 20.95 | 4.54 | 20 | |
| 1,2,3-Trichlorobenzene | 22.040 | 1.0 | 20.00 | 0 | 110 | 67 | 137 | 20.54 | 7.05 | 20 | |
| 1,2,3-Trichloropropane | 22.730 | 1.0 | 20.00 | 0 | 114 | 73 | 124 | 20.47 | 10.5 | 20 | |
| 1,2,4-Trichlorobenzene | 20.000 | 1.0 | 20.00 | 0 | 100 | 66 | 134 | 19.24 | 3.87 | 20 | |
| 1,2,4-Trimethylbenzene | 22.900 | 1.0 | 20.00 | 0 | 114 | 74 | 132 | 21.84 | 4.74 | 20 | |
| 1,2-Dibromo-3-chloropropane | 24.800 | 2.0 | 20.00 | 0 | 124 | 50 | 132 | 21.69 | 13.4 | 20 | |
| 1,2-Dibromoethane | 20.640 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | 20.57 | 0.340 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060386**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 20.710 | 1.0 | 20.00 | 0 | 104 | 71 | 122 | 19.13 | 7.93 | 20 | |
| 1,2-Dichloroethane | 19.370 | 0.50 | 20.00 | 0 | 96.9 | 69 | 132 | 20.01 | 3.25 | 20 | |
| 1,2-Dichloropropane | 19.470 | 1.0 | 20.00 | 0 | 97.4 | 75 | 125 | 19.89 | 2.13 | 20 | |
| 1,3,5-Trimethylbenzene | 22.640 | 1.0 | 20.00 | 0 | 113 | 74 | 131 | 21.50 | 5.17 | 20 | |
| 1,3-Dichlorobenzene | 20.390 | 1.0 | 20.00 | 0 | 102 | 75 | 124 | 18.80 | 8.11 | 20 | |
| 1,3-Dichloropropane | 21.730 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | 20.45 | 6.07 | 20 | |
| 1,4-Dichlorobenzene | 20.320 | 0.50 | 20.00 | 0 | 102 | 74 | 123 | 19.36 | 4.84 | 20 | |
| 2,2-Dichloropropane | 17.750 | 1.0 | 20.00 | 0 | 88.8 | 69 | 137 | 18.03 | 1.57 | 20 | |
| 2-Butanone | 238.820 | 10 | 200.0 | 0 | 119 | 49 | 136 | 231.4 | 3.16 | 20 | |
| 2-Chlorotoluene | 20.850 | 1.0 | 20.00 | 0 | 104 | 73 | 126 | 19.40 | 7.20 | 20 | |
| 4-Chlorotoluene | 21.710 | 1.0 | 20.00 | 0 | 109 | 74 | 128 | 19.78 | 9.30 | 20 | |
| 4-Isopropyltoluene | 21.280 | 1.0 | 20.00 | 0 | 106 | 73 | 130 | 20.11 | 5.65 | 20 | |
| 4-Methyl-2-pentanone | 252.090 | 10 | 200.0 | 0 | 126 | 58 | 134 | 245.4 | 2.67 | 20 | |
| Acetone | 271.460 | 10 | 200.0 | 14.47 | 128 | 40 | 135 | 265.3 | 2.29 | 20 | |
| Acrolein | 212.280 | 20 | 200.0 | 0 | 106 | 75 | 125 | 206.5 | 2.77 | 20 | |
| Acrylonitrile | 231.390 | 20 | 200.0 | 0 | 116 | 75 | 125 | 226.0 | 2.33 | 20 | |
| Benzene | 20.180 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 20.00 | 0.896 | 20 | |
| Bromobenzene | 19.990 | 1.0 | 20.00 | 0 | 100 | 76 | 124 | 18.50 | 7.74 | 20 | |
| Bromochloromethane | 22.270 | 1.0 | 20.00 | 0 | 111 | 65 | 129 | 20.29 | 9.30 | 20 | |
| Bromodichloromethane | 19.480 | 0.50 | 20.00 | 0 | 97.4 | 76 | 121 | 19.39 | 0.463 | 20 | |
| Bromoform | 22.020 | 1.0 | 20.00 | 0 | 110 | 69 | 128 | 19.88 | 10.2 | 20 | |
| Bromomethane | 21.350 | 1.0 | 20.00 | 0 | 107 | 53 | 141 | 20.48 | 4.16 | 20 | |
| Carbon disulfide | 21.720 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | 21.66 | 0.277 | 20 | |
| Carbon tetrachloride | 20.470 | 0.50 | 20.00 | 0 | 102 | 66 | 138 | 20.18 | 1.43 | 20 | |
| Chlorobenzene | 19.870 | 0.50 | 20.00 | 0 | 99.4 | 81 | 122 | 18.88 | 5.11 | 20 | |
| Chloroethane | 21.540 | 1.0 | 20.00 | 0 | 108 | 58 | 133 | 22.35 | 3.69 | 20 | |
| Chloroform | 19.820 | 1.0 | 20.00 | 0.7200 | 95.5 | 69 | 128 | 19.96 | 0.704 | 20 | |
| Chloromethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 56 | 131 | 21.52 | 3.16 | 20 | |
| cis-1,2-Dichloroethene | 19.880 | 1.0 | 20.00 | 0 | 99.4 | 72 | 126 | 19.92 | 0.201 | 20 | |
| cis-1,3-Dichloropropene | 20.620 | 0.50 | 20.00 | 0 | 103 | 69 | 131 | 21.10 | 2.30 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060386**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 20.650 | 0.50 | 20.00 | 0 | 103 | 66 | 133 | 18.84 | 9.17 | 20 | |
| Dibromomethane | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 76 | 125 | 19.98 | 4.77 | 20 | |
| Dichlorodifluoromethane | 17.280 | 1.0 | 20.00 | 0 | 86.4 | 53 | 153 | 17.64 | 2.06 | 20 | |
| Ethylbenzene | 20.440 | 1.0 | 20.00 | 0 | 102 | 73 | 127 | 19.20 | 6.26 | 20 | |
| Freon-113 | 21.570 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | 21.40 | 0.791 | 20 | |
| Hexachlorobutadiene | 20.340 | 0.50 | 20.00 | 0 | 102 | 67 | 131 | 19.19 | 5.82 | 20 | |
| Isopropylbenzene | 21.080 | 1.0 | 20.00 | 0 | 105 | 75 | 127 | 19.90 | 5.76 | 20 | |
| m,p-Xylene | 43.520 | 1.0 | 40.00 | 0 | 109 | 76 | 128 | 41.35 | 5.11 | 20 | |
| Methylene chloride | 22.480 | 1.0 | 20.00 | 0 | 112 | 63 | 137 | 22.65 | 0.753 | 20 | |
| MTBE | 21.490 | 1.0 | 20.00 | 0 | 107 | 65 | 123 | 22.10 | 2.80 | 20 | |
| n-Butylbenzene | 22.560 | 1.0 | 20.00 | 0 | 113 | 69 | 137 | 21.08 | 6.78 | 20 | |
| n-Propylbenzene | 22.300 | 1.0 | 20.00 | 0 | 112 | 72 | 129 | 20.69 | 7.49 | 20 | |
| Naphthalene | 20.400 | 1.0 | 20.00 | 0 | 102 | 54 | 138 | 18.70 | 8.70 | 20 | |
| o-Xylene | 20.730 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | 20.38 | 1.70 | 20 | |
| sec-Butylbenzene | 21.750 | 1.0 | 20.00 | 0 | 109 | 72 | 127 | 20.41 | 6.36 | 20 | |
| Styrene | 18.390 | 1.0 | 20.00 | 0 | 92.0 | 65 | 134 | 17.48 | 5.07 | 20 | |
| tert-Butylbenzene | 22.550 | 1.0 | 20.00 | 0 | 113 | 70 | 129 | 20.66 | 8.75 | 20 | |
| Tetrachloroethene | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 66 | 128 | 18.76 | 3.10 | 20 | |
| Toluene | 19.630 | 0.50 | 20.00 | 0 | 98.2 | 77 | 122 | 19.72 | 0.457 | 20 | |
| trans-1,2-Dichloroethene | 19.420 | 1.0 | 20.00 | 0 | 97.1 | 63 | 137 | 19.55 | 0.667 | 20 | |
| trans-1,3-Dichloropropene | 21.570 | 1.0 | 20.00 | 0 | 108 | 59 | 135 | 21.42 | 0.698 | 20 | |
| Trichloroethene | 18.800 | 1.0 | 20.00 | 0 | 94.0 | 70 | 127 | 18.96 | 0.847 | 20 | |
| Trichlorofluoromethane | 19.410 | 1.0 | 20.00 | 0 | 97.0 | 57 | 129 | 19.79 | 1.94 | 20 | |
| Vinyl chloride | 21.060 | 0.50 | 20.00 | 0 | 105 | 50 | 134 | 21.27 | 0.992 | 20 | |
| Xylenes, Total | 64.250 | 2.0 | 60.00 | 0 | 107 | 75 | 125 | 61.73 | 4.00 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 28.250 | | 25.00 | | 113 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 27.020 | | 25.00 | | 108 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 28.080 | | 25.00 | | 112 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 26.380 | | 25.00 | | 106 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060387**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.960 | 0.50 | 20.00 | 0 | 94.8 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.520 | 1.0 | 20.00 | 0 | 108 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.970 | 0.50 | 20.00 | 0 | 105 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.840 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 20.460 | 1.0 | 20.00 | 0 | 102 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.870 | 1.0 | 20.00 | 0 | 104 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.400 | 1.0 | 20.00 | 0 | 107 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 22.440 | 1.0 | 20.00 | 0 | 112 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.070 | 1.0 | 20.00 | 0 | 100 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 22.410 | 1.0 | 20.00 | 0 | 112 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.490 | 2.0 | 20.00 | 0 | 107 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.680 | 1.0 | 20.00 | 0 | 108 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.040 | 1.0 | 20.00 | 0 | 100 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.680 | 0.50 | 20.00 | 0 | 103 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.870 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 21.230 | 1.0 | 20.00 | 0 | 106 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 19.540 | 1.0 | 20.00 | 0 | 97.7 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 22.400 | 1.0 | 20.00 | 0 | 112 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.670 | 0.50 | 20.00 | 0 | 98.4 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 17.970 | 1.0 | 20.00 | 0 | 89.8 | 69 | 137 | | | | |
| 2-Butanone | 249.230 | 10 | 200.0 | 0 | 125 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 73 | 126 | | | | |
| 4-Chlorotoluene | 20.860 | 1.0 | 20.00 | 0 | 104 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.920 | 1.0 | 20.00 | 0 | 99.6 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 276.690 | 10 | 200.0 | 0 | 138 | 58 | 134 | | | | S |
| Acetone | 267.690 | 10 | 200.0 | 10.06 | 129 | 40 | 135 | | | | |
| Acrolein | 218.070 | 20 | 200.0 | 0 | 109 | 75 | 125 | | | | |
| Acrylonitrile | 239.400 | 20 | 200.0 | 0 | 120 | 75 | 125 | | | | |
| Benzene | 20.980 | 0.50 | 20.00 | 0 | 105 | 81 | 122 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060387**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 19.070 | 1.0 | 20.00 | 0 | 95.4 | 76 | 124 | | | | |
| Bromochloromethane | 21.990 | 1.0 | 20.00 | 0 | 110 | 65 | 129 | | | | |
| Bromodichloromethane | 19.560 | 0.50 | 20.00 | 0 | 97.8 | 76 | 121 | | | | |
| Bromoform | 21.360 | 1.0 | 20.00 | 0 | 107 | 69 | 128 | | | | |
| Bromomethane | 22.160 | 1.0 | 20.00 | 0 | 111 | 53 | 141 | | | | |
| Carbon disulfide | 22.230 | 1.0 | 20.00 | 0 | 111 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.680 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | | | | |
| Chlorobenzene | 19.680 | 0.50 | 20.00 | 0 | 98.4 | 81 | 122 | | | | |
| Chloroethane | 22.930 | 1.0 | 20.00 | 0 | 115 | 58 | 133 | | | | |
| Chloroform | 20.670 | 1.0 | 20.00 | 0.3800 | 101 | 69 | 128 | | | | |
| Chloromethane | 22.670 | 1.0 | 20.00 | 0 | 113 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.670 | 1.0 | 20.00 | 0 | 103 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.550 | 0.50 | 20.00 | 0 | 113 | 69 | 131 | | | | |
| Dibromochloromethane | 20.380 | 0.50 | 20.00 | 0 | 102 | 66 | 133 | | | | |
| Dibromomethane | 20.760 | 1.0 | 20.00 | 0 | 104 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.340 | 1.0 | 20.00 | 0 | 86.7 | 53 | 153 | | | | |
| Ethylbenzene | 20.050 | 1.0 | 20.00 | 0 | 100 | 73 | 127 | | | | |
| Freon-113 | 20.690 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.160 | 0.50 | 20.00 | 0 | 101 | 67 | 131 | | | | |
| Isopropylbenzene | 19.770 | 1.0 | 20.00 | 0 | 98.8 | 75 | 127 | | | | |
| m,p-Xylene | 43.000 | 1.0 | 40.00 | 0 | 108 | 76 | 128 | | | | |
| Methylene chloride | 23.890 | 1.0 | 20.00 | 0 | 119 | 63 | 137 | | | | |
| MTBE | 23.340 | 1.0 | 20.00 | 0 | 117 | 65 | 123 | | | | |
| n-Butylbenzene | 21.000 | 1.0 | 20.00 | 0 | 105 | 69 | 137 | | | | |
| n-Propylbenzene | 20.840 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | | | | |
| Naphthalene | 20.080 | 1.0 | 20.00 | 0 | 100 | 54 | 138 | | | | |
| o-Xylene | 20.530 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | | | | |
| sec-Butylbenzene | 20.610 | 1.0 | 20.00 | 0 | 103 | 72 | 127 | | | | |
| Styrene | 15.730 | 1.0 | 20.00 | 0 | 78.7 | 65 | 134 | | | | |
| tert-Butylbenzene | 21.630 | 1.0 | 20.00 | 0 | 108 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060387**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 19.170 | 1.0 | 20.00 | 0 | 95.9 | 66 | 128 | | | | |
| Toluene | 20.190 | 0.50 | 20.00 | 0 | 101 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.530 | 1.0 | 20.00 | 0 | 113 | 59 | 135 | | | | |
| Trichloroethene | 20.320 | 1.0 | 20.00 | 0 | 102 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.870 | 1.0 | 20.00 | 0 | 99.4 | 57 | 129 | | | | |
| Vinyl chloride | 21.750 | 0.50 | 20.00 | 0 | 109 | 50 | 134 | | | | |
| Xylenes, Total | 63.530 | 2.0 | 60.00 | 0 | 106 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.510 | | 25.00 | | 110 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 26.830 | | 25.00 | | 107 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 28.720 | | 25.00 | | 115 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.590 | | 25.00 | | 110 | 81 | 120 | | | | |

Sample ID: **N043470-004DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.410 | 0.50 | 20.00 | 0 | 97.0 | 81 | 129 | 18.96 | 2.35 | 20 | |
| 1,1,1-Trichloroethane | 21.760 | 1.0 | 20.00 | 0 | 109 | 67 | 132 | 21.52 | 1.11 | 20 | |
| 1,1,2,2-Tetrachloroethane | 20.440 | 0.50 | 20.00 | 0 | 102 | 63 | 128 | 20.97 | 2.56 | 20 | |
| 1,1,2-Trichloroethane | 20.710 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | 21.84 | 5.31 | 20 | |
| 1,1-Dichloroethane | 20.920 | 1.0 | 20.00 | 0 | 105 | 69 | 133 | 20.85 | 0.335 | 20 | |
| 1,1-Dichloroethene | 20.950 | 1.0 | 20.00 | 0 | 105 | 68 | 130 | 20.46 | 2.37 | 20 | |
| 1,1-Dichloropropene | 20.630 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | 20.87 | 1.16 | 20 | |
| 1,2,3-Trichlorobenzene | 20.580 | 1.0 | 20.00 | 0 | 103 | 67 | 137 | 21.40 | 3.91 | 20 | |
| 1,2,3-Trichloropropane | 19.790 | 1.0 | 20.00 | 0 | 99.0 | 73 | 124 | 22.44 | 12.6 | 20 | |
| 1,2,4-Trichlorobenzene | 18.000 | 1.0 | 20.00 | 0 | 90.0 | 66 | 134 | 20.07 | 10.9 | 20 | |
| 1,2,4-Trimethylbenzene | 21.150 | 1.0 | 20.00 | 0 | 106 | 74 | 132 | 22.41 | 5.79 | 20 | |
| 1,2-Dibromo-3-chloropropane | 22.600 | 2.0 | 20.00 | 0 | 113 | 50 | 132 | 21.49 | 5.04 | 20 | |
| 1,2-Dibromoethane | 20.100 | 1.0 | 20.00 | 0 | 101 | 80 | 121 | 21.68 | 7.56 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 18.950 | 1.0 | 20.00 | 0 | 94.8 | 71 | 122 | 20.04 | 5.59 | 20 | |
| 1,2-Dichloroethane | 19.010 | 0.50 | 20.00 | 0 | 95.1 | 69 | 132 | 20.68 | 8.42 | 20 | |
| 1,2-Dichloropropane | 19.170 | 1.0 | 20.00 | 0 | 95.9 | 75 | 125 | 20.87 | 8.49 | 20 | |
| 1,3,5-Trimethylbenzene | 20.240 | 1.0 | 20.00 | 0 | 101 | 74 | 131 | 21.23 | 4.77 | 20 | |
| 1,3-Dichlorobenzene | 18.100 | 1.0 | 20.00 | 0 | 90.5 | 75 | 124 | 19.54 | 7.65 | 20 | |
| 1,3-Dichloropropane | 21.100 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | 22.40 | 5.98 | 20 | |
| 1,4-Dichlorobenzene | 18.490 | 0.50 | 20.00 | 0 | 92.5 | 74 | 123 | 19.67 | 6.18 | 20 | |
| 2,2-Dichloropropane | 18.190 | 1.0 | 20.00 | 0 | 91.0 | 69 | 137 | 17.97 | 1.22 | 20 | |
| 2-Butanone | 239.960 | 10 | 200.0 | 0 | 120 | 49 | 136 | 249.2 | 3.79 | 20 | |
| 2-Chlorotoluene | 18.810 | 1.0 | 20.00 | 0 | 94.1 | 73 | 126 | 19.48 | 3.50 | 20 | |
| 4-Chlorotoluene | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 74 | 128 | 20.86 | 7.00 | 20 | |
| 4-Isopropyltoluene | 19.310 | 1.0 | 20.00 | 0 | 96.6 | 73 | 130 | 19.92 | 3.11 | 20 | |
| 4-Methyl-2-pentanone | 246.270 | 10 | 200.0 | 0 | 123 | 58 | 134 | 276.7 | 11.6 | 20 | |
| Acetone | 248.620 | 10 | 200.0 | 10.06 | 119 | 40 | 135 | 267.7 | 7.39 | 20 | |
| Acrolein | 207.650 | 20 | 200.0 | 0 | 104 | 75 | 125 | 218.1 | 4.90 | 20 | |
| Acrylonitrile | 232.720 | 20 | 200.0 | 0 | 116 | 75 | 125 | 239.4 | 2.83 | 20 | |
| Benzene | 19.510 | 0.50 | 20.00 | 0 | 97.6 | 81 | 122 | 20.98 | 7.26 | 20 | |
| Bromobenzene | 18.500 | 1.0 | 20.00 | 0 | 92.5 | 76 | 124 | 19.07 | 3.03 | 20 | |
| Bromochloromethane | 20.830 | 1.0 | 20.00 | 0 | 104 | 65 | 129 | 21.99 | 5.42 | 20 | |
| Bromodichloromethane | 18.150 | 0.50 | 20.00 | 0 | 90.8 | 76 | 121 | 19.56 | 7.48 | 20 | |
| Bromoform | 20.880 | 1.0 | 20.00 | 0 | 104 | 69 | 128 | 21.36 | 2.27 | 20 | |
| Bromomethane | 22.200 | 1.0 | 20.00 | 0 | 111 | 53 | 141 | 22.16 | 0.180 | 20 | |
| Carbon disulfide | 21.820 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | 22.23 | 1.86 | 20 | |
| Carbon tetrachloride | 19.950 | 0.50 | 20.00 | 0 | 99.8 | 66 | 138 | 20.68 | 3.59 | 20 | |
| Chlorobenzene | 19.070 | 0.50 | 20.00 | 0 | 95.4 | 81 | 122 | 19.68 | 3.15 | 20 | |
| Chloroethane | 22.470 | 1.0 | 20.00 | 0 | 112 | 58 | 133 | 22.93 | 2.03 | 20 | |
| Chloroform | 19.890 | 1.0 | 20.00 | 0.3800 | 97.6 | 69 | 128 | 20.67 | 3.85 | 20 | |
| Chloromethane | 22.350 | 1.0 | 20.00 | 0 | 112 | 56 | 131 | 22.67 | 1.42 | 20 | |
| cis-1,2-Dichloroethene | 20.020 | 1.0 | 20.00 | 0 | 100 | 72 | 126 | 20.67 | 3.19 | 20 | |
| cis-1,3-Dichloropropene | 20.290 | 0.50 | 20.00 | 0 | 101 | 69 | 131 | 22.55 | 10.6 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043469
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.690 | 0.50 | 20.00 | 0 | 98.4 | 66 | 133 | 20.38 | 3.44 | 20 | |
| Dibromomethane | 18.850 | 1.0 | 20.00 | 0 | 94.3 | 76 | 125 | 20.76 | 9.64 | 20 | |
| Dichlorodifluoromethane | 16.940 | 1.0 | 20.00 | 0 | 84.7 | 53 | 153 | 17.34 | 2.33 | 20 | |
| Ethylbenzene | 19.230 | 1.0 | 20.00 | 0 | 96.2 | 73 | 127 | 20.05 | 4.18 | 20 | |
| Freon-113 | 20.570 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | 20.69 | 0.582 | 20 | |
| Hexachlorobutadiene | 18.590 | 0.50 | 20.00 | 0 | 93.0 | 67 | 131 | 20.16 | 8.10 | 20 | |
| Isopropylbenzene | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 75 | 127 | 19.77 | 2.51 | 20 | |
| m,p-Xylene | 41.390 | 1.0 | 40.00 | 0 | 103 | 76 | 128 | 43.00 | 3.82 | 20 | |
| Methylene chloride | 23.180 | 1.0 | 20.00 | 0 | 116 | 63 | 137 | 23.89 | 3.02 | 20 | |
| MTBE | 22.540 | 1.0 | 20.00 | 0 | 113 | 65 | 123 | 23.34 | 3.49 | 20 | |
| n-Butylbenzene | 20.290 | 1.0 | 20.00 | 0 | 101 | 69 | 137 | 21.00 | 3.44 | 20 | |
| n-Propylbenzene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 72 | 129 | 20.84 | 4.66 | 20 | |
| Naphthalene | 19.070 | 1.0 | 20.00 | 0 | 95.4 | 54 | 138 | 20.08 | 5.16 | 20 | |
| o-Xylene | 20.030 | 1.0 | 20.00 | 0 | 100 | 80 | 121 | 20.53 | 2.47 | 20 | |
| sec-Butylbenzene | 19.690 | 1.0 | 20.00 | 0 | 98.4 | 72 | 127 | 20.61 | 4.57 | 20 | |
| Styrene | 14.490 | 1.0 | 20.00 | 0 | 72.4 | 65 | 134 | 15.73 | 8.21 | 20 | |
| tert-Butylbenzene | 20.210 | 1.0 | 20.00 | 0 | 101 | 70 | 129 | 21.63 | 6.79 | 20 | |
| Tetrachloroethene | 18.000 | 1.0 | 20.00 | 0 | 90.0 | 66 | 128 | 19.17 | 6.30 | 20 | |
| Toluene | 19.230 | 0.50 | 20.00 | 0 | 96.2 | 77 | 122 | 20.19 | 4.87 | 20 | |
| trans-1,2-Dichloroethene | 19.470 | 1.0 | 20.00 | 0 | 97.4 | 63 | 137 | 19.35 | 0.618 | 20 | |
| trans-1,3-Dichloropropene | 21.000 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | 22.53 | 7.03 | 20 | |
| Trichloroethene | 18.640 | 1.0 | 20.00 | 0 | 93.2 | 70 | 127 | 20.32 | 8.62 | 20 | |
| Trichlorofluoromethane | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 57 | 129 | 19.87 | 2.76 | 20 | |
| Vinyl chloride | 21.000 | 0.50 | 20.00 | 0 | 105 | 50 | 134 | 21.75 | 3.51 | 20 | |
| Xylenes, Total | 61.420 | 2.0 | 60.00 | 0 | 102 | 75 | 125 | 63.53 | 3.38 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 27.000 | | 25.00 | | 108 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 26.590 | | 25.00 | | 106 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 27.670 | | 25.00 | | 111 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 26.050 | | 25.00 | | 104 | 81 | 120 | | 0 | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

N043469

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD

Page 1 of 2


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Reggie Tep | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | Sampled By: Nara Tay | P.O.# SWA-ASSET-C9817-057 | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12/16/20 | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | Global ID: | | Regulatory | 5. IR number 2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | Signature: Date: 12/16/20 | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | | | | | Sample Temp: 3.2°C/0.8°C / 2.6°C/3.6°C |
| Project Number: 30035275 | | | | | Courier: KRCSET Tracking No.: |

Matrix: Ground x Sediment; Potable; Soil; NPDES; Other Solid; Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CFIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH [illegible] poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM2540) 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOAs | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, N 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 Cu, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | VOCs (8260) 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043469-01 | MW-48-Q420 | 12/16/2020 | 15:15 | | X | | | X | X | | X | X | | | | | X | | | | | X | | | | | E | 3 | P | BN | |
| 2 | -02 | MW-68-180-Q420 | 12/16/2020 | 10:18 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | MSMSD |
| 3 | -03 | MW-939-Q420 | 12/16/2020 | 10:28 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 4 | -04 | MW-68-240-Q420 | 12/16/2020 | 12:34 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | MSMSD |
| 5 | -05 | MW-940-Q420 | 12/16/2020 | 12:44 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 6 | -06 | MW-68BR-280-Q420 | 12/16/2020 | 8:50 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | MSMSD |
| 7 | -07 | MW-941-Q420 | 12/16/2020 | 9:00 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 8 | -08 | EB-725-Q420 | 12/16/2020 | 12:51 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 9 | -09 | EB-726-Q420 | 12/16/2020 | 15:30 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 10 | -10 | MW-66BR-270-Q420 | 12/16/2020 | 14:30 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | X | E | 13 | PV | HBNS | MSMSD |
| 11 | -11 | MW-938-Q420 | 12/16/2020 | 14:40 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | X | E | 7 | PV | HBNS | |
| 12 | -12 | MW-42-030-Q420 | 12/16/2020 | 9:55 | | X | X | | | | | X | | X | | | | | | X | | | | | | | | E | 5 | PV | BNS | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Reggie Tep | 12/16/20 1605 | ROMEO KUCAMARA | 12/16/20 1605 |
| ROMEO KUCAMARA | 12/16/20 1904 | ROMEO KUCAMARA | 12/16/20 1904 |
| | | | |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**

Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Terms**

1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=60% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 5% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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# CHAIN OF CUSTODY RECORD



| | | |

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/16/2020 | Workorder: | N043469 |
| Rep sample Temp (Deg C): | 3.2/0.8/2.6/3.6 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | NA ☐ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/17/2020

Reviewed By: MBC 12/18/2020

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-001A | MW-48-Q420 | 12/16/2020 3:15:00 PM | 12/29/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-001B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043469-001C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043469-002A | MW-68-180-Q420 | 12/16/2020 10:18:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043469-002B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-002B | MW-68-180-Q420 | 12/16/2020 10:18:00 AM | 12/29/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | WW |
| N043469-002C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043469-002D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☐ | WW |
| N043469-003A | MW-939-Q420 | 12/16/2020 10:28:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-003B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043469-003C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-003D | MW-939-Q420 | 12/16/2020 10:28:00 AM | 12/29/2020 | Groundwater | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043469-004A | MW-68-240-Q420 | 12/16/2020 12:34:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043469-004B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | WW |
| N043469-004C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043469-004D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☐ | WW |
| N043469-005A | MW-940-Q420 | 12/16/2020 12:44:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-005B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-005B | MW-940-Q420 | 12/16/2020 12:44:00 PM | 12/29/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043469-005C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043469-005D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043469-006A | MW-68BR-280-Q420 | 12/16/2020 8:50:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043469-006B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | WW |
| N043469-006C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-006C | MW-68BR-280-Q420 | 12/16/2020 8:50:00 AM | 12/29/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043469-006D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☑ | SUB |
| N043469-007A | MW-941-Q420 | 12/16/2020 9:00:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-007B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043469-007C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043469-007D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043469-008A | EB-725-Q420 | 12/16/2020 12:51:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-009A | EB-726-Q420 | 12/16/2020 3:30:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-010A | MW-66BR-270-Q420 | 12/16/2020 2:30:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-010B | MW-66BR-270-Q420 | 12/16/2020 2:30:00 PM | 12/29/2020 | Groundwater | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | WW |
| N043469-010C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043469-010D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☐ | WW |
| N043469-010E | | | 12/29/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043469-011A | MW-938-Q420 | 12/16/2020 2:40:00 PM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-011B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-011B | MW-938-Q420 | 12/16/2020 2:40:00 PM | 12/29/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043469-011C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043469-011D | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043469-011E | | | 12/29/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N043469-012A | MW-42-030-Q420 | 12/16/2020 9:55:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-012B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| N043469-012C | | | 12/29/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043469-012D | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043469-012E | | | 12/29/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043469-013A | MW-42-055-Q420 | 12/16/2020 9:27:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-013B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-013B | MW-42-055-Q420 | 12/16/2020 9:27:00 AM | 12/29/2020 | Groundwater | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043469-013C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043469-013D | | | 12/29/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043469-014A | MW-42-055-EB-Q420 | 12/16/2020 9:00:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-015A | MW-42-065-Q420 | 12/16/2020 8:51:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-015B | | | 12/29/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043469-015C | | | 12/29/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*04-Jan-21*

**WorkOrder:** N043469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043469-015C | MW-42-065-Q420 | 12/16/2020 8:51:00 AM | 12/29/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/29/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043469-015D | | | 12/29/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043469-016A | MW-42-065-EB-Q420 | 12/16/2020 8:20:00 AM | 12/29/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043469-017A | FOLDER | 12/31/2020 | 12/29/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/29/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/29/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/31/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: Nara Tep

**17-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043469-012E / MW-42-030-Q420 | Groundwater | 12/16/2020 9:55:00 AM | 8OZP | 1 | | |
| N043469-013D / MW-42-055-Q420 | Groundwater | 12/16/2020 9:27:00 AM | 8OZP | 1 | | |
| N043469-015D / MW-42-065-Q420 | Groundwater | 12/16/2020 8:51:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43469A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium by CFIRM. EDD requirement Labspec7 edata.

Fedex #: 772409226366

| | | **Date/Time** | | | **Date/Time** |
|---|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/17/2020 1630 | **Received by:** | | |
| **Relinquished by:** | | | **Received by:** | | |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Nara Tep

**04-Jan-21**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **SM4500-NO3F** | | |
| N043469-006D / MW-68BR-280-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 8OZP | 1 | | |

Plese run MS/MSD

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43469B Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please anayze for Nitrate/Nitrite by SM4500. EDD requirement Labspec 7 edata.

GSO #: 551770377

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | YRJ | 1/4/2021 1630 | **Received by:** | | |
| **Relinquished by:** | | | **Received by:** | | |

January 08, 2021

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043470

RE: PG&E Topock - GMP Exotic, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 16, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab Order:** N043470

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 365.3_Ortho Phosphate:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria in QC samples N043470-001E-MS, N043470-001E-MSD, N043470-003E-MS and N043470-003E-MSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 365.3_Total:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria in QC samples N043470-001BMS, N043470-00BMSD, N043470-003BMS and N043470-003BMSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Silica in QC samples N043470-003AMS1 and N043470-003AMSD1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike Duplicate (MSD) is outside recovery criteria for Potassium in QC sample N043470-003AMSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8260B:

Surrogate Dibromofluoromethane recovery bias high for some samples possibly due to matrix interference. The other surrogates were recovered within control limits. Initial run also failed surrogate criteria. Reported result from the reanalysis.

Some surrogate recoveries biased high for samples N043470-003 and 007, however, samples results were non- detect (ND) therefore, reanalysis of the samples was not necessary.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043470-002DMSD, N043469-010EMSD, N043470-006DMSDand N043470-004DMS possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8270C:

Some surrogate recovery biased high in sample N043470-002 possibly due to matrix interferences. Sample results were non-detect (ND) for analytes of interest therefore reanalysis of the sample was not necessary.

Surrogate recovery of Fluorobiphenyl in Method Blank was below the laboratory acceptable limit. However, the other surrogates were within acceptable limit.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were not performed due to limited sample. LCS/LCSD was used instead to measure precision.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab Order:** N043470
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043470-001A | MW-68-180-EC-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-001B | MW-68-180-EC-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-001C | MW-68-180-EC-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-001D | MW-68-180-EC-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-001E | MW-68-180-EC-Q420 | Groundwater | 12/16/2020 10:18:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-002A | MW-939-EC-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-002B | MW-939-EC-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-002C | MW-939-EC-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-002D | MW-939-EC-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-002E | MW-939-EC-Q420 | Groundwater | 12/16/2020 10:28:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-003A | MW-68-240-EC-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-003B | MW-68-240-EC-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-003C | MW-68-240-EC-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-003D | MW-68-240-EC-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-003E | MW-68-240-EC-Q420 | Groundwater | 12/16/2020 12:34:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-004A | MW-940-EC-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-004B | MW-940-EC-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-004C | MW-940-EC-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-004D | MW-940-EC-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-004E | MW-940-EC-Q420 | Groundwater | 12/16/2020 12:44:00 PM | 12/16/2020 | 1/8/2021 |
| N043470-005A | MW-68BR-280-EC-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-005B | MW-68BR-280-EC-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-005C | MW-68BR-280-EC-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-005D | MW-68BR-280-EC-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-005E | MW-68BR-280-EC-Q420 | Groundwater | 12/16/2020 8:50:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-006A | MW-941-EC-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-006B | MW-941-EC-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-006C | MW-941-EC-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-006D | MW-941-EC-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab Order:** N043470
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043470-006E | MW-941-EC-Q420 | Groundwater | 12/16/2020 9:00:00 AM | 12/16/2020 | 1/8/2021 |
| N043470-007A | TB-2 | Groundwater | 12/16/2020 8:00:00 AM | 12/16/2020 | 1/8/2021 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-180-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 10:18:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ORTHO PHOSPHATE** | | | | | | | |
| **EPA 365.3** | | | | | | | |
| RunID: **NV00922-WC_201217L** QC Batch: **R149852** PrepDate: Analyst: **CEI** | | | | | | | |
| Phosphorus, Total Orthophosphate (As P) | 0.026 | 0.0046 | 0.020 | | mg/L | 1 | 12/17/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ORTHO PHOSPHATE** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201217L** | QC Batch: **R149852** | | | PrepDate: | | | Analyst: **CEI** |
| Phosphorus, Total Orthophosphate (As P) | 0.024 | 0.0046 | 0.020 | | mg/L | 1 | 12/17/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-240-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 12:34:00 PM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ORTHO PHOSPHATE** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201217L** | QC Batch: **R149852** | | | PrepDate: | | | Analyst: **CEI** |
| Phosphorus, Total Orthophosphate (As P) | ND | 0.0046 | 0.020 | | mg/L | 1 | 12/17/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 12:44:00 PM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ORTHO PHOSPHATE** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201217L** | QC Batch: **R149852** | | | PrepDate: | | | Analyst: **CEI** |
| Phosphorus, Total Orthophosphate (As P) | ND | 0.0046 | 0.020 | | mg/L | 1 | 12/17/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ORTHO PHOSPHATE** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201217L** | QC Batch: **R149852** | | | PrepDate: | | | Analyst: **CEI** |
| Phosphorus, Total Orthophosphate (As P) | ND | 0.0046 | 0.020 | | mg/L | 1 | 12/17/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ORTHO PHOSPHATE** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201217L** | QC Batch: **R149852** | | | PrepDate: | | | Analyst: **CEI** |
| Phosphorus, Total Orthophosphate (As P) | ND | 0.0046 | 0.020 | | mg/L | 1 | 12/17/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 365.3_W_OPO4_PGE**

| Sample ID: **LCS-R149852** | SampType: **LCS** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067203** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | 0.405 | 0.020 | 0.4000 | 0 | 101 | 80 | 120 | | | | |

| Sample ID: **MB-R149852** | SampType: **MBLK** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067204** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | ND | 0.020 | | | | | | | | | |

| Sample ID: **N043470-001E-MS** | SampType: **MS** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067207** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | 0.156 | 0.020 | 0.4000 | 0.02600 | 32.5 | 80 | 120 | | | | S |

| Sample ID: **N043470-001E-MSD** | SampType: **MSD** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067209** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | 0.153 | 0.020 | 0.4000 | 0.02600 | 31.8 | 80 | 120 | 0.1560 | 1.94 | 20 | S |

| Sample ID: **N043470-003E-MS** | SampType: **MS** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067213** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | 0.154 | 0.020 | 0.4000 | 0.009000 | 36.3 | 80 | 120 | | | | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 365.3_W_OPO4_PGE**

| Sample ID: **N043470-003E-MSD** | SampType: **MSD** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067215** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | 0.137 | 0.020 | 0.4000 | 0.009000 | 32.0 | 80 | 120 | 0.1540 | 11.7 | 20 | S |

| Sample ID: **N043470-005E-DUP** | SampType: **DUP** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067218** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | ND | 0.020 | | | | | | 0 | 0 | 20 | |

| Sample ID: **N043470-005EMS** | SampType: **MS** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067219** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | 0.410 | 0.020 | 0.4000 | 0 | 103 | 80 | 120 | | | | |

| Sample ID: **N043470-005EMSD** | SampType: **MSD** | TestCode: **365.3_W_OP** | Units: **mg/L** | Prep Date: | RunNo: **149852** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149852** | TestNo: **EPA 365.3** | | Analysis Date: **12/17/2020** | SeqNo: **4067220** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total Orthophosphate (As | 0.418 | 0.020 | 0.4000 | 0 | 104 | 80 | 120 | 0.4100 | 1.93 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-001

**Client Sample ID:** MW-68-180-EC-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL PHOSPHORUS** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201218C** | QC Batch: **83554** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Phosphorus, Total (As P) | 0.025 | 0.0062 | 0.020 | | mg/L | 1 | 12/18/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL PHOSPHORUS** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201218C** | QC Batch: **83554** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Phosphorus, Total (As P) | 0.024 | 0.0062 | 0.020 | | mg/L | 1 | 12/18/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-003

**Client Sample ID:** MW-68-240-EC-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL PHOSPHORUS** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201218C** | QC Batch: **83554** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Phosphorus, Total (As P) | ND | 0.0062 | 0.020 | | mg/L | 1 | 12/18/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 12:44:00 PM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL PHOSPHORUS** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201218C** | QC Batch: **83554** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Phosphorus, Total (As P) | ND | 0.0062 | 0.020 | | mg/L | 1 | 12/18/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL PHOSPHORUS** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201218C** | QC Batch: **83554** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Phosphorus, Total (As P) | ND | 0.0062 | 0.020 | | mg/L | 1 | 12/18/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL PHOSPHORUS** | | | | | | | |
| | | | **EPA 365.3** | | | | |
| RunID: **NV00922-WC_201218C** | QC Batch: **83554** | | | PrepDate: | **12/17/2020** | | Analyst: **CEI** |
| Phosphorus, Total (As P) | ND | 0.0062 | 0.020 | | mg/L | 1 | 12/18/2020 |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 365.3_W_T**

| Sample ID: **LCS-83554** | SampType: **LCS** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067235** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | 0.396 | 0.020 | 0.4000 | 0 | 99.0 | 80 | 120 | | | | |

| Sample ID: **MB-83554** | SampType: **MBLK** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067242** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | ND | 0.020 | | | | | | | | | |

| Sample ID: **N043470-001BMS** | SampType: **MS** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067245** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | 0.191 | 0.020 | 0.4000 | 0.02500 | 41.5 | 80 | 120 | | | | S |

| Sample ID: **N043470-001BMSD** | SampType: **MSD** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067246** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | 0.196 | 0.020 | 0.4000 | 0.02500 | 42.8 | 80 | 120 | 0.1910 | 2.58 | 20 | S |

| Sample ID: **N043470-003BMS** | SampType: **MS** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067249** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | 0.209 | 0.020 | 0.4000 | 0 | 52.2 | 80 | 120 | | | | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 365.3_W_T**

| Sample ID: **N043470-003BMSD** | SampType: **MSD** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067250** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | 0.211 | 0.020 | 0.4000 | 0 | 52.8 | 80 | 120 | 0.2090 | 0.952 | 20 | S |

| Sample ID: **N043470-005B-DUP** | SampType: **DUP** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067253** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | ND | 0.020 | | | | | | 0 | 0 | 20 | |

| Sample ID: **N043470-005BMS** | SampType: **MS** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067254** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | 0.390 | 0.020 | 0.4000 | 0 | 97.5 | 80 | 120 | | | | |

| Sample ID: **N043470-005BMSD** | SampType: **MSD** | TestCode: **365.3_W_T** | Units: **mg/L** | Prep Date: **12/17/2020** | RunNo: **149853** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83554** | TestNo: **EPA 365.3** | | Analysis Date: **12/18/2020** | SeqNo: **4067255** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Phosphorus, Total (As P) | 0.393 | 0.020 | 0.4000 | 0 | 98.2 | 80 | 120 | 0.3900 | 0.766 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-001

**Client Sample ID:** MW-68-180-EC-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210106A** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Silica (SiO2) | 23 | 0.32 | 1.0 | | mg/L | 10 | 1/6/2021 07:00 AM |
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210105C** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Potassium | 17000 | 850 | 5000 | | ug/L | 10 | 1/5/2021 01:10 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-002

**Client Sample ID:** MW-939-EC-Q420
**Collection Date:** 12/16/2020 10:28:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210106A** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Silica (SiO2) | 23 | 0.32 | 1.0 | | mg/L | 10 | 1/6/2021 07:23 AM |
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210105C** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Potassium | 18000 | 850 | 5000 | | ug/L | 10 | 1/5/2021 01:14 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-003

**Client Sample ID:** MW-68-240-EC-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_210106A** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Silica (SiO2) | 24 | 0.32 | 1.0 | | mg/L | 10 | 1/6/2021 07:28 AM |
| **DISSOLVED METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_210105C** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Potassium | 46000 | 850 | 5000 | | ug/L | 10 | 1/5/2021 01:19 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-004

**Client Sample ID:** MW-940-EC-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210106A** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Silica (SiO2) | 24 | 0.32 | 1.0 | | mg/L | 10 | 1/6/2021 07:59 AM |
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210105C** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Potassium | 43000 | 850 | 5000 | | ug/L | 10 | 1/5/2021 01:24 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_210106A** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Silica (SiO2) | 1.5 | 0.032 | 0.10 | | mg/L | 1 | 1/6/2021 08:43 AM |
| **DISSOLVED METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_210105C** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Potassium | 51000 | 850 | 5000 | | ug/L | 10 | 1/5/2021 01:29 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-006

**Client Sample ID:** MW-941-EC-Q420
**Collection Date:** 12/16/2020 9:00:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_210106A** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Silica (SiO2) | 1.5 | 0.032 | 0.10 | | mg/L | 1 | 1/6/2021 08:38 AM |
| **DISSOLVED METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_210105C** | QC Batch: **83606** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Potassium | 53000 | 850 | 5000 | | ug/L | 10 | 1/5/2021 01:34 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WD_SiO2**

| Sample ID: **MB-83606** | SampType: **MBLK** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: **12/23/2020** | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067044** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | ND | 0.10 | | | | | | | | | |

| Sample ID: **N043470-001AMS1** | SampType: **MS** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: **12/23/2020** | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067049** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 29.660 | 1.0 | 5.350 | 23.04 | 124 | 75 | 125 | | | | |

| Sample ID: **N043470-001AMSD1** | SampType: **MSD** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: **12/23/2020** | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067050** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 28.843 | 1.0 | 5.350 | 23.04 | 109 | 75 | 125 | 29.66 | 2.79 | 20 | |

| Sample ID: **N043470-003AMS1** | SampType: **MS** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: **12/23/2020** | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067057** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 31.079 | 1.0 | 5.350 | 23.97 | 133 | 75 | 125 | | | | S |

| Sample ID: **N043470-003AMSD1** | SampType: **MSD** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: **12/23/2020** | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067058** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 30.753 | 1.0 | 5.350 | 23.97 | 127 | 75 | 125 | 31.08 | 1.06 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WD_SiO2**

| Sample ID: **N043470-005AMS1** | SampType: **MS** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: **12/23/2020** | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067072** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 7.700 | 0.10 | 5.350 | 1.518 | 116 | 75 | 125 | | | | |

| Sample ID: **N043470-005AMSD1** | SampType: **MSD** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: **12/23/2020** | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067073** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 7.739 | 0.10 | 5.350 | 1.518 | 116 | 75 | 125 | 7.700 | 0.500 | 20 | |

| Sample ID: **LCS1-83606** | SampType: **LCS** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: **12/23/2020** | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067472** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 10.573 | 0.10 | 10.70 | 0 | 98.8 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **MB-83606** | SampType: **MBLK** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066399** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | ND | 500 | | | | | | | | | |

| Sample ID: **LCS2-83606** | SampType: **LCS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066400** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 19104.405 | 500 | 20000 | 0 | 95.5 | 85 | 115 | | | | |

| Sample ID: **N043470-001AMS2** | SampType: **MS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066411** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 37832.514 | 5000 | 20000 | 16890 | 105 | 75 | 125 | | | | |

| Sample ID: **N043470-001AMSD2** | SampType: **MSD** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066412** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 39175.972 | 5000 | 20000 | 16890 | 111 | 75 | 125 | 37830 | 3.49 | 20 | |

| Sample ID: **N043470-003AMS2** | SampType: **MS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066415** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 66352.803 | 5000 | 20000 | 45800 | 103 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043470-003AMSD2** | SampType: **MSD** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066416** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 76142.074 | 5000 | 20000 | 45800 | 152 | 75 | 125 | 66350 | 13.7 | 20 | S |

| Sample ID: **N043470-005AMS2** | SampType: **MS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066421** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 74691.729 | 5000 | 20000 | 51020 | 118 | 75 | 125 | | | | |

| Sample ID: **N043470-005AMSD2** | SampType: **MSD** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066422** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 74450.654 | 5000 | 20000 | 51020 | 117 | 75 | 125 | 74690 | 0.323 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WD_SiO2**

| Sample ID: **N043470-001A-PS** | SampType: **PS** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067048** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 29.816 | 1.0 | 5.350 | 23.04 | 127 | 80 | 120 | | | | S |

| Sample ID: **N043470-003A-PS** | SampType: **PS** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067056** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 30.858 | 1.0 | 5.350 | 23.97 | 129 | 80 | 120 | | | | S |

| Sample ID: **N043470-005A-PS** | SampType: **PS** | TestCode: **6010_WD_Si** | Units: **mg/L** | Prep Date: | RunNo: **149850** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/6/2021** | SeqNo: **4067071** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Silica (SiO2) | 7.504 | 0.10 | 5.350 | 1.518 | 112 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043470-001A-PS** | SampType: **PS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066410** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 41322.291 | 5000 | 20000 | 16890 | 122 | 80 | 120 | | | | S |

| Sample ID: **N043470-003A-PS** | SampType: **PS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066414** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 67907.267 | 5000 | 20000 | 45800 | 111 | 80 | 120 | | | | |

| Sample ID: **N043470-005A-PS** | SampType: **PS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: | RunNo: **149830** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83606** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066418** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 74554.758 | 5000 | 20000 | 51020 | 118 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68-180-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 10:18:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS** | | | | | | | |
| **EPA 8260B** | | | | | | | |
| RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG** | | | | | | | |
| Acrylamide | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 11:41 PM |
| n-Hexane | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 11:41 PM |
| Propylene | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 11:41 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS** | | | | | | | |
| **EPA 8260B** | | | | | | | |
| RunID: **NV00922-MS5_201221A** QC Batch: **P20VW133** PrepDate: Analyst: **HG** | | | | | | | |
| Acrylamide | ND | 2.5 | 2.5 | | µg/L | 1 | 12/21/2020 09:57 PM |
| n-Hexane | ND | 2.5 | 2.5 | | µg/L | 1 | 12/21/2020 09:57 PM |
| Propylene | ND | 2.5 | 2.5 | | µg/L | 1 | 12/21/2020 09:57 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-003

**Client Sample ID:** MW-68-240-EC-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS** | | | | | | | |
| | | | **EPA 8260B** | | | | |
| RunID: **NV00922-MS5_201228A** | QC Batch: **P20VW137** | | | PrepDate: | | | Analyst: **HG** |
| Acrylamide | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 10:55 PM |
| n-Hexane | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 10:55 PM |
| Propylene | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 10:55 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-004

**Client Sample ID:** MW-940-EC-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS** | | | | | | | |
| **EPA 8260B** | | | | | | | |
| RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG** | | | | | | | |
| Acrylamide | ND | 2.5 | 2.5 | | µg/L | 1 | 12/29/2020 12:03 AM |
| n-Hexane | ND | 2.5 | 2.5 | | µg/L | 1 | 12/29/2020 12:03 AM |
| Propylene | ND | 2.5 | 2.5 | | µg/L | 1 | 12/29/2020 12:03 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-68BR-280-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 8:50:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS** | | | | | | | |
| **EPA 8260B** | | | | | | | |
| RunID: **NV00922-MS5_201221A** QC Batch: **P20VW133** PrepDate: Analyst: **HG** | | | | | | | |
| Acrylamide | ND | 2.5 | 2.5 | | µg/L | 1 | 12/21/2020 08:49 PM |
| n-Hexane | ND | 2.5 | 2.5 | | µg/L | 1 | 12/21/2020 08:49 PM |
| Propylene | ND | 2.5 | 2.5 | | µg/L | 1 | 12/21/2020 08:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-941-EC-Q420 |
| **Lab Order:** | N043470 | **Collection Date:** | 12/16/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP Exotic, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043470-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS** | | | | | | | |
| **EPA 8260B** | | | | | | | |
| RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG** | | | | | | | |
| Acrylamide | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 11:18 PM |
| n-Hexane | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 11:18 PM |
| Propylene | ND | 2.5 | 2.5 | | µg/L | 1 | 12/28/2020 11:18 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-001

**Client Sample ID:** MW-68-180-EC-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Acetone | 14 | 4.6 | 10 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-001

**Client Sample ID:** MW-68-180-EC-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/28/2020 11:41 PM |
| Surr: 1,2-Dichloroethane-d4 | 117 | 0 | 72-119 | | %REC | 1 | 12/28/2020 11:41 PM |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 76-119 | | %REC | 1 | 12/28/2020 11:41 PM |
| Surr: Dibromofluoromethane | 124 | 0 | 85-115 | S | %REC | 1 | 12/28/2020 11:41 PM |
| Surr: Toluene-d8 | 107 | 0 | 81-120 | | %REC | 1 | 12/28/2020 11:41 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-002

**Client Sample ID:** MW-939-EC-Q420
**Collection Date:** 12/16/2020 10:28:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201221A** QC Batch: **P20VW133** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-002

**Client Sample ID:** MW-939-EC-Q420
**Collection Date:** 12/16/2020 10:28:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201221A** QC Batch: **P20VW133** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/21/2020 09:57 PM |
| Surr: 1,2-Dichloroethane-d4 | 111 | 0 | 72-119 | | %REC | 1 | 12/21/2020 09:57 PM |
| Surr: 4-Bromofluorobenzene | 101 | 0 | 76-119 | | %REC | 1 | 12/21/2020 09:57 PM |
| Surr: Dibromofluoromethane | 109 | 0 | 85-115 | | %REC | 1 | 12/21/2020 09:57 PM |
| Surr: Toluene-d8 | 105 | 0 | 81-120 | | %REC | 1 | 12/21/2020 09:57 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-003

**Client Sample ID:** MW-68-240-EC-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-003

**Client Sample ID:** MW-68-240-EC-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/28/2020 10:55 PM |
| Surr: 1,2-Dichloroethane-d4 | 116 | 0 | 72-119 | | %REC | 1 | 12/28/2020 10:55 PM |
| Surr: 4-Bromofluorobenzene | 95.8 | 0 | 76-119 | | %REC | 1 | 12/28/2020 10:55 PM |
| Surr: Dibromofluoromethane | 116 | 0 | 85-115 | S | %REC | 1 | 12/28/2020 10:55 PM |
| Surr: Toluene-d8 | 105 | 0 | 81-120 | | %REC | 1 | 12/28/2020 10:55 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-004

**Client Sample ID:** MW-940-EC-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Acetone | 10 | 4.6 | 10 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-004

**Client Sample ID:** MW-940-EC-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/29/2020 12:03 AM |
| Surr: 1,2-Dichloroethane-d4 | 118 | 0 | 72-119 | | %REC | 1 | 12/29/2020 12:03 AM |
| Surr: 4-Bromofluorobenzene | 97.7 | 0 | 76-119 | | %REC | 1 | 12/29/2020 12:03 AM |
| Surr: Dibromofluoromethane | 116 | 0 | 85-115 | S | %REC | 1 | 12/29/2020 12:03 AM |
| Surr: Toluene-d8 | 108 | 0 | 81-120 | | %REC | 1 | 12/29/2020 12:03 AM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-005

**Client Sample ID:** MW-68BR-280-EC-Q420
**Collection Date:** 12/16/2020 8:50:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201221A** QC Batch: **P20VW133** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-005

**Client Sample ID:** MW-68BR-280-EC-Q420
**Collection Date:** 12/16/2020 8:50:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201221A** QC Batch: **P20VW133** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/21/2020 08:49 PM |
| Surr: 1,2-Dichloroethane-d4 | 104 | 0 | 72-119 | | %REC | 1 | 12/21/2020 08:49 PM |
| Surr: 4-Bromofluorobenzene | 88.6 | 0 | 76-119 | | %REC | 1 | 12/21/2020 08:49 PM |
| Surr: Dibromofluoromethane | 105 | 0 | 85-115 | | %REC | 1 | 12/21/2020 08:49 PM |
| Surr: Toluene-d8 | 95.7 | 0 | 81-120 | | %REC | 1 | 12/21/2020 08:49 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-006

**Client Sample ID:** MW-941-EC-Q420
**Collection Date:** 12/16/2020 9:00:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Acetone | 13 | 4.6 | 10 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-006

**Client Sample ID:** MW-941-EC-Q420
**Collection Date:** 12/16/2020 9:00:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201228A** QC Batch: **P20VW137** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/28/2020 11:18 PM |
| Surr: 1,2-Dichloroethane-d4 | 113 | 0 | 72-119 | | %REC | 1 | 12/28/2020 11:18 PM |
| Surr: 4-Bromofluorobenzene | 95.7 | 0 | 76-119 | | %REC | 1 | 12/28/2020 11:18 PM |
| Surr: Dibromofluoromethane | 119 | 0 | 85-115 | S | %REC | 1 | 12/28/2020 11:18 PM |
| Surr: Toluene-d8 | 106 | 0 | 81-120 | | %REC | 1 | 12/28/2020 11:18 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-007

**Client Sample ID:** TB-2
**Collection Date:** 12/16/2020 8:00:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201221A** QC Batch: **P20VW133** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-007

**Client Sample ID:** TB-2
**Collection Date:** 12/16/2020 8:00:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201221A** QC Batch: **P20VW133** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/21/2020 06:56 PM |
| Surr: 1,2-Dichloroethane-d4 | 124 | 0 | 72-119 | S | %REC | 1 | 12/21/2020 06:56 PM |
| Surr: 4-Bromofluorobenzene | 105 | 0 | 76-119 | | %REC | 1 | 12/21/2020 06:56 PM |
| Surr: Dibromofluoromethane | 117 | 0 | 85-115 | S | %REC | 1 | 12/21/2020 06:56 PM |
| Surr: Toluene-d8 | 113 | 0 | 81-120 | | %REC | 1 | 12/21/2020 06:56 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201221LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **LCSW** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/21/2020** SeqNo: **4055753**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.070 | 0.50 | 20.00 | 0 | 90.4 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 18.150 | 1.0 | 20.00 | 0 | 90.8 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.480 | 0.50 | 20.00 | 0 | 102 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 18.280 | 1.0 | 20.00 | 0 | 91.4 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 18.010 | 1.0 | 20.00 | 0 | 90.1 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 18.120 | 1.0 | 20.00 | 0 | 90.6 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 18.270 | 1.0 | 20.00 | 0 | 91.4 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 19.360 | 1.0 | 20.00 | 0 | 96.8 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 19.340 | 1.0 | 20.00 | 0 | 96.7 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 19.070 | 1.0 | 20.00 | 0 | 95.4 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 18.950 | 1.0 | 20.00 | 0 | 94.8 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 20.750 | 2.0 | 20.00 | 0 | 104 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 18.610 | 1.0 | 20.00 | 0 | 93.0 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 18.590 | 1.0 | 20.00 | 0 | 93.0 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 17.970 | 0.50 | 20.00 | 0 | 89.8 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 17.320 | 1.0 | 20.00 | 0 | 86.6 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 18.730 | 1.0 | 20.00 | 0 | 93.6 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 17.860 | 1.0 | 20.00 | 0 | 89.3 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 18.210 | 1.0 | 20.00 | 0 | 91.1 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 17.620 | 0.50 | 20.00 | 0 | 88.1 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.420 | 1.0 | 20.00 | 0 | 92.1 | 69 | 137 | | | | |
| 2-Butanone | 214.750 | 10 | 200.0 | 0 | 107 | 49 | 136 | | | | |
| 2-Chlorotoluene | 17.860 | 1.0 | 20.00 | 0 | 89.3 | 73 | 126 | | | | |
| 4-Chlorotoluene | 18.660 | 1.0 | 20.00 | 0 | 93.3 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 18.400 | 1.0 | 20.00 | 0 | 92.0 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 205.670 | 10 | 200.0 | 0 | 103 | 58 | 134 | | | | |
| Acetone | 192.560 | 10 | 200.0 | 0 | 96.3 | 40 | 135 | | | | |
| Acrolein | 189.690 | 20 | 200.0 | 0 | 94.8 | 75 | 125 | | | | |
| Acrylonitrile | 201.230 | 20 | 200.0 | 0 | 101 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201221LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **LCSW** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/21/2020** SeqNo: **4055753**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 17.610 | 0.50 | 20.00 | 0 | 88.0 | 81 | 122 | | | | |
| Bromobenzene | 17.650 | 1.0 | 20.00 | 0 | 88.2 | 76 | 124 | | | | |
| Bromochloromethane | 18.780 | 1.0 | 20.00 | 0 | 93.9 | 65 | 129 | | | | |
| Bromodichloromethane | 17.190 | 0.50 | 20.00 | 0 | 86.0 | 76 | 121 | | | | |
| Bromoform | 18.840 | 1.0 | 20.00 | 0 | 94.2 | 69 | 128 | | | | |
| Bromomethane | 19.220 | 1.0 | 20.00 | 0 | 96.1 | 53 | 141 | | | | |
| Carbon disulfide | 17.690 | 1.0 | 20.00 | 0 | 88.4 | 75 | 125 | | | | |
| Carbon tetrachloride | 17.940 | 0.50 | 20.00 | 0 | 89.7 | 66 | 138 | | | | |
| Chlorobenzene | 17.860 | 0.50 | 20.00 | 0 | 89.3 | 81 | 122 | | | | |
| Chloroethane | 16.400 | 1.0 | 20.00 | 0 | 82.0 | 58 | 133 | | | | |
| Chloroform | 18.550 | 1.0 | 20.00 | 0 | 92.8 | 69 | 128 | | | | |
| Chloromethane | 18.290 | 1.0 | 20.00 | 0 | 91.4 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 17.430 | 1.0 | 20.00 | 0 | 87.2 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 17.920 | 0.50 | 20.00 | 0 | 89.6 | 69 | 131 | | | | |
| Dibromochloromethane | 18.130 | 0.50 | 20.00 | 0 | 90.7 | 66 | 133 | | | | |
| Dibromomethane | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 18.320 | 1.0 | 20.00 | 0 | 91.6 | 53 | 153 | | | | |
| Ethylbenzene | 17.340 | 1.0 | 20.00 | 0 | 86.7 | 73 | 127 | | | | |
| Freon-113 | 17.700 | 1.0 | 20.00 | 0 | 88.5 | 75 | 125 | | | | |
| Hexachlorobutadiene | 16.400 | 0.50 | 20.00 | 0 | 82.0 | 67 | 131 | | | | |
| Isopropylbenzene | 18.150 | 1.0 | 20.00 | 0 | 90.8 | 75 | 127 | | | | |
| m,p-Xylene | 35.100 | 1.0 | 40.00 | 0 | 87.8 | 76 | 128 | | | | |
| Methylene chloride | 16.300 | 1.0 | 20.00 | 0 | 81.5 | 63 | 137 | | | | |
| MTBE | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 65 | 123 | | | | |
| n-Butylbenzene | 18.150 | 1.0 | 20.00 | 0 | 90.8 | 69 | 137 | | | | |
| n-Propylbenzene | 18.320 | 1.0 | 20.00 | 0 | 91.6 | 72 | 129 | | | | |
| Naphthalene | 20.060 | 1.0 | 20.00 | 0 | 100 | 54 | 138 | | | | |
| o-Xylene | 17.690 | 1.0 | 20.00 | 0 | 88.4 | 80 | 121 | | | | |
| sec-Butylbenzene | 18.500 | 1.0 | 20.00 | 0 | 92.5 | 72 | 127 | | | | |
| Styrene | 18.620 | 1.0 | 20.00 | 0 | 93.1 | 65 | 134 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201221LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **LCSW** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/21/2020** SeqNo: **4055753**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | 17.760 | 1.0 | 20.00 | 0 | 88.8 | 70 | 129 | | | | |
| Tetrachloroethene | 17.340 | 1.0 | 20.00 | 0 | 86.7 | 66 | 128 | | | | |
| Toluene | 17.110 | 0.50 | 20.00 | 0 | 85.6 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 17.360 | 1.0 | 20.00 | 0 | 86.8 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 18.700 | 1.0 | 20.00 | 0 | 93.5 | 59 | 135 | | | | |
| Trichloroethene | 16.900 | 1.0 | 20.00 | 0 | 84.5 | 70 | 127 | | | | |
| Trichlorofluoromethane | 17.900 | 1.0 | 20.00 | 0 | 89.5 | 57 | 129 | | | | |
| Vinyl chloride | 16.960 | 0.50 | 20.00 | 0 | 84.8 | 50 | 134 | | | | |
| Xylenes, Total | 52.790 | 2.0 | 60.00 | 0 | 88.0 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 23.930 | | 25.00 | | 95.7 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 22.540 | | 25.00 | | 90.2 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 23.730 | | 25.00 | | 94.9 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 22.390 | | 25.00 | | 89.6 | 81 | 120 | | | | |

Sample ID: **P201221MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **PBW** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/21/2020** SeqNo: **4055756**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201221MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **PBW** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/21/2020** SeqNo: **4055756**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 0.50 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 0.50 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201221MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **PBW** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/21/2020** SeqNo: **4055756**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ND | 0.50 | | | | | | | | | |
| Dibromochloromethane | ND | 0.50 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.50 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | 0.520 | 1.0 | | | | | | | | | |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.040 | | 25.00 | | 104 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 23.130 | | 25.00 | | 92.5 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 25.670 | | 25.00 | | 103 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 24.340 | | 25.00 | | 97.4 | 81 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-005DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055772**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.970 | 0.50 | 20.00 | 0 | 99.8 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 18.700 | 1.0 | 20.00 | 0 | 93.5 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 22.990 | 0.50 | 20.00 | 0 | 115 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.030 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 19.100 | 1.0 | 20.00 | 0 | 95.5 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 19.270 | 1.0 | 20.00 | 0 | 96.4 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.430 | 1.0 | 20.00 | 0 | 97.2 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.630 | 1.0 | 20.00 | 0 | 108 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.380 | 1.0 | 20.00 | 0 | 107 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.490 | 1.0 | 20.00 | 0 | 102 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 19.750 | 1.0 | 20.00 | 0 | 98.8 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 22.260 | 2.0 | 20.00 | 0 | 111 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.630 | 1.0 | 20.00 | 0 | 108 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.460 | 1.0 | 20.00 | 0 | 102 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.660 | 0.50 | 20.00 | 0 | 103 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.750 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 18.970 | 1.0 | 20.00 | 0 | 94.8 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.290 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 18.490 | 0.50 | 20.00 | 0 | 92.5 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 16.550 | 1.0 | 20.00 | 0 | 82.8 | 69 | 137 | | | | |
| 2-Butanone | 244.010 | 10 | 200.0 | 0 | 122 | 49 | 136 | | | | |
| 2-Chlorotoluene | 18.610 | 1.0 | 20.00 | 0 | 93.0 | 73 | 126 | | | | |
| 4-Chlorotoluene | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 18.600 | 1.0 | 20.00 | 0 | 93.0 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 248.230 | 10 | 200.0 | 0 | 124 | 58 | 134 | | | | |
| Acetone | 265.050 | 10 | 200.0 | 6.650 | 129 | 40 | 135 | | | | |
| Acrolein | 196.370 | 20 | 200.0 | 0 | 98.2 | 75 | 125 | | | | |
| Acrylonitrile | 220.650 | 20 | 200.0 | 0 | 110 | 75 | 125 | | | | |
| Benzene | 19.960 | 0.50 | 20.00 | 0 | 99.8 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-005DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055772**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 76 | 124 | | | | |
| Bromochloromethane | 20.190 | 1.0 | 20.00 | 0 | 101 | 65 | 129 | | | | |
| Bromodichloromethane | 20.420 | 0.50 | 20.00 | 0 | 102 | 76 | 121 | | | | |
| Bromoform | 22.050 | 1.0 | 20.00 | 0 | 110 | 69 | 128 | | | | |
| Bromomethane | 16.760 | 1.0 | 20.00 | 0 | 83.8 | 53 | 141 | | | | |
| Carbon disulfide | 18.730 | 1.0 | 20.00 | 0.3100 | 92.1 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.830 | 0.50 | 20.00 | 0 | 99.2 | 66 | 138 | | | | |
| Chlorobenzene | 20.150 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | | | | |
| Chloroethane | 22.840 | 1.0 | 20.00 | 0 | 114 | 58 | 133 | | | | |
| Chloroform | 20.330 | 1.0 | 20.00 | 0 | 102 | 69 | 128 | | | | |
| Chloromethane | 18.610 | 1.0 | 20.00 | 0 | 93.0 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 18.830 | 1.0 | 20.00 | 0 | 94.2 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 19.510 | 0.50 | 20.00 | 0 | 97.6 | 69 | 131 | | | | |
| Dibromochloromethane | 21.540 | 0.50 | 20.00 | 0 | 108 | 66 | 133 | | | | |
| Dibromomethane | 21.510 | 1.0 | 20.00 | 0 | 108 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 18.710 | 1.0 | 20.00 | 0 | 93.6 | 53 | 153 | | | | |
| Ethylbenzene | 18.940 | 1.0 | 20.00 | 0 | 94.7 | 73 | 127 | | | | |
| Freon-113 | 18.800 | 1.0 | 20.00 | 0 | 94.0 | 75 | 125 | | | | |
| Hexachlorobutadiene | 16.780 | 0.50 | 20.00 | 0 | 83.9 | 67 | 131 | | | | |
| Isopropylbenzene | 18.590 | 1.0 | 20.00 | 0 | 93.0 | 75 | 127 | | | | |
| m,p-Xylene | 38.710 | 1.0 | 40.00 | 0 | 96.8 | 76 | 128 | | | | |
| Methylene chloride | 19.230 | 1.0 | 20.00 | 0.6100 | 93.1 | 63 | 137 | | | | |
| MTBE | 21.710 | 1.0 | 20.00 | 0 | 109 | 65 | 123 | | | | |
| n-Butylbenzene | 18.690 | 1.0 | 20.00 | 0 | 93.5 | 69 | 137 | | | | |
| n-Propylbenzene | 18.530 | 1.0 | 20.00 | 0 | 92.6 | 72 | 129 | | | | |
| Naphthalene | 21.390 | 1.0 | 20.00 | 0 | 107 | 54 | 138 | | | | |
| o-Xylene | 19.110 | 1.0 | 20.00 | 0 | 95.6 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 72 | 127 | | | | |
| Styrene | 20.430 | 1.0 | 20.00 | 0 | 102 | 65 | 134 | | | | |
| tert-Butylbenzene | 18.230 | 1.0 | 20.00 | 0 | 91.2 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-005DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055772**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.920 | 1.0 | 20.00 | 0 | 94.6 | 66 | 128 | | | | |
| Toluene | 19.230 | 0.50 | 20.00 | 0 | 96.2 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 17.820 | 1.0 | 20.00 | 0 | 89.1 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 21.410 | 1.0 | 20.00 | 0 | 107 | 59 | 135 | | | | |
| Trichloroethene | 18.670 | 1.0 | 20.00 | 0 | 93.4 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.140 | 1.0 | 20.00 | 0 | 95.7 | 57 | 129 | | | | |
| Vinyl chloride | 18.230 | 0.50 | 20.00 | 0 | 91.2 | 50 | 134 | | | | |
| Xylenes, Total | 57.820 | 2.0 | 60.00 | 0 | 96.4 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.740 | | 25.00 | | 107 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.380 | | 25.00 | | 102 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.810 | | 25.00 | | 107 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.060 | | 25.00 | | 104 | 81 | 120 | | | | |

Sample ID: **N043470-005DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055773**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.300 | 0.50 | 20.00 | 0 | 102 | 81 | 129 | 19.97 | 1.64 | 20 | |
| 1,1,1-Trichloroethane | 19.270 | 1.0 | 20.00 | 0 | 96.4 | 67 | 132 | 18.70 | 3.00 | 20 | |
| 1,1,2,2-Tetrachloroethane | 24.000 | 0.50 | 20.00 | 0 | 120 | 63 | 128 | 22.99 | 4.30 | 20 | |
| 1,1,2-Trichloroethane | 22.270 | 1.0 | 20.00 | 0 | 111 | 75 | 125 | 21.03 | 5.73 | 20 | |
| 1,1-Dichloroethane | 19.640 | 1.0 | 20.00 | 0 | 98.2 | 69 | 133 | 19.10 | 2.79 | 20 | |
| 1,1-Dichloroethene | 19.670 | 1.0 | 20.00 | 0 | 98.4 | 68 | 130 | 19.27 | 2.05 | 20 | |
| 1,1-Dichloropropene | 20.200 | 1.0 | 20.00 | 0 | 101 | 73 | 132 | 19.43 | 3.89 | 20 | |
| 1,2,3-Trichlorobenzene | 22.390 | 1.0 | 20.00 | 0 | 112 | 67 | 137 | 21.63 | 3.45 | 20 | |
| 1,2,3-Trichloropropane | 22.140 | 1.0 | 20.00 | 0 | 111 | 73 | 124 | 21.38 | 3.49 | 20 | |
| 1,2,4-Trichlorobenzene | 20.730 | 1.0 | 20.00 | 0 | 104 | 66 | 134 | 20.49 | 1.16 | 20 | |
| 1,2,4-Trimethylbenzene | 20.910 | 1.0 | 20.00 | 0 | 105 | 74 | 132 | 19.75 | 5.71 | 20 | |
| 1,2-Dibromo-3-chloropropane | 23.840 | 2.0 | 20.00 | 0 | 119 | 50 | 132 | 22.26 | 6.85 | 20 | |
| 1,2-Dibromoethane | 23.000 | 1.0 | 20.00 | 0 | 115 | 80 | 121 | 21.63 | 6.14 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-005DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055773**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 21.040 | 1.0 | 20.00 | 0 | 105 | 71 | 122 | 20.46 | 2.80 | 20 | |
| 1,2-Dichloroethane | 21.270 | 0.50 | 20.00 | 0 | 106 | 69 | 132 | 20.66 | 2.91 | 20 | |
| 1,2-Dichloropropane | 21.070 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | 20.75 | 1.53 | 20 | |
| 1,3,5-Trimethylbenzene | 20.370 | 1.0 | 20.00 | 0 | 102 | 74 | 131 | 19.65 | 3.60 | 20 | |
| 1,3-Dichlorobenzene | 19.640 | 1.0 | 20.00 | 0 | 98.2 | 75 | 124 | 18.97 | 3.47 | 20 | |
| 1,3-Dichloropropane | 22.290 | 1.0 | 20.00 | 0 | 111 | 73 | 126 | 21.29 | 4.59 | 20 | |
| 1,4-Dichlorobenzene | 19.290 | 0.50 | 20.00 | 0 | 96.5 | 74 | 123 | 18.49 | 4.24 | 20 | |
| 2,2-Dichloropropane | 17.520 | 1.0 | 20.00 | 0 | 87.6 | 69 | 137 | 16.55 | 5.69 | 20 | |
| 2-Butanone | 251.310 | 10 | 200.0 | 0 | 126 | 49 | 136 | 244.0 | 2.95 | 20 | |
| 2-Chlorotoluene | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 73 | 126 | 18.61 | 6.40 | 20 | |
| 4-Chlorotoluene | 20.190 | 1.0 | 20.00 | 0 | 101 | 74 | 128 | 19.46 | 3.68 | 20 | |
| 4-Isopropyltoluene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 73 | 130 | 18.60 | 6.05 | 20 | |
| 4-Methyl-2-pentanone | 256.010 | 10 | 200.0 | 0 | 128 | 58 | 134 | 248.2 | 3.09 | 20 | |
| Acetone | 267.520 | 10 | 200.0 | 6.650 | 130 | 40 | 135 | 265.0 | 0.928 | 20 | |
| Acrolein | 201.810 | 20 | 200.0 | 0 | 101 | 75 | 125 | 196.4 | 2.73 | 20 | |
| Acrylonitrile | 227.260 | 20 | 200.0 | 0 | 114 | 75 | 125 | 220.6 | 2.95 | 20 | |
| Benzene | 20.650 | 0.50 | 20.00 | 0 | 103 | 81 | 122 | 19.96 | 3.40 | 20 | |
| Bromobenzene | 21.050 | 1.0 | 20.00 | 0 | 105 | 76 | 124 | 19.97 | 5.27 | 20 | |
| Bromochloromethane | 21.060 | 1.0 | 20.00 | 0 | 105 | 65 | 129 | 20.19 | 4.22 | 20 | |
| Bromodichloromethane | 21.160 | 0.50 | 20.00 | 0 | 106 | 76 | 121 | 20.42 | 3.56 | 20 | |
| Bromoform | 21.840 | 1.0 | 20.00 | 0 | 109 | 69 | 128 | 22.05 | 0.957 | 20 | |
| Bromomethane | 16.700 | 1.0 | 20.00 | 0 | 83.5 | 53 | 141 | 16.76 | 0.359 | 20 | |
| Carbon disulfide | 20.180 | 1.0 | 20.00 | 0.3100 | 99.4 | 75 | 125 | 18.73 | 7.45 | 20 | |
| Carbon tetrachloride | 20.320 | 0.50 | 20.00 | 0 | 102 | 66 | 138 | 19.83 | 2.44 | 20 | |
| Chlorobenzene | 19.770 | 0.50 | 20.00 | 0 | 98.8 | 81 | 122 | 20.15 | 1.90 | 20 | |
| Chloroethane | 21.040 | 1.0 | 20.00 | 0 | 105 | 58 | 133 | 22.84 | 8.20 | 20 | |
| Chloroform | 20.270 | 1.0 | 20.00 | 0 | 101 | 69 | 128 | 20.33 | 0.296 | 20 | |
| Chloromethane | 19.960 | 1.0 | 20.00 | 0 | 99.8 | 56 | 131 | 18.61 | 7.00 | 20 | |
| cis-1,2-Dichloroethene | 18.830 | 1.0 | 20.00 | 0 | 94.2 | 72 | 126 | 18.83 | 0 | 20 | |
| cis-1,3-Dichloropropene | 20.770 | 0.50 | 20.00 | 0 | 104 | 69 | 131 | 19.51 | 6.26 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-005DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055773**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 21.190 | 0.50 | 20.00 | 0 | 106 | 66 | 133 | 21.54 | 1.64 | 20 | |
| Dibromomethane | 21.700 | 1.0 | 20.00 | 0 | 108 | 76 | 125 | 21.51 | 0.879 | 20 | |
| Dichlorodifluoromethane | 19.340 | 1.0 | 20.00 | 0 | 96.7 | 53 | 153 | 18.71 | 3.31 | 20 | |
| Ethylbenzene | 19.300 | 1.0 | 20.00 | 0 | 96.5 | 73 | 127 | 18.94 | 1.88 | 20 | |
| Freon-113 | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 75 | 125 | 18.80 | 3.45 | 20 | |
| Hexachlorobutadiene | 17.730 | 0.50 | 20.00 | 0 | 88.6 | 67 | 131 | 16.78 | 5.51 | 20 | |
| Isopropylbenzene | 19.950 | 1.0 | 20.00 | 0 | 99.8 | 75 | 127 | 18.59 | 7.06 | 20 | |
| m,p-Xylene | 39.580 | 1.0 | 40.00 | 0 | 99.0 | 76 | 128 | 38.71 | 2.22 | 20 | |
| Methylene chloride | 20.070 | 1.0 | 20.00 | 0.6100 | 97.3 | 63 | 137 | 19.23 | 4.27 | 20 | |
| MTBE | 22.320 | 1.0 | 20.00 | 0 | 112 | 65 | 123 | 21.71 | 2.77 | 20 | |
| n-Butylbenzene | 19.160 | 1.0 | 20.00 | 0 | 95.8 | 69 | 137 | 18.69 | 2.48 | 20 | |
| n-Propylbenzene | 19.410 | 1.0 | 20.00 | 0 | 97.0 | 72 | 129 | 18.53 | 4.64 | 20 | |
| Naphthalene | 22.400 | 1.0 | 20.00 | 0 | 112 | 54 | 138 | 21.39 | 4.61 | 20 | |
| o-Xylene | 19.590 | 1.0 | 20.00 | 0 | 98.0 | 80 | 121 | 19.11 | 2.48 | 20 | |
| sec-Butylbenzene | 20.390 | 1.0 | 20.00 | 0 | 102 | 72 | 127 | 19.20 | 6.01 | 20 | |
| Styrene | 20.730 | 1.0 | 20.00 | 0 | 104 | 65 | 134 | 20.43 | 1.46 | 20 | |
| tert-Butylbenzene | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 70 | 129 | 18.23 | 6.63 | 20 | |
| Tetrachloroethene | 19.190 | 1.0 | 20.00 | 0 | 96.0 | 66 | 128 | 18.92 | 1.42 | 20 | |
| Toluene | 19.920 | 0.50 | 20.00 | 0 | 99.6 | 77 | 122 | 19.23 | 3.52 | 20 | |
| trans-1,2-Dichloroethene | 18.270 | 1.0 | 20.00 | 0 | 91.4 | 63 | 137 | 17.82 | 2.49 | 20 | |
| trans-1,3-Dichloropropene | 21.390 | 1.0 | 20.00 | 0 | 107 | 59 | 135 | 21.41 | 0.0935 | 20 | |
| Trichloroethene | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 70 | 127 | 18.67 | 5.93 | 20 | |
| Trichlorofluoromethane | 19.150 | 1.0 | 20.00 | 0 | 95.8 | 57 | 129 | 19.14 | 0.0522 | 20 | |
| Vinyl chloride | 18.980 | 0.50 | 20.00 | 0 | 94.9 | 50 | 134 | 18.23 | 4.03 | 20 | |
| Xylenes, Total | 59.170 | 2.0 | 60.00 | 0 | 98.6 | 75 | 125 | 57.82 | 2.31 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 26.580 | | 25.00 | | 106 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 25.300 | | 25.00 | | 101 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 26.930 | | 25.00 | | 108 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.740 | | 25.00 | | 103 | 81 | 120 | | 0 | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-002DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055778**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.650 | 0.50 | 20.00 | 0 | 98.2 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 18.380 | 1.0 | 20.00 | 0 | 91.9 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 23.380 | 0.50 | 20.00 | 0 | 117 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.170 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 19.010 | 1.0 | 20.00 | 0 | 95.1 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 18.500 | 1.0 | 20.00 | 0 | 92.5 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.500 | 1.0 | 20.00 | 0 | 97.5 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 22.340 | 1.0 | 20.00 | 0 | 112 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.910 | 1.0 | 20.00 | 0 | 110 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.790 | 1.0 | 20.00 | 0 | 104 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.710 | 1.0 | 20.00 | 0 | 104 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 24.310 | 2.0 | 20.00 | 0 | 122 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.060 | 1.0 | 20.00 | 0 | 105 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.460 | 1.0 | 20.00 | 0 | 107 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.830 | 0.50 | 20.00 | 0 | 104 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.420 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.440 | 1.0 | 20.00 | 0 | 102 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.780 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.510 | 0.50 | 20.00 | 0 | 97.6 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 15.380 | 1.0 | 20.00 | 0 | 76.9 | 69 | 137 | | | | |
| 2-Butanone | 228.310 | 10 | 200.0 | 0 | 114 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 73 | 126 | | | | |
| 4-Chlorotoluene | 20.340 | 1.0 | 20.00 | 0 | 102 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.630 | 1.0 | 20.00 | 0 | 98.2 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 239.060 | 10 | 200.0 | 0 | 120 | 58 | 134 | | | | |
| Acetone | 254.440 | 10 | 200.0 | 9.060 | 123 | 40 | 135 | | | | |
| Acrolein | 182.900 | 20 | 200.0 | 0 | 91.4 | 75 | 125 | | | | |
| Acrylonitrile | 210.460 | 20 | 200.0 | 0 | 105 | 75 | 125 | | | | |
| Benzene | 19.570 | 0.50 | 20.00 | 0 | 97.9 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-002DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055778**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 20.860 | 1.0 | 20.00 | 0 | 104 | 76 | 124 | | | | |
| Bromochloromethane | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 65 | 129 | | | | |
| Bromodichloromethane | 20.380 | 0.50 | 20.00 | 0 | 102 | 76 | 121 | | | | |
| Bromoform | 21.150 | 1.0 | 20.00 | 0 | 106 | 69 | 128 | | | | |
| Bromomethane | 18.660 | 1.0 | 20.00 | 0 | 93.3 | 53 | 141 | | | | |
| Carbon disulfide | 18.220 | 1.0 | 20.00 | 0 | 91.1 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.550 | 0.50 | 20.00 | 0 | 97.8 | 66 | 138 | | | | |
| Chlorobenzene | 20.180 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | | | | |
| Chloroethane | 17.850 | 1.0 | 20.00 | 0 | 89.2 | 58 | 133 | | | | |
| Chloroform | 20.160 | 1.0 | 20.00 | 0.7100 | 97.3 | 69 | 128 | | | | |
| Chloromethane | 19.960 | 1.0 | 20.00 | 0 | 99.8 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 18.710 | 1.0 | 20.00 | 0 | 93.6 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 19.780 | 0.50 | 20.00 | 0 | 98.9 | 69 | 131 | | | | |
| Dibromochloromethane | 20.760 | 0.50 | 20.00 | 0 | 104 | 66 | 133 | | | | |
| Dibromomethane | 20.410 | 1.0 | 20.00 | 0 | 102 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.740 | 1.0 | 20.00 | 0 | 88.7 | 53 | 153 | | | | |
| Ethylbenzene | 19.250 | 1.0 | 20.00 | 0 | 96.2 | 73 | 127 | | | | |
| Freon-113 | 17.890 | 1.0 | 20.00 | 0 | 89.4 | 75 | 125 | | | | |
| Hexachlorobutadiene | 18.650 | 0.50 | 20.00 | 0 | 93.3 | 67 | 131 | | | | |
| Isopropylbenzene | 19.940 | 1.0 | 20.00 | 0 | 99.7 | 75 | 127 | | | | |
| m,p-Xylene | 38.820 | 1.0 | 40.00 | 0 | 97.0 | 76 | 128 | | | | |
| Methylene chloride | 18.930 | 1.0 | 20.00 | 0.5600 | 91.9 | 63 | 137 | | | | |
| MTBE | 21.110 | 1.0 | 20.00 | 0 | 106 | 65 | 123 | | | | |
| n-Butylbenzene | 19.120 | 1.0 | 20.00 | 0 | 95.6 | 69 | 137 | | | | |
| n-Propylbenzene | 19.990 | 1.0 | 20.00 | 0 | 100 | 72 | 129 | | | | |
| Naphthalene | 21.560 | 1.0 | 20.00 | 0 | 108 | 54 | 138 | | | | |
| o-Xylene | 19.570 | 1.0 | 20.00 | 0 | 97.9 | 80 | 121 | | | | |
| sec-Butylbenzene | 20.280 | 1.0 | 20.00 | 0 | 101 | 72 | 127 | | | | |
| Styrene | 17.400 | 1.0 | 20.00 | 0 | 87.0 | 65 | 134 | | | | |
| tert-Butylbenzene | 19.680 | 1.0 | 20.00 | 0 | 98.4 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-002DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055778**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 19.260 | 1.0 | 20.00 | 0 | 96.3 | 66 | 128 | | | | |
| Toluene | 19.290 | 0.50 | 20.00 | 0 | 96.5 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 17.790 | 1.0 | 20.00 | 0 | 89.0 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 20.560 | 1.0 | 20.00 | 0 | 103 | 59 | 135 | | | | |
| Trichloroethene | 18.390 | 1.0 | 20.00 | 0 | 92.0 | 70 | 127 | | | | |
| Trichlorofluoromethane | 18.490 | 1.0 | 20.00 | 0 | 92.5 | 57 | 129 | | | | |
| Vinyl chloride | 18.000 | 0.50 | 20.00 | 0 | 90.0 | 50 | 134 | | | | |
| Xylenes, Total | 58.390 | 2.0 | 60.00 | 0 | 97.3 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 25.180 | | 25.00 | | 101 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.150 | | 25.00 | | 101 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 24.910 | | 25.00 | | 99.6 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.590 | | 25.00 | | 102 | 81 | 120 | | | | |

Sample ID: **N043470-002DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055779**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.290 | 0.50 | 20.00 | 0 | 101 | 81 | 129 | 19.65 | 3.20 | 20 | |
| 1,1,1-Trichloroethane | 20.260 | 1.0 | 20.00 | 0 | 101 | 67 | 132 | 18.38 | 9.73 | 20 | |
| 1,1,2,2-Tetrachloroethane | 24.800 | 0.50 | 20.00 | 0 | 124 | 63 | 128 | 23.38 | 5.89 | 20 | |
| 1,1,2-Trichloroethane | 22.210 | 1.0 | 20.00 | 0 | 111 | 75 | 125 | 21.17 | 4.79 | 20 | |
| 1,1-Dichloroethane | 21.250 | 1.0 | 20.00 | 0 | 106 | 69 | 133 | 19.01 | 11.1 | 20 | |
| 1,1-Dichloroethene | 21.190 | 1.0 | 20.00 | 0 | 106 | 68 | 130 | 18.50 | 13.6 | 20 | |
| 1,1-Dichloropropene | 20.680 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | 19.50 | 5.87 | 20 | |
| 1,2,3-Trichlorobenzene | 21.710 | 1.0 | 20.00 | 0 | 109 | 67 | 137 | 22.34 | 2.86 | 20 | |
| 1,2,3-Trichloropropane | 20.960 | 1.0 | 20.00 | 0 | 105 | 73 | 124 | 21.91 | 4.43 | 20 | |
| 1,2,4-Trichlorobenzene | 19.300 | 1.0 | 20.00 | 0 | 96.5 | 66 | 134 | 20.79 | 7.43 | 20 | |
| 1,2,4-Trimethylbenzene | 20.120 | 1.0 | 20.00 | 0 | 101 | 74 | 132 | 20.71 | 2.89 | 20 | |
| 1,2-Dibromo-3-chloropropane | 23.670 | 2.0 | 20.00 | 0 | 118 | 50 | 132 | 24.31 | 2.67 | 20 | |
| 1,2-Dibromoethane | 22.330 | 1.0 | 20.00 | 0 | 112 | 80 | 121 | 21.06 | 5.85 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-002DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055779**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 20.830 | 1.0 | 20.00 | 0 | 104 | 71 | 122 | 21.46 | 2.98 | 20 | |
| 1,2-Dichloroethane | 21.230 | 0.50 | 20.00 | 0 | 106 | 69 | 132 | 20.83 | 1.90 | 20 | |
| 1,2-Dichloropropane | 20.690 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | 20.42 | 1.31 | 20 | |
| 1,3,5-Trimethylbenzene | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 74 | 131 | 20.44 | 3.13 | 20 | |
| 1,3-Dichlorobenzene | 19.310 | 1.0 | 20.00 | 0 | 96.6 | 75 | 124 | 19.65 | 1.75 | 20 | |
| 1,3-Dichloropropane | 22.430 | 1.0 | 20.00 | 0 | 112 | 73 | 126 | 21.78 | 2.94 | 20 | |
| 1,4-Dichlorobenzene | 18.990 | 0.50 | 20.00 | 0 | 95.0 | 74 | 123 | 19.51 | 2.70 | 20 | |
| 2,2-Dichloropropane | 17.410 | 1.0 | 20.00 | 0 | 87.1 | 69 | 137 | 15.38 | 12.4 | 20 | |
| 2-Butanone | 261.280 | 10 | 200.0 | 0 | 131 | 49 | 136 | 228.3 | 13.5 | 20 | |
| 2-Chlorotoluene | 19.620 | 1.0 | 20.00 | 0 | 98.1 | 73 | 126 | 19.90 | 1.42 | 20 | |
| 4-Chlorotoluene | 20.140 | 1.0 | 20.00 | 0 | 101 | 74 | 128 | 20.34 | 0.988 | 20 | |
| 4-Isopropyltoluene | 19.370 | 1.0 | 20.00 | 0 | 96.9 | 73 | 130 | 19.63 | 1.33 | 20 | |
| 4-Methyl-2-pentanone | 254.500 | 10 | 200.0 | 0 | 127 | 58 | 134 | 239.1 | 6.26 | 20 | |
| Acetone | 300.020 | 10 | 200.0 | 9.060 | 145 | 40 | 135 | 254.4 | 16.4 | 20 | S |
| Acrolein | 209.390 | 20 | 200.0 | 0 | 105 | 75 | 125 | 182.9 | 13.5 | 20 | |
| Acrylonitrile | 245.260 | 20 | 200.0 | 0 | 123 | 75 | 125 | 210.5 | 15.3 | 20 | |
| Benzene | 20.520 | 0.50 | 20.00 | 0 | 103 | 81 | 122 | 19.57 | 4.74 | 20 | |
| Bromobenzene | 20.710 | 1.0 | 20.00 | 0 | 104 | 76 | 124 | 20.86 | 0.722 | 20 | |
| Bromochloromethane | 22.650 | 1.0 | 20.00 | 0 | 113 | 65 | 129 | 19.28 | 16.1 | 20 | |
| Bromodichloromethane | 21.490 | 0.50 | 20.00 | 0 | 107 | 76 | 121 | 20.38 | 5.30 | 20 | |
| Bromoform | 21.330 | 1.0 | 20.00 | 0 | 107 | 69 | 128 | 21.15 | 0.847 | 20 | |
| Bromomethane | 20.550 | 1.0 | 20.00 | 0 | 103 | 53 | 141 | 18.66 | 9.64 | 20 | |
| Carbon disulfide | 20.020 | 1.0 | 20.00 | 0 | 100 | 75 | 125 | 18.22 | 9.41 | 20 | |
| Carbon tetrachloride | 20.380 | 0.50 | 20.00 | 0 | 102 | 66 | 138 | 19.55 | 4.16 | 20 | |
| Chlorobenzene | 20.120 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 20.18 | 0.298 | 20 | |
| Chloroethane | 20.160 | 1.0 | 20.00 | 0 | 101 | 58 | 133 | 17.85 | 12.2 | 20 | |
| Chloroform | 22.160 | 1.0 | 20.00 | 0.7100 | 107 | 69 | 128 | 20.16 | 9.45 | 20 | |
| Chloromethane | 21.300 | 1.0 | 20.00 | 0 | 106 | 56 | 131 | 19.96 | 6.50 | 20 | |
| cis-1,2-Dichloroethene | 19.880 | 1.0 | 20.00 | 0 | 99.4 | 72 | 126 | 18.71 | 6.06 | 20 | |
| cis-1,3-Dichloropropene | 20.280 | 0.50 | 20.00 | 0 | 101 | 69 | 131 | 19.78 | 2.50 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-002DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149600**
Client ID: **ZZZZZZ** Batch ID: **P20VW133** TestNo: **EPA 8260B** Analysis Date: **12/22/2020** SeqNo: **4055779**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 20.170 | 0.50 | 20.00 | 0 | 101 | 66 | 133 | 20.76 | 2.88 | 20 | |
| Dibromomethane | 21.480 | 1.0 | 20.00 | 0 | 107 | 76 | 125 | 20.41 | 5.11 | 20 | |
| Dichlorodifluoromethane | 20.480 | 1.0 | 20.00 | 0 | 102 | 53 | 153 | 17.74 | 14.3 | 20 | |
| Ethylbenzene | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 73 | 127 | 19.25 | 0.156 | 20 | |
| Freon-113 | 20.180 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 17.89 | 12.0 | 20 | |
| Hexachlorobutadiene | 17.690 | 0.50 | 20.00 | 0 | 88.4 | 67 | 131 | 18.65 | 5.28 | 20 | |
| Isopropylbenzene | 19.780 | 1.0 | 20.00 | 0 | 98.9 | 75 | 127 | 19.94 | 0.806 | 20 | |
| m,p-Xylene | 39.120 | 1.0 | 40.00 | 0 | 97.8 | 76 | 128 | 38.82 | 0.770 | 20 | |
| Methylene chloride | 20.710 | 1.0 | 20.00 | 0.5600 | 101 | 63 | 137 | 18.93 | 8.98 | 20 | |
| MTBE | 23.640 | 1.0 | 20.00 | 0 | 118 | 65 | 123 | 21.11 | 11.3 | 20 | |
| n-Butylbenzene | 18.510 | 1.0 | 20.00 | 0 | 92.6 | 69 | 137 | 19.12 | 3.24 | 20 | |
| n-Propylbenzene | 19.820 | 1.0 | 20.00 | 0 | 99.1 | 72 | 129 | 19.99 | 0.854 | 20 | |
| Naphthalene | 21.580 | 1.0 | 20.00 | 0 | 108 | 54 | 138 | 21.56 | 0.0927 | 20 | |
| o-Xylene | 19.770 | 1.0 | 20.00 | 0 | 98.8 | 80 | 121 | 19.57 | 1.02 | 20 | |
| sec-Butylbenzene | 20.080 | 1.0 | 20.00 | 0 | 100 | 72 | 127 | 20.28 | 0.991 | 20 | |
| Styrene | 17.250 | 1.0 | 20.00 | 0 | 86.2 | 65 | 134 | 17.40 | 0.866 | 20 | |
| tert-Butylbenzene | 19.290 | 1.0 | 20.00 | 0 | 96.5 | 70 | 129 | 19.68 | 2.00 | 20 | |
| Tetrachloroethene | 18.790 | 1.0 | 20.00 | 0 | 94.0 | 66 | 128 | 19.26 | 2.47 | 20 | |
| Toluene | 20.050 | 0.50 | 20.00 | 0 | 100 | 77 | 122 | 19.29 | 3.86 | 20 | |
| trans-1,2-Dichloroethene | 20.100 | 1.0 | 20.00 | 0 | 101 | 63 | 137 | 17.79 | 12.2 | 20 | |
| trans-1,3-Dichloropropene | 20.670 | 1.0 | 20.00 | 0 | 103 | 59 | 135 | 20.56 | 0.534 | 20 | |
| Trichloroethene | 19.510 | 1.0 | 20.00 | 0 | 97.6 | 70 | 127 | 18.39 | 5.91 | 20 | |
| Trichlorofluoromethane | 20.710 | 1.0 | 20.00 | 0 | 104 | 57 | 129 | 18.49 | 11.3 | 20 | |
| Vinyl chloride | 19.520 | 0.50 | 20.00 | 0 | 97.6 | 50 | 134 | 18.00 | 8.10 | 20 | |
| Xylenes, Total | 58.890 | 2.0 | 60.00 | 0 | 98.2 | 75 | 125 | 58.39 | 0.853 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 28.980 | | 25.00 | | 116 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 26.090 | | 25.00 | | 104 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 28.730 | | 25.00 | | 115 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 27.380 | | 25.00 | | 110 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **LCSW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060110**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.730 | 0.50 | 20.00 | 0 | 98.6 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.630 | 1.0 | 20.00 | 0 | 108 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.290 | 0.50 | 20.00 | 0 | 101 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 20.750 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.320 | 1.0 | 20.00 | 0 | 102 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 21.140 | 1.0 | 20.00 | 0 | 106 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 21.030 | 1.0 | 20.00 | 0 | 105 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 22.630 | 1.0 | 20.00 | 0 | 113 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.040 | 1.0 | 20.00 | 0 | 105 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 21.300 | 1.0 | 20.00 | 0 | 106 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 23.030 | 1.0 | 20.00 | 0 | 115 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 24.520 | 2.0 | 20.00 | 0 | 123 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.750 | 1.0 | 20.00 | 0 | 109 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.530 | 1.0 | 20.00 | 0 | 103 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.820 | 0.50 | 20.00 | 0 | 99.1 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.150 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 23.060 | 1.0 | 20.00 | 0 | 115 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 21.350 | 1.0 | 20.00 | 0 | 107 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.250 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 20.120 | 0.50 | 20.00 | 0 | 101 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 20.800 | 1.0 | 20.00 | 0 | 104 | 69 | 137 | | | | |
| 2-Butanone | 212.630 | 10 | 200.0 | 0 | 106 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.120 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.080 | 1.0 | 20.00 | 0 | 110 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 22.250 | 1.0 | 20.00 | 0 | 111 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 232.470 | 10 | 200.0 | 0 | 116 | 58 | 134 | | | | |
| Acetone | 209.980 | 10 | 200.0 | 0 | 105 | 40 | 135 | | | | |
| Acrolein | 216.860 | 20 | 200.0 | 0 | 108 | 75 | 125 | | | | |
| Acrylonitrile | 220.410 | 20 | 200.0 | 0 | 110 | 75 | 125 | | | | |
| Benzene | 20.810 | 0.50 | 20.00 | 0 | 104 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **LCSW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060110**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 76 | 124 | | | | |
| Bromochloromethane | 21.690 | 1.0 | 20.00 | 0 | 108 | 65 | 129 | | | | |
| Bromodichloromethane | 20.120 | 0.50 | 20.00 | 0 | 101 | 76 | 121 | | | | |
| Bromoform | 21.720 | 1.0 | 20.00 | 0 | 109 | 69 | 128 | | | | |
| Bromomethane | 23.220 | 1.0 | 20.00 | 0 | 116 | 53 | 141 | | | | |
| Carbon disulfide | 21.100 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| Carbon tetrachloride | 21.000 | 0.50 | 20.00 | 0 | 105 | 66 | 138 | | | | |
| Chlorobenzene | 20.680 | 0.50 | 20.00 | 0 | 103 | 81 | 122 | | | | |
| Chloroethane | 23.290 | 1.0 | 20.00 | 0 | 116 | 58 | 133 | | | | |
| Chloroform | 20.400 | 1.0 | 20.00 | 0 | 102 | 69 | 128 | | | | |
| Chloromethane | 23.060 | 1.0 | 20.00 | 0 | 115 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.830 | 1.0 | 20.00 | 0 | 104 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.460 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | | | | |
| Dibromochloromethane | 19.810 | 0.50 | 20.00 | 0 | 99.0 | 66 | 133 | | | | |
| Dibromomethane | 20.450 | 1.0 | 20.00 | 0 | 102 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 21.840 | 1.0 | 20.00 | 0 | 109 | 53 | 153 | | | | |
| Ethylbenzene | 20.300 | 1.0 | 20.00 | 0 | 102 | 73 | 127 | | | | |
| Freon-113 | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 75 | 125 | | | | |
| Hexachlorobutadiene | 21.610 | 0.50 | 20.00 | 0 | 108 | 67 | 131 | | | | |
| Isopropylbenzene | 21.640 | 1.0 | 20.00 | 0 | 108 | 75 | 127 | | | | |
| m,p-Xylene | 43.820 | 1.0 | 40.00 | 0 | 110 | 76 | 128 | | | | |
| Methylene chloride | 23.250 | 1.0 | 20.00 | 0 | 116 | 63 | 137 | | | | |
| MTBE | 22.870 | 1.0 | 20.00 | 0 | 114 | 65 | 123 | | | | |
| n-Butylbenzene | 22.020 | 1.0 | 20.00 | 0 | 110 | 69 | 137 | | | | |
| n-Propylbenzene | 22.290 | 1.0 | 20.00 | 0 | 111 | 72 | 129 | | | | |
| Naphthalene | 20.630 | 1.0 | 20.00 | 0 | 103 | 54 | 138 | | | | |
| o-Xylene | 21.720 | 1.0 | 20.00 | 0 | 109 | 80 | 121 | | | | |
| sec-Butylbenzene | 22.040 | 1.0 | 20.00 | 0 | 110 | 72 | 127 | | | | |
| Styrene | 22.060 | 1.0 | 20.00 | 0 | 110 | 65 | 134 | | | | |
| tert-Butylbenzene | 22.130 | 1.0 | 20.00 | 0 | 111 | 70 | 129 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **LCSW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060110**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 21.030 | 1.0 | 20.00 | 0 | 105 | 66 | 128 | | | | |
| Toluene | 20.780 | 0.50 | 20.00 | 0 | 104 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 20.620 | 1.0 | 20.00 | 0 | 103 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 21.530 | 1.0 | 20.00 | 0 | 108 | 59 | 135 | | | | |
| Trichloroethene | 20.270 | 1.0 | 20.00 | 0 | 101 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.440 | 1.0 | 20.00 | 0 | 97.2 | 57 | 129 | | | | |
| Vinyl chloride | 22.100 | 0.50 | 20.00 | 0 | 110 | 50 | 134 | | | | |
| Xylenes, Total | 65.540 | 2.0 | 60.00 | 0 | 109 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.510 | | 25.00 | | 106 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 27.300 | | 25.00 | | 109 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.590 | | 25.00 | | 106 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.430 | | 25.00 | | 106 | 81 | 120 | | | | |

Sample ID: **P201228MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **PBW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060113**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **PBW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060113**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 0.50 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 0.50 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.50 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201228MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **PBW** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/28/2020** SeqNo: **4060113**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | ND | 0.50 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.50 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | ND | 1.0 | | | | | | | | | |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.100 | | 25.00 | | 108 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 24.070 | | 25.00 | | 96.3 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.940 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.540 | | 25.00 | | 102 | 81 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060379**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.980 | 0.50 | 20.00 | 0 | 99.9 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.740 | 1.0 | 20.00 | 0 | 104 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.350 | 0.50 | 20.00 | 0 | 107 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.150 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.040 | 1.0 | 20.00 | 0 | 100 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.940 | 1.0 | 20.00 | 0 | 99.7 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.160 | 1.0 | 20.00 | 0 | 101 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.000 | 1.0 | 20.00 | 0 | 105 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 18.840 | 1.0 | 20.00 | 0 | 94.2 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 22.250 | 1.0 | 20.00 | 0.3800 | 109 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 23.380 | 2.0 | 20.00 | 0 | 117 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.240 | 1.0 | 20.00 | 0 | 101 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.540 | 0.50 | 20.00 | 0 | 97.7 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 19.510 | 1.0 | 20.00 | 0 | 97.6 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 21.580 | 1.0 | 20.00 | 0 | 108 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 19.080 | 1.0 | 20.00 | 0 | 95.4 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.300 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.280 | 0.50 | 20.00 | 0 | 96.4 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.190 | 1.0 | 20.00 | 0 | 91.0 | 69 | 137 | | | | |
| 2-Butanone | 233.460 | 10 | 200.0 | 0 | 117 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.010 | 1.0 | 20.00 | 0 | 95.1 | 73 | 126 | | | | |
| 4-Chlorotoluene | 20.540 | 1.0 | 20.00 | 0 | 103 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 20.000 | 1.0 | 20.00 | 0 | 100 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 255.210 | 10 | 200.0 | 0 | 128 | 58 | 134 | | | | |
| Acetone | 285.720 | 10 | 200.0 | 26.54 | 130 | 40 | 135 | | | | |
| Acrolein | 208.510 | 20 | 200.0 | 0 | 104 | 75 | 125 | | | | |
| Acrylonitrile | 223.420 | 20 | 200.0 | 0 | 112 | 75 | 125 | | | | |
| Benzene | 19.560 | 0.50 | 20.00 | 0 | 97.8 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060379**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 19.640 | 1.0 | 20.00 | 0 | 98.2 | 76 | 124 | | | | |
| Bromochloromethane | 22.000 | 1.0 | 20.00 | 0 | 110 | 65 | 129 | | | | |
| Bromodichloromethane | 19.160 | 0.50 | 20.00 | 0 | 95.8 | 76 | 121 | | | | |
| Bromoform | 21.170 | 1.0 | 20.00 | 0 | 106 | 69 | 128 | | | | |
| Bromomethane | 19.070 | 1.0 | 20.00 | 0 | 95.4 | 53 | 141 | | | | |
| Carbon disulfide | 21.720 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.390 | 0.50 | 20.00 | 0 | 102 | 66 | 138 | | | | |
| Chlorobenzene | 19.520 | 0.50 | 20.00 | 0 | 97.6 | 81 | 122 | | | | |
| Chloroethane | 23.500 | 1.0 | 20.00 | 0 | 118 | 58 | 133 | | | | |
| Chloroform | 19.780 | 1.0 | 20.00 | 0.7700 | 95.1 | 69 | 128 | | | | |
| Chloromethane | 21.220 | 1.0 | 20.00 | 0 | 106 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.080 | 1.0 | 20.00 | 0 | 100 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.310 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | | | | |
| Dibromochloromethane | 20.000 | 0.50 | 20.00 | 0 | 100 | 66 | 133 | | | | |
| Dibromomethane | 20.000 | 1.0 | 20.00 | 0 | 100 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.380 | 1.0 | 20.00 | 0 | 86.9 | 53 | 153 | | | | |
| Ethylbenzene | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 73 | 127 | | | | |
| Freon-113 | 21.150 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.320 | 0.50 | 20.00 | 0 | 102 | 67 | 131 | | | | |
| Isopropylbenzene | 19.530 | 1.0 | 20.00 | 0 | 97.6 | 75 | 127 | | | | |
| m,p-Xylene | 42.690 | 1.0 | 40.00 | 0 | 107 | 76 | 128 | | | | |
| Methylene chloride | 22.330 | 1.0 | 20.00 | 0 | 112 | 63 | 137 | | | | |
| MTBE | 21.040 | 1.0 | 20.00 | 0 | 105 | 65 | 123 | | | | |
| n-Butylbenzene | 20.660 | 1.0 | 20.00 | 0 | 103 | 69 | 137 | | | | |
| n-Propylbenzene | 20.860 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | | | | |
| Naphthalene | 18.700 | 1.0 | 20.00 | 0 | 93.5 | 54 | 138 | | | | |
| o-Xylene | 20.360 | 1.0 | 20.00 | 0 | 102 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 72 | 127 | | | | |
| Styrene | 21.400 | 1.0 | 20.00 | 0 | 107 | 65 | 134 | | | | |
| tert-Butylbenzene | 21.190 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060379**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.960 | 1.0 | 20.00 | 0 | 94.8 | 66 | 128 | | | | |
| Toluene | 19.920 | 0.50 | 20.00 | 0 | 99.6 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 18.280 | 1.0 | 20.00 | 0 | 91.4 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.500 | 1.0 | 20.00 | 0 | 112 | 59 | 135 | | | | |
| Trichloroethene | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 57 | 129 | | | | |
| Vinyl chloride | 20.170 | 0.50 | 20.00 | 0 | 101 | 50 | 134 | | | | |
| Xylenes, Total | 63.050 | 2.0 | 60.00 | 0 | 105 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.230 | | 25.00 | | 105 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.960 | | 25.00 | | 104 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 27.370 | | 25.00 | | 109 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.610 | | 25.00 | | 102 | 81 | 120 | | | | |

Sample ID: **N043469-010EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060380**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.040 | 0.50 | 20.00 | 0 | 95.2 | 81 | 129 | 19.98 | 4.82 | 20 | |
| 1,1,1-Trichloroethane | 22.390 | 1.0 | 20.00 | 0 | 112 | 67 | 132 | 20.74 | 7.65 | 20 | |
| 1,1,2,2-Tetrachloroethane | 21.340 | 0.50 | 20.00 | 0 | 107 | 63 | 128 | 21.35 | 0.0468 | 20 | |
| 1,1,2-Trichloroethane | 20.130 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 21.15 | 4.94 | 20 | |
| 1,1-Dichloroethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 69 | 133 | 20.04 | 3.96 | 20 | |
| 1,1-Dichloroethene | 21.360 | 1.0 | 20.00 | 0 | 107 | 68 | 130 | 19.73 | 7.93 | 20 | |
| 1,1-Dichloropropene | 20.680 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | 19.94 | 3.64 | 20 | |
| 1,2,3-Trichlorobenzene | 21.810 | 1.0 | 20.00 | 0 | 109 | 67 | 137 | 20.16 | 7.86 | 20 | |
| 1,2,3-Trichloropropane | 20.960 | 1.0 | 20.00 | 0 | 105 | 73 | 124 | 21.00 | 0.191 | 20 | |
| 1,2,4-Trichlorobenzene | 18.940 | 1.0 | 20.00 | 0 | 94.7 | 66 | 134 | 18.84 | 0.529 | 20 | |
| 1,2,4-Trimethylbenzene | 22.660 | 1.0 | 20.00 | 0.3800 | 111 | 74 | 132 | 22.25 | 1.83 | 20 | |
| 1,2-Dibromo-3-chloropropane | 23.060 | 2.0 | 20.00 | 0 | 115 | 50 | 132 | 23.38 | 1.38 | 20 | |
| 1,2-Dibromoethane | 22.100 | 1.0 | 20.00 | 0 | 110 | 80 | 121 | 20.24 | 8.79 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060380**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 19.850 | 1.0 | 20.00 | 0 | 99.2 | 71 | 122 | 19.20 | 3.33 | 20 | |
| 1,2-Dichloroethane | 19.690 | 0.50 | 20.00 | 0 | 98.4 | 69 | 132 | 19.54 | 0.765 | 20 | |
| 1,2-Dichloropropane | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 75 | 125 | 19.51 | 2.39 | 20 | |
| 1,3,5-Trimethylbenzene | 21.130 | 1.0 | 20.00 | 0 | 106 | 74 | 131 | 21.58 | 2.11 | 20 | |
| 1,3-Dichlorobenzene | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 75 | 124 | 19.08 | 0.473 | 20 | |
| 1,3-Dichloropropane | 21.750 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | 21.30 | 2.09 | 20 | |
| 1,4-Dichlorobenzene | 19.340 | 0.50 | 20.00 | 0 | 96.7 | 74 | 123 | 19.28 | 0.311 | 20 | |
| 2,2-Dichloropropane | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 69 | 137 | 18.19 | 6.70 | 20 | |
| 2-Butanone | 250.730 | 10 | 200.0 | 0 | 125 | 49 | 136 | 233.5 | 7.13 | 20 | |
| 2-Chlorotoluene | 19.150 | 1.0 | 20.00 | 0 | 95.8 | 73 | 126 | 19.01 | 0.734 | 20 | |
| 4-Chlorotoluene | 20.080 | 1.0 | 20.00 | 0 | 100 | 74 | 128 | 20.54 | 2.26 | 20 | |
| 4-Isopropyltoluene | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 73 | 130 | 20.00 | 0.351 | 20 | |
| 4-Methyl-2-pentanone | 268.040 | 10 | 200.0 | 0 | 134 | 58 | 134 | 255.2 | 4.90 | 20 | S |
| Acetone | 253.910 | 10 | 200.0 | 26.54 | 114 | 40 | 135 | 285.7 | 11.8 | 20 | |
| Acrolein | 241.040 | 20 | 200.0 | 0 | 121 | 75 | 125 | 208.5 | 14.5 | 20 | |
| Acrylonitrile | 240.680 | 20 | 200.0 | 0 | 120 | 75 | 125 | 223.4 | 7.44 | 20 | |
| Benzene | 20.120 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 19.56 | 2.82 | 20 | |
| Bromobenzene | 18.860 | 1.0 | 20.00 | 0 | 94.3 | 76 | 124 | 19.64 | 4.05 | 20 | |
| Bromochloromethane | 22.360 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | 22.00 | 1.62 | 20 | |
| Bromodichloromethane | 19.220 | 0.50 | 20.00 | 0 | 96.1 | 76 | 121 | 19.16 | 0.313 | 20 | |
| Bromoform | 22.160 | 1.0 | 20.00 | 0 | 111 | 69 | 128 | 21.17 | 4.57 | 20 | |
| Bromomethane | 20.500 | 1.0 | 20.00 | 0 | 103 | 53 | 141 | 19.07 | 7.23 | 20 | |
| Carbon disulfide | 22.970 | 1.0 | 20.00 | 0 | 115 | 75 | 125 | 21.72 | 5.59 | 20 | |
| Carbon tetrachloride | 21.650 | 0.50 | 20.00 | 0 | 108 | 66 | 138 | 20.39 | 5.99 | 20 | |
| Chlorobenzene | 19.550 | 0.50 | 20.00 | 0 | 97.8 | 81 | 122 | 19.52 | 0.154 | 20 | |
| Chloroethane | 25.650 | 1.0 | 20.00 | 0 | 128 | 58 | 133 | 23.50 | 8.75 | 20 | |
| Chloroform | 20.720 | 1.0 | 20.00 | 0.7700 | 99.8 | 69 | 128 | 19.78 | 4.64 | 20 | |
| Chloromethane | 22.300 | 1.0 | 20.00 | 0 | 112 | 56 | 131 | 21.22 | 4.96 | 20 | |
| cis-1,2-Dichloroethene | 20.980 | 1.0 | 20.00 | 0 | 105 | 72 | 126 | 20.08 | 4.38 | 20 | |
| cis-1,3-Dichloropropene | 21.360 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | 21.31 | 0.234 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043469-010EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060380**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 20.280 | 0.50 | 20.00 | 0 | 101 | 66 | 133 | 20.00 | 1.39 | 20 | |
| Dibromomethane | 19.990 | 1.0 | 20.00 | 0 | 100 | 76 | 125 | 20.00 | 0.0500 | 20 | |
| Dichlorodifluoromethane | 17.960 | 1.0 | 20.00 | 0 | 89.8 | 53 | 153 | 17.38 | 3.28 | 20 | |
| Ethylbenzene | 19.620 | 1.0 | 20.00 | 0 | 98.1 | 73 | 127 | 19.84 | 1.12 | 20 | |
| Freon-113 | 22.670 | 1.0 | 20.00 | 0 | 113 | 75 | 125 | 21.15 | 6.94 | 20 | |
| Hexachlorobutadiene | 19.900 | 0.50 | 20.00 | 0 | 99.5 | 67 | 131 | 20.32 | 2.09 | 20 | |
| Isopropylbenzene | 19.570 | 1.0 | 20.00 | 0 | 97.9 | 75 | 127 | 19.53 | 0.205 | 20 | |
| m,p-Xylene | 42.240 | 1.0 | 40.00 | 0 | 106 | 76 | 128 | 42.69 | 1.06 | 20 | |
| Methylene chloride | 23.810 | 1.0 | 20.00 | 0 | 119 | 63 | 137 | 22.33 | 6.42 | 20 | |
| MTBE | 23.020 | 1.0 | 20.00 | 0 | 115 | 65 | 123 | 21.04 | 8.99 | 20 | |
| n-Butylbenzene | 20.940 | 1.0 | 20.00 | 0 | 105 | 69 | 137 | 20.66 | 1.35 | 20 | |
| n-Propylbenzene | 20.520 | 1.0 | 20.00 | 0 | 103 | 72 | 129 | 20.86 | 1.64 | 20 | |
| Naphthalene | 21.650 | 1.0 | 20.00 | 0 | 108 | 54 | 138 | 18.70 | 14.6 | 20 | |
| o-Xylene | 20.620 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | 20.36 | 1.27 | 20 | |
| sec-Butylbenzene | 20.330 | 1.0 | 20.00 | 0 | 102 | 72 | 127 | 19.90 | 2.14 | 20 | |
| Styrene | 21.060 | 1.0 | 20.00 | 0 | 105 | 65 | 134 | 21.40 | 1.60 | 20 | |
| tert-Butylbenzene | 21.210 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | 21.19 | 0.0943 | 20 | |
| Tetrachloroethene | 18.850 | 1.0 | 20.00 | 0 | 94.3 | 66 | 128 | 18.96 | 0.582 | 20 | |
| Toluene | 20.030 | 0.50 | 20.00 | 0 | 100 | 77 | 122 | 19.92 | 0.551 | 20 | |
| trans-1,2-Dichloroethene | 19.290 | 1.0 | 20.00 | 0 | 96.5 | 63 | 137 | 18.28 | 5.38 | 20 | |
| trans-1,3-Dichloropropene | 21.810 | 1.0 | 20.00 | 0 | 109 | 59 | 135 | 22.50 | 3.11 | 20 | |
| Trichloroethene | 18.850 | 1.0 | 20.00 | 0 | 94.3 | 70 | 127 | 19.20 | 1.84 | 20 | |
| Trichlorofluoromethane | 20.280 | 1.0 | 20.00 | 0 | 101 | 57 | 129 | 19.28 | 5.06 | 20 | |
| Vinyl chloride | 22.410 | 0.50 | 20.00 | 0 | 112 | 50 | 134 | 20.17 | 10.5 | 20 | |
| Xylenes, Total | 62.860 | 2.0 | 60.00 | 0 | 105 | 75 | 125 | 63.05 | 0.302 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 28.690 | | 25.00 | | 115 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 26.150 | | 25.00 | | 105 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 28.510 | | 25.00 | | 114 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.540 | | 25.00 | | 102 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060381**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.090 | 0.50 | 20.00 | 0 | 95.4 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.030 | 1.0 | 20.00 | 0 | 100 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.490 | 0.50 | 20.00 | 0 | 102 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 20.690 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.070 | 1.0 | 20.00 | 0 | 100 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 20.120 | 1.0 | 20.00 | 0 | 101 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.940 | 1.0 | 20.00 | 0 | 99.7 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.790 | 1.0 | 20.00 | 0 | 104 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 20.160 | 1.0 | 20.00 | 0 | 101 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 18.810 | 1.0 | 20.00 | 0 | 94.1 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.670 | 1.0 | 20.00 | 0 | 103 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 24.740 | 2.0 | 20.00 | 0 | 124 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.780 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 18.450 | 1.0 | 20.00 | 0 | 92.2 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.690 | 0.50 | 20.00 | 0 | 98.4 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 19.680 | 1.0 | 20.00 | 0 | 98.4 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.610 | 1.0 | 20.00 | 0 | 103 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 18.110 | 1.0 | 20.00 | 0 | 90.6 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 20.780 | 1.0 | 20.00 | 0 | 104 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 18.760 | 0.50 | 20.00 | 0 | 93.8 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.480 | 1.0 | 20.00 | 0 | 92.4 | 69 | 137 | | | | |
| 2-Butanone | 239.080 | 10 | 200.0 | 0 | 120 | 49 | 136 | | | | |
| 2-Chlorotoluene | 18.430 | 1.0 | 20.00 | 0 | 92.2 | 73 | 126 | | | | |
| 4-Chlorotoluene | 19.440 | 1.0 | 20.00 | 0 | 97.2 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.140 | 1.0 | 20.00 | 0 | 95.7 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 251.540 | 10 | 200.0 | 0 | 126 | 58 | 134 | | | | |
| Acetone | 257.520 | 10 | 200.0 | 7.450 | 125 | 40 | 135 | | | | |
| Acrolein | 203.580 | 20 | 200.0 | 0 | 102 | 75 | 125 | | | | |
| Acrylonitrile | 223.400 | 20 | 200.0 | 0 | 112 | 75 | 125 | | | | |
| Benzene | 19.460 | 0.50 | 20.00 | 0 | 97.3 | 81 | 122 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060381**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 18.770 | 1.0 | 20.00 | 0 | 93.8 | 76 | 124 | | | | |
| Bromochloromethane | 21.120 | 1.0 | 20.00 | 0 | 106 | 65 | 129 | | | | |
| Bromodichloromethane | 18.360 | 0.50 | 20.00 | 0.3100 | 90.3 | 76 | 121 | | | | |
| Bromoform | 20.900 | 1.0 | 20.00 | 0 | 104 | 69 | 128 | | | | |
| Bromomethane | 20.900 | 1.0 | 20.00 | 0 | 104 | 53 | 141 | | | | |
| Carbon disulfide | 21.640 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.960 | 0.50 | 20.00 | 0 | 99.8 | 66 | 138 | | | | |
| Chlorobenzene | 18.940 | 0.50 | 20.00 | 0 | 94.7 | 81 | 122 | | | | |
| Chloroethane | 21.510 | 1.0 | 20.00 | 0 | 108 | 58 | 133 | | | | |
| Chloroform | 18.910 | 1.0 | 20.00 | 0 | 94.6 | 69 | 128 | | | | |
| Chloromethane | 21.770 | 1.0 | 20.00 | 0 | 109 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 19.530 | 1.0 | 20.00 | 0 | 97.6 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 20.830 | 0.50 | 20.00 | 0 | 104 | 69 | 131 | | | | |
| Dibromochloromethane | 19.840 | 0.50 | 20.00 | 0 | 99.2 | 66 | 133 | | | | |
| Dibromomethane | 18.670 | 1.0 | 20.00 | 0 | 93.4 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.210 | 1.0 | 20.00 | 0 | 86.1 | 53 | 153 | | | | |
| Ethylbenzene | 19.470 | 1.0 | 20.00 | 0 | 97.4 | 73 | 127 | | | | |
| Freon-113 | 20.840 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| Hexachlorobutadiene | 18.390 | 0.50 | 20.00 | 0 | 92.0 | 67 | 131 | | | | |
| Isopropylbenzene | 18.770 | 1.0 | 20.00 | 0 | 93.8 | 75 | 127 | | | | |
| m,p-Xylene | 41.990 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | | | | |
| Methylene chloride | 21.630 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | | | | |
| MTBE | 21.790 | 1.0 | 20.00 | 0 | 109 | 65 | 123 | | | | |
| n-Butylbenzene | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 69 | 137 | | | | |
| n-Propylbenzene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 72 | 129 | | | | |
| Naphthalene | 18.250 | 1.0 | 20.00 | 0 | 91.2 | 54 | 138 | | | | |
| o-Xylene | 20.280 | 1.0 | 20.00 | 0 | 101 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.770 | 1.0 | 20.00 | 0 | 98.8 | 72 | 127 | | | | |
| Styrene | 15.210 | 1.0 | 20.00 | 0 | 76.1 | 65 | 134 | | | | |
| tert-Butylbenzene | 19.500 | 1.0 | 20.00 | 0 | 97.5 | 70 | 129 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060381**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.770 | 1.0 | 20.00 | 0 | 93.8 | 66 | 128 | | | | |
| Toluene | 19.520 | 0.50 | 20.00 | 0 | 97.6 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 18.470 | 1.0 | 20.00 | 0 | 92.4 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 20.880 | 1.0 | 20.00 | 0 | 104 | 59 | 135 | | | | |
| Trichloroethene | 18.100 | 1.0 | 20.00 | 0 | 90.5 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.170 | 1.0 | 20.00 | 0 | 95.9 | 57 | 129 | | | | |
| Vinyl chloride | 20.960 | 0.50 | 20.00 | 0 | 105 | 50 | 134 | | | | |
| Xylenes, Total | 62.270 | 2.0 | 60.00 | 0 | 104 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.400 | | 25.00 | | 106 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 26.110 | | 25.00 | | 104 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.810 | | 25.00 | | 107 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 25.410 | | 25.00 | | 102 | 81 | 120 | | | | |

Sample ID: **N043470-003DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060382**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.160 | 0.50 | 20.00 | 0 | 95.8 | 81 | 129 | 19.09 | 0.366 | 20 | |
| 1,1,1-Trichloroethane | 20.090 | 1.0 | 20.00 | 0 | 100 | 67 | 132 | 20.03 | 0.299 | 20 | |
| 1,1,2,2-Tetrachloroethane | 21.650 | 0.50 | 20.00 | 0 | 108 | 63 | 128 | 20.49 | 5.51 | 20 | |
| 1,1,2-Trichloroethane | 20.320 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | 20.69 | 1.80 | 20 | |
| 1,1-Dichloroethane | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 69 | 133 | 20.07 | 1.30 | 20 | |
| 1,1-Dichloroethene | 19.320 | 1.0 | 20.00 | 0 | 96.6 | 68 | 130 | 20.12 | 4.06 | 20 | |
| 1,1-Dichloropropene | 19.100 | 1.0 | 20.00 | 0 | 95.5 | 73 | 132 | 19.94 | 4.30 | 20 | |
| 1,2,3-Trichlorobenzene | 21.060 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | 20.79 | 1.29 | 20 | |
| 1,2,3-Trichloropropane | 21.160 | 1.0 | 20.00 | 0 | 106 | 73 | 124 | 20.16 | 4.84 | 20 | |
| 1,2,4-Trichlorobenzene | 19.090 | 1.0 | 20.00 | 0 | 95.4 | 66 | 134 | 18.81 | 1.48 | 20 | |
| 1,2,4-Trimethylbenzene | 21.840 | 1.0 | 20.00 | 0 | 109 | 74 | 132 | 20.67 | 5.50 | 20 | |
| 1,2-Dibromo-3-chloropropane | 24.650 | 2.0 | 20.00 | 0 | 123 | 50 | 132 | 24.74 | 0.364 | 20 | |
| 1,2-Dibromoethane | 20.730 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | 20.78 | 0.241 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060382**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 71 | 122 | 18.45 | 6.86 | 20 | |
| 1,2-Dichloroethane | 19.880 | 0.50 | 20.00 | 0 | 99.4 | 69 | 132 | 19.69 | 0.960 | 20 | |
| 1,2-Dichloropropane | 18.890 | 1.0 | 20.00 | 0 | 94.4 | 75 | 125 | 19.68 | 4.10 | 20 | |
| 1,3,5-Trimethylbenzene | 21.220 | 1.0 | 20.00 | 0 | 106 | 74 | 131 | 20.61 | 2.92 | 20 | |
| 1,3-Dichlorobenzene | 19.010 | 1.0 | 20.00 | 0 | 95.1 | 75 | 124 | 18.11 | 4.85 | 20 | |
| 1,3-Dichloropropane | 22.320 | 1.0 | 20.00 | 0 | 112 | 73 | 126 | 20.78 | 7.15 | 20 | |
| 1,4-Dichlorobenzene | 19.400 | 0.50 | 20.00 | 0 | 97.0 | 74 | 123 | 18.76 | 3.35 | 20 | |
| 2,2-Dichloropropane | 18.880 | 1.0 | 20.00 | 0 | 94.4 | 69 | 137 | 18.48 | 2.14 | 20 | |
| 2-Butanone | 238.360 | 10 | 200.0 | 0 | 119 | 49 | 136 | 239.1 | 0.302 | 20 | |
| 2-Chlorotoluene | 19.230 | 1.0 | 20.00 | 0 | 96.2 | 73 | 126 | 18.43 | 4.25 | 20 | |
| 4-Chlorotoluene | 20.330 | 1.0 | 20.00 | 0 | 102 | 74 | 128 | 19.44 | 4.48 | 20 | |
| 4-Isopropyltoluene | 19.670 | 1.0 | 20.00 | 0 | 98.4 | 73 | 130 | 19.14 | 2.73 | 20 | |
| 4-Methyl-2-pentanone | 245.060 | 10 | 200.0 | 0 | 123 | 58 | 134 | 251.5 | 2.61 | 20 | |
| Acetone | 230.040 | 10 | 200.0 | 7.450 | 111 | 40 | 135 | 257.5 | 11.3 | 20 | |
| Acrolein | 214.470 | 20 | 200.0 | 0 | 107 | 75 | 125 | 203.6 | 5.21 | 20 | |
| Acrylonitrile | 224.720 | 20 | 200.0 | 0 | 112 | 75 | 125 | 223.4 | 0.589 | 20 | |
| Benzene | 19.070 | 0.50 | 20.00 | 0 | 95.4 | 81 | 122 | 19.46 | 2.02 | 20 | |
| Bromobenzene | 18.520 | 1.0 | 20.00 | 0 | 92.6 | 76 | 124 | 18.77 | 1.34 | 20 | |
| Bromochloromethane | 21.000 | 1.0 | 20.00 | 0 | 105 | 65 | 129 | 21.12 | 0.570 | 20 | |
| Bromodichloromethane | 18.770 | 0.50 | 20.00 | 0.3100 | 92.3 | 76 | 121 | 18.36 | 2.21 | 20 | |
| Bromoform | 20.190 | 1.0 | 20.00 | 0 | 101 | 69 | 128 | 20.90 | 3.46 | 20 | |
| Bromomethane | 21.580 | 1.0 | 20.00 | 0 | 108 | 53 | 141 | 20.90 | 3.20 | 20 | |
| Carbon disulfide | 21.520 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | 21.64 | 0.556 | 20 | |
| Carbon tetrachloride | 19.480 | 0.50 | 20.00 | 0 | 97.4 | 66 | 138 | 19.96 | 2.43 | 20 | |
| Chlorobenzene | 18.850 | 0.50 | 20.00 | 0 | 94.3 | 81 | 122 | 18.94 | 0.476 | 20 | |
| Chloroethane | 21.950 | 1.0 | 20.00 | 0 | 110 | 58 | 133 | 21.51 | 2.02 | 20 | |
| Chloroform | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 69 | 128 | 18.91 | 4.24 | 20 | |
| Chloromethane | 21.450 | 1.0 | 20.00 | 0 | 107 | 56 | 131 | 21.77 | 1.48 | 20 | |
| cis-1,2-Dichloroethene | 20.410 | 1.0 | 20.00 | 0 | 102 | 72 | 126 | 19.53 | 4.41 | 20 | |
| cis-1,3-Dichloropropene | 20.820 | 0.50 | 20.00 | 0 | 104 | 69 | 131 | 20.83 | 0.0480 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-003DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060382**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.400 | 0.50 | 20.00 | 0 | 97.0 | 66 | 133 | 19.84 | 2.24 | 20 | |
| Dibromomethane | 19.780 | 1.0 | 20.00 | 0 | 98.9 | 76 | 125 | 18.67 | 5.77 | 20 | |
| Dichlorodifluoromethane | 17.680 | 1.0 | 20.00 | 0 | 88.4 | 53 | 153 | 17.21 | 2.69 | 20 | |
| Ethylbenzene | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 73 | 127 | 19.47 | 0.0513 | 20 | |
| Freon-113 | 20.380 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | 20.84 | 2.23 | 20 | |
| Hexachlorobutadiene | 18.810 | 0.50 | 20.00 | 0 | 94.1 | 67 | 131 | 18.39 | 2.26 | 20 | |
| Isopropylbenzene | 20.190 | 1.0 | 20.00 | 0 | 101 | 75 | 127 | 18.77 | 7.29 | 20 | |
| m,p-Xylene | 41.840 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | 41.99 | 0.358 | 20 | |
| Methylene chloride | 21.520 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | 21.63 | 0.510 | 20 | |
| MTBE | 22.560 | 1.0 | 20.00 | 0 | 113 | 65 | 123 | 21.79 | 3.47 | 20 | |
| n-Butylbenzene | 20.400 | 1.0 | 20.00 | 0 | 102 | 69 | 137 | 19.97 | 2.13 | 20 | |
| n-Propylbenzene | 20.640 | 1.0 | 20.00 | 0 | 103 | 72 | 129 | 19.89 | 3.70 | 20 | |
| Naphthalene | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 54 | 138 | 18.25 | 6.37 | 20 | |
| o-Xylene | 20.000 | 1.0 | 20.00 | 0 | 100 | 80 | 121 | 20.28 | 1.39 | 20 | |
| sec-Butylbenzene | 19.960 | 1.0 | 20.00 | 0 | 99.8 | 72 | 127 | 19.77 | 0.956 | 20 | |
| Styrene | 16.610 | 1.0 | 20.00 | 0 | 83.0 | 65 | 134 | 15.21 | 8.80 | 20 | |
| tert-Butylbenzene | 20.400 | 1.0 | 20.00 | 0 | 102 | 70 | 129 | 19.50 | 4.51 | 20 | |
| Tetrachloroethene | 17.990 | 1.0 | 20.00 | 0 | 90.0 | 66 | 128 | 18.77 | 4.24 | 20 | |
| Toluene | 19.140 | 0.50 | 20.00 | 0 | 95.7 | 77 | 122 | 19.52 | 1.97 | 20 | |
| trans-1,2-Dichloroethene | 18.970 | 1.0 | 20.00 | 0 | 94.8 | 63 | 137 | 18.47 | 2.67 | 20 | |
| trans-1,3-Dichloropropene | 20.920 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | 20.88 | 0.191 | 20 | |
| Trichloroethene | 18.540 | 1.0 | 20.00 | 0 | 92.7 | 70 | 127 | 18.10 | 2.40 | 20 | |
| Trichlorofluoromethane | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 57 | 129 | 19.17 | 1.50 | 20 | |
| Vinyl chloride | 20.760 | 0.50 | 20.00 | 0 | 104 | 50 | 134 | 20.96 | 0.959 | 20 | |
| Xylenes, Total | 61.840 | 2.0 | 60.00 | 0 | 103 | 75 | 125 | 62.27 | 0.693 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 26.690 | | 25.00 | | 107 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 26.670 | | 25.00 | | 107 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 27.510 | | 25.00 | | 110 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.200 | | 25.00 | | 101 | 81 | 120 | | 0 | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060383**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.540 | 0.50 | 20.00 | 0 | 92.7 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.140 | 1.0 | 20.00 | 0 | 106 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.760 | 0.50 | 20.00 | 0 | 104 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 19.700 | 1.0 | 20.00 | 0 | 98.5 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.270 | 1.0 | 20.00 | 0 | 101 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 20.160 | 1.0 | 20.00 | 0 | 101 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 19.830 | 1.0 | 20.00 | 0 | 99.2 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.660 | 1.0 | 20.00 | 0 | 103 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 19.120 | 1.0 | 20.00 | 0 | 95.6 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 18.890 | 1.0 | 20.00 | 0 | 94.4 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 21.140 | 1.0 | 20.00 | 0 | 106 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.040 | 2.0 | 20.00 | 0 | 105 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 19.040 | 1.0 | 20.00 | 0 | 95.2 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.880 | 0.50 | 20.00 | 0 | 99.4 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 18.890 | 1.0 | 20.00 | 0 | 94.4 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.780 | 1.0 | 20.00 | 0 | 104 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 18.330 | 1.0 | 20.00 | 0 | 91.7 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.620 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 18.600 | 0.50 | 20.00 | 0 | 93.0 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.330 | 1.0 | 20.00 | 0 | 91.7 | 69 | 137 | | | | |
| 2-Butanone | 235.980 | 10 | 200.0 | 0 | 118 | 49 | 136 | | | | |
| 2-Chlorotoluene | 18.920 | 1.0 | 20.00 | 0 | 94.6 | 73 | 126 | | | | |
| 4-Chlorotoluene | 19.520 | 1.0 | 20.00 | 0 | 97.6 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.080 | 1.0 | 20.00 | 0 | 95.4 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 251.650 | 10 | 200.0 | 0 | 126 | 58 | 134 | | | | |
| Acetone | 267.430 | 10 | 200.0 | 12.64 | 127 | 40 | 135 | | | | |
| Acrolein | 211.180 | 20 | 200.0 | 0 | 106 | 75 | 125 | | | | |
| Acrylonitrile | 229.320 | 20 | 200.0 | 0 | 115 | 75 | 125 | | | | |
| Benzene | 19.640 | 0.50 | 20.00 | 0 | 98.2 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060383**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 18.570 | 1.0 | 20.00 | 0 | 92.8 | 76 | 124 | | | | |
| Bromochloromethane | 22.310 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | | | | |
| Bromodichloromethane | 18.860 | 0.50 | 20.00 | 0 | 94.3 | 76 | 121 | | | | |
| Bromoform | 20.750 | 1.0 | 20.00 | 0 | 104 | 69 | 128 | | | | |
| Bromomethane | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 53 | 141 | | | | |
| Carbon disulfide | 22.060 | 1.0 | 20.00 | 0 | 110 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.860 | 0.50 | 20.00 | 0 | 99.3 | 66 | 138 | | | | |
| Chlorobenzene | 19.390 | 0.50 | 20.00 | 0 | 97.0 | 81 | 122 | | | | |
| Chloroethane | 23.070 | 1.0 | 20.00 | 0 | 115 | 58 | 133 | | | | |
| Chloroform | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 69 | 128 | | | | |
| Chloromethane | 21.190 | 1.0 | 20.00 | 0 | 106 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.570 | 1.0 | 20.00 | 0 | 103 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 20.850 | 0.50 | 20.00 | 0 | 104 | 69 | 131 | | | | |
| Dibromochloromethane | 19.230 | 0.50 | 20.00 | 0 | 96.2 | 66 | 133 | | | | |
| Dibromomethane | 20.310 | 1.0 | 20.00 | 0 | 102 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.290 | 1.0 | 20.00 | 0 | 86.5 | 53 | 153 | | | | |
| Ethylbenzene | 19.370 | 1.0 | 20.00 | 0 | 96.9 | 73 | 127 | | | | |
| Freon-113 | 21.170 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | | | | |
| Hexachlorobutadiene | 18.240 | 0.50 | 20.00 | 0 | 91.2 | 67 | 131 | | | | |
| Isopropylbenzene | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 75 | 127 | | | | |
| m,p-Xylene | 41.320 | 1.0 | 40.00 | 0 | 103 | 76 | 128 | | | | |
| Methylene chloride | 23.220 | 1.0 | 20.00 | 0 | 116 | 63 | 137 | | | | |
| MTBE | 22.670 | 1.0 | 20.00 | 0 | 113 | 65 | 123 | | | | |
| n-Butylbenzene | 19.960 | 1.0 | 20.00 | 0 | 99.8 | 69 | 137 | | | | |
| n-Propylbenzene | 20.480 | 1.0 | 20.00 | 0 | 102 | 72 | 129 | | | | |
| Naphthalene | 19.960 | 1.0 | 20.00 | 0 | 99.8 | 54 | 138 | | | | |
| o-Xylene | 20.190 | 1.0 | 20.00 | 0 | 101 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.400 | 1.0 | 20.00 | 0 | 97.0 | 72 | 127 | | | | |
| Styrene | 20.240 | 1.0 | 20.00 | 0 | 101 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.570 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060383**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 17.480 | 1.0 | 20.00 | 0 | 87.4 | 66 | 128 | | | | |
| Toluene | 19.220 | 0.50 | 20.00 | 0 | 96.1 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.080 | 1.0 | 20.00 | 0 | 95.4 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 21.640 | 1.0 | 20.00 | 0 | 108 | 59 | 135 | | | | |
| Trichloroethene | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.560 | 1.0 | 20.00 | 0 | 97.8 | 57 | 129 | | | | |
| Vinyl chloride | 20.650 | 0.50 | 20.00 | 0 | 103 | 50 | 134 | | | | |
| Xylenes, Total | 61.510 | 2.0 | 60.00 | 0 | 103 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.010 | | 25.00 | | 108 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.660 | | 25.00 | | 103 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 28.610 | | 25.00 | | 114 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.100 | | 25.00 | | 104 | 81 | 120 | | | | |

Sample ID: **N043470-006DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060384**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.910 | 0.50 | 20.00 | 0 | 94.6 | 81 | 129 | 18.54 | 1.98 | 20 | |
| 1,1,1-Trichloroethane | 22.170 | 1.0 | 20.00 | 0 | 111 | 67 | 132 | 21.14 | 4.76 | 20 | |
| 1,1,2,2-Tetrachloroethane | 21.400 | 0.50 | 20.00 | 0 | 107 | 63 | 128 | 20.76 | 3.04 | 20 | |
| 1,1,2-Trichloroethane | 20.730 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | 19.70 | 5.10 | 20 | |
| 1,1-Dichloroethane | 20.680 | 1.0 | 20.00 | 0 | 103 | 69 | 133 | 20.27 | 2.00 | 20 | |
| 1,1-Dichloroethene | 20.030 | 1.0 | 20.00 | 0 | 100 | 68 | 130 | 20.16 | 0.647 | 20 | |
| 1,1-Dichloropropene | 20.400 | 1.0 | 20.00 | 0 | 102 | 73 | 132 | 19.83 | 2.83 | 20 | |
| 1,2,3-Trichlorobenzene | 22.050 | 1.0 | 20.00 | 0 | 110 | 67 | 137 | 20.66 | 6.51 | 20 | |
| 1,2,3-Trichloropropane | 20.240 | 1.0 | 20.00 | 0 | 101 | 73 | 124 | 19.12 | 5.69 | 20 | |
| 1,2,4-Trichlorobenzene | 20.050 | 1.0 | 20.00 | 0 | 100 | 66 | 134 | 18.89 | 5.96 | 20 | |
| 1,2,4-Trimethylbenzene | 22.240 | 1.0 | 20.00 | 0 | 111 | 74 | 132 | 21.14 | 5.07 | 20 | |
| 1,2-Dibromo-3-chloropropane | 22.940 | 2.0 | 20.00 | 0 | 115 | 50 | 132 | 21.04 | 8.64 | 20 | |
| 1,2-Dibromoethane | 20.390 | 1.0 | 20.00 | 0 | 102 | 80 | 121 | 20.85 | 2.23 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060384**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 71 | 122 | 19.04 | 3.56 | 20 | |
| 1,2-Dichloroethane | 19.460 | 0.50 | 20.00 | 0 | 97.3 | 69 | 132 | 19.88 | 2.14 | 20 | |
| 1,2-Dichloropropane | 20.410 | 1.0 | 20.00 | 0 | 102 | 75 | 125 | 18.89 | 7.74 | 20 | |
| 1,3,5-Trimethylbenzene | 21.670 | 1.0 | 20.00 | 0 | 108 | 74 | 131 | 20.78 | 4.19 | 20 | |
| 1,3-Dichlorobenzene | 19.060 | 1.0 | 20.00 | 0 | 95.3 | 75 | 124 | 18.33 | 3.90 | 20 | |
| 1,3-Dichloropropane | 21.340 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | 21.62 | 1.30 | 20 | |
| 1,4-Dichlorobenzene | 19.660 | 0.50 | 20.00 | 0 | 98.3 | 74 | 123 | 18.60 | 5.54 | 20 | |
| 2,2-Dichloropropane | 18.750 | 1.0 | 20.00 | 0 | 93.8 | 69 | 137 | 18.33 | 2.27 | 20 | |
| 2-Butanone | 234.850 | 10 | 200.0 | 0 | 117 | 49 | 136 | 236.0 | 0.480 | 20 | |
| 2-Chlorotoluene | 19.240 | 1.0 | 20.00 | 0 | 96.2 | 73 | 126 | 18.92 | 1.68 | 20 | |
| 4-Chlorotoluene | 20.670 | 1.0 | 20.00 | 0 | 103 | 74 | 128 | 19.52 | 5.72 | 20 | |
| 4-Isopropyltoluene | 20.250 | 1.0 | 20.00 | 0 | 101 | 73 | 130 | 19.08 | 5.95 | 20 | |
| 4-Methyl-2-pentanone | 255.640 | 10 | 200.0 | 0 | 128 | 58 | 134 | 251.6 | 1.57 | 20 | |
| Acetone | 227.160 | 10 | 200.0 | 12.64 | 107 | 40 | 135 | 267.4 | 16.3 | 20 | |
| Acrolein | 216.900 | 20 | 200.0 | 0 | 108 | 75 | 125 | 211.2 | 2.67 | 20 | |
| Acrylonitrile | 229.170 | 20 | 200.0 | 0 | 115 | 75 | 125 | 229.3 | 0.0654 | 20 | |
| Benzene | 20.160 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 19.64 | 2.61 | 20 | |
| Bromobenzene | 19.290 | 1.0 | 20.00 | 0 | 96.5 | 76 | 124 | 18.57 | 3.80 | 20 | |
| Bromochloromethane | 22.410 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | 22.31 | 0.447 | 20 | |
| Bromodichloromethane | 19.440 | 0.50 | 20.00 | 0 | 97.2 | 76 | 121 | 18.86 | 3.03 | 20 | |
| Bromoform | 21.340 | 1.0 | 20.00 | 0 | 107 | 69 | 128 | 20.75 | 2.80 | 20 | |
| Bromomethane | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 53 | 141 | 19.61 | 0.665 | 20 | |
| Carbon disulfide | 22.710 | 1.0 | 20.00 | 0 | 114 | 75 | 125 | 22.06 | 2.90 | 20 | |
| Carbon tetrachloride | 20.490 | 0.50 | 20.00 | 0 | 102 | 66 | 138 | 19.86 | 3.12 | 20 | |
| Chlorobenzene | 19.160 | 0.50 | 20.00 | 0 | 95.8 | 81 | 122 | 19.39 | 1.19 | 20 | |
| Chloroethane | 23.400 | 1.0 | 20.00 | 0 | 117 | 58 | 133 | 23.07 | 1.42 | 20 | |
| Chloroform | 20.720 | 1.0 | 20.00 | 0 | 104 | 69 | 128 | 19.84 | 4.34 | 20 | |
| Chloromethane | 22.280 | 1.0 | 20.00 | 0 | 111 | 56 | 131 | 21.19 | 5.01 | 20 | |
| cis-1,2-Dichloroethene | 21.200 | 1.0 | 20.00 | 0 | 106 | 72 | 126 | 20.57 | 3.02 | 20 | |
| cis-1,3-Dichloropropene | 20.620 | 0.50 | 20.00 | 0 | 103 | 69 | 131 | 20.85 | 1.11 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-006DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060384**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.660 | 0.50 | 20.00 | 0 | 98.3 | 66 | 133 | 19.23 | 2.21 | 20 | |
| Dibromomethane | 20.220 | 1.0 | 20.00 | 0 | 101 | 76 | 125 | 20.31 | 0.444 | 20 | |
| Dichlorodifluoromethane | 17.880 | 1.0 | 20.00 | 0 | 89.4 | 53 | 153 | 17.29 | 3.36 | 20 | |
| Ethylbenzene | 19.470 | 1.0 | 20.00 | 0 | 97.4 | 73 | 127 | 19.37 | 0.515 | 20 | |
| Freon-113 | 21.570 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | 21.17 | 1.87 | 20 | |
| Hexachlorobutadiene | 20.560 | 0.50 | 20.00 | 0 | 103 | 67 | 131 | 18.24 | 12.0 | 20 | |
| Isopropylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 75 | 127 | 19.35 | 2.80 | 20 | |
| m,p-Xylene | 42.250 | 1.0 | 40.00 | 0 | 106 | 76 | 128 | 41.32 | 2.23 | 20 | |
| Methylene chloride | 23.800 | 1.0 | 20.00 | 0 | 119 | 63 | 137 | 23.22 | 2.47 | 20 | |
| MTBE | 22.880 | 1.0 | 20.00 | 0 | 114 | 65 | 123 | 22.67 | 0.922 | 20 | |
| n-Butylbenzene | 20.940 | 1.0 | 20.00 | 0 | 105 | 69 | 137 | 19.96 | 4.79 | 20 | |
| n-Propylbenzene | 20.740 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | 20.48 | 1.26 | 20 | |
| Naphthalene | 20.430 | 1.0 | 20.00 | 0 | 102 | 54 | 138 | 19.96 | 2.33 | 20 | |
| o-Xylene | 20.480 | 1.0 | 20.00 | 0 | 102 | 80 | 121 | 20.19 | 1.43 | 20 | |
| sec-Butylbenzene | 20.130 | 1.0 | 20.00 | 0 | 101 | 72 | 127 | 19.40 | 3.69 | 20 | |
| Styrene | 20.730 | 1.0 | 20.00 | 0 | 104 | 65 | 134 | 20.24 | 2.39 | 20 | |
| tert-Butylbenzene | 21.110 | 1.0 | 20.00 | 0 | 106 | 70 | 129 | 20.57 | 2.59 | 20 | |
| Tetrachloroethene | 18.550 | 1.0 | 20.00 | 0 | 92.8 | 66 | 128 | 17.48 | 5.94 | 20 | |
| Toluene | 19.690 | 0.50 | 20.00 | 0 | 98.4 | 77 | 122 | 19.22 | 2.42 | 20 | |
| trans-1,2-Dichloroethene | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 63 | 137 | 19.08 | 2.07 | 20 | |
| trans-1,3-Dichloropropene | 22.200 | 1.0 | 20.00 | 0 | 111 | 59 | 135 | 21.64 | 2.55 | 20 | |
| Trichloroethene | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 70 | 127 | 19.00 | 0 | 20 | |
| Trichlorofluoromethane | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 57 | 129 | 19.56 | 1.27 | 20 | |
| Vinyl chloride | 21.420 | 0.50 | 20.00 | 0 | 107 | 50 | 134 | 20.65 | 3.66 | 20 | |
| Xylenes, Total | 62.730 | 2.0 | 60.00 | 0 | 105 | 75 | 125 | 61.51 | 1.96 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 27.390 | | 25.00 | | 110 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 25.740 | | 25.00 | | 103 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 29.680 | | 25.00 | | 119 | 85 | 115 | | 0 | | S |
| Surr: Toluene-d8 | 26.370 | | 25.00 | | 105 | 81 | 120 | | 0 | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060385**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.900 | 0.50 | 20.00 | 0 | 94.5 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.240 | 1.0 | 20.00 | 0 | 106 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.070 | 0.50 | 20.00 | 0 | 100 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 20.240 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.550 | 1.0 | 20.00 | 0 | 103 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 20.020 | 1.0 | 20.00 | 0 | 100 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.950 | 1.0 | 20.00 | 0 | 105 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.540 | 1.0 | 20.00 | 0 | 103 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 20.470 | 1.0 | 20.00 | 0 | 102 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 19.240 | 1.0 | 20.00 | 0 | 96.2 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 21.840 | 1.0 | 20.00 | 0 | 109 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.690 | 2.0 | 20.00 | 0 | 108 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.570 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 19.130 | 1.0 | 20.00 | 0 | 95.7 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.010 | 0.50 | 20.00 | 0 | 100 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 21.500 | 1.0 | 20.00 | 0 | 108 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 18.800 | 1.0 | 20.00 | 0 | 94.0 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 20.450 | 1.0 | 20.00 | 0 | 102 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.360 | 0.50 | 20.00 | 0 | 96.8 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 18.030 | 1.0 | 20.00 | 0 | 90.2 | 69 | 137 | | | | |
| 2-Butanone | 231.380 | 10 | 200.0 | 0 | 116 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.400 | 1.0 | 20.00 | 0 | 97.0 | 73 | 126 | | | | |
| 4-Chlorotoluene | 19.780 | 1.0 | 20.00 | 0 | 98.9 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 20.110 | 1.0 | 20.00 | 0 | 101 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 245.440 | 10 | 200.0 | 0 | 123 | 58 | 134 | | | | |
| Acetone | 265.310 | 10 | 200.0 | 14.47 | 125 | 40 | 135 | | | | |
| Acrolein | 206.490 | 20 | 200.0 | 0 | 103 | 75 | 125 | | | | |
| Acrylonitrile | 226.050 | 20 | 200.0 | 0 | 113 | 75 | 125 | | | | |
| Benzene | 20.000 | 0.50 | 20.00 | 0 | 100 | 81 | 122 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060385**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 18.500 | 1.0 | 20.00 | 0 | 92.5 | 76 | 124 | | | | |
| Bromochloromethane | 20.290 | 1.0 | 20.00 | 0 | 101 | 65 | 129 | | | | |
| Bromodichloromethane | 19.390 | 0.50 | 20.00 | 0 | 97.0 | 76 | 121 | | | | |
| Bromoform | 19.880 | 1.0 | 20.00 | 0 | 99.4 | 69 | 128 | | | | |
| Bromomethane | 20.480 | 1.0 | 20.00 | 0 | 102 | 53 | 141 | | | | |
| Carbon disulfide | 21.660 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.180 | 0.50 | 20.00 | 0 | 101 | 66 | 138 | | | | |
| Chlorobenzene | 18.880 | 0.50 | 20.00 | 0 | 94.4 | 81 | 122 | | | | |
| Chloroethane | 22.350 | 1.0 | 20.00 | 0 | 112 | 58 | 133 | | | | |
| Chloroform | 19.960 | 1.0 | 20.00 | 0.7200 | 96.2 | 69 | 128 | | | | |
| Chloromethane | 21.520 | 1.0 | 20.00 | 0 | 108 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 19.920 | 1.0 | 20.00 | 0 | 99.6 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.100 | 0.50 | 20.00 | 0 | 106 | 69 | 131 | | | | |
| Dibromochloromethane | 18.840 | 0.50 | 20.00 | 0 | 94.2 | 66 | 133 | | | | |
| Dibromomethane | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.640 | 1.0 | 20.00 | 0 | 88.2 | 53 | 153 | | | | |
| Ethylbenzene | 19.200 | 1.0 | 20.00 | 0 | 96.0 | 73 | 127 | | | | |
| Freon-113 | 21.400 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.190 | 0.50 | 20.00 | 0 | 96.0 | 67 | 131 | | | | |
| Isopropylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 75 | 127 | | | | |
| m,p-Xylene | 41.350 | 1.0 | 40.00 | 0 | 103 | 76 | 128 | | | | |
| Methylene chloride | 22.650 | 1.0 | 20.00 | 0 | 113 | 63 | 137 | | | | |
| MTBE | 22.100 | 1.0 | 20.00 | 0 | 110 | 65 | 123 | | | | |
| n-Butylbenzene | 21.080 | 1.0 | 20.00 | 0 | 105 | 69 | 137 | | | | |
| n-Propylbenzene | 20.690 | 1.0 | 20.00 | 0 | 103 | 72 | 129 | | | | |
| Naphthalene | 18.700 | 1.0 | 20.00 | 0 | 93.5 | 54 | 138 | | | | |
| o-Xylene | 20.380 | 1.0 | 20.00 | 0 | 102 | 80 | 121 | | | | |
| sec-Butylbenzene | 20.410 | 1.0 | 20.00 | 0 | 102 | 72 | 127 | | | | |
| Styrene | 17.480 | 1.0 | 20.00 | 0 | 87.4 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.660 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060385**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.760 | 1.0 | 20.00 | 0 | 93.8 | 66 | 128 | | | | |
| Toluene | 19.720 | 0.50 | 20.00 | 0 | 98.6 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.550 | 1.0 | 20.00 | 0 | 97.8 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 21.420 | 1.0 | 20.00 | 0 | 107 | 59 | 135 | | | | |
| Trichloroethene | 18.960 | 1.0 | 20.00 | 0 | 94.8 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.790 | 1.0 | 20.00 | 0 | 99.0 | 57 | 129 | | | | |
| Vinyl chloride | 21.270 | 0.50 | 20.00 | 0 | 106 | 50 | 134 | | | | |
| Xylenes, Total | 61.730 | 2.0 | 60.00 | 0 | 103 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.660 | | 25.00 | | 107 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 26.270 | | 25.00 | | 105 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 28.100 | | 25.00 | | 112 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.910 | | 25.00 | | 108 | 81 | 120 | | | | |

Sample ID: **N043470-001DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060386**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.810 | 0.50 | 20.00 | 0 | 99.0 | 81 | 129 | 18.90 | 4.70 | 20 | |
| 1,1,1-Trichloroethane | 21.290 | 1.0 | 20.00 | 0 | 106 | 67 | 132 | 21.24 | 0.235 | 20 | |
| 1,1,2,2-Tetrachloroethane | 22.050 | 0.50 | 20.00 | 0 | 110 | 63 | 128 | 20.07 | 9.40 | 20 | |
| 1,1,2-Trichloroethane | 20.170 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 20.24 | 0.346 | 20 | |
| 1,1-Dichloroethane | 20.130 | 1.0 | 20.00 | 0 | 101 | 69 | 133 | 20.55 | 2.06 | 20 | |
| 1,1-Dichloroethene | 20.530 | 1.0 | 20.00 | 0 | 103 | 68 | 130 | 20.02 | 2.52 | 20 | |
| 1,1-Dichloropropene | 20.020 | 1.0 | 20.00 | 0 | 100 | 73 | 132 | 20.95 | 4.54 | 20 | |
| 1,2,3-Trichlorobenzene | 22.040 | 1.0 | 20.00 | 0 | 110 | 67 | 137 | 20.54 | 7.05 | 20 | |
| 1,2,3-Trichloropropane | 22.730 | 1.0 | 20.00 | 0 | 114 | 73 | 124 | 20.47 | 10.5 | 20 | |
| 1,2,4-Trichlorobenzene | 20.000 | 1.0 | 20.00 | 0 | 100 | 66 | 134 | 19.24 | 3.87 | 20 | |
| 1,2,4-Trimethylbenzene | 22.900 | 1.0 | 20.00 | 0 | 114 | 74 | 132 | 21.84 | 4.74 | 20 | |
| 1,2-Dibromo-3-chloropropane | 24.800 | 2.0 | 20.00 | 0 | 124 | 50 | 132 | 21.69 | 13.4 | 20 | |
| 1,2-Dibromoethane | 20.640 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | 20.57 | 0.340 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060386**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 20.710 | 1.0 | 20.00 | 0 | 104 | 71 | 122 | 19.13 | 7.93 | 20 | |
| 1,2-Dichloroethane | 19.370 | 0.50 | 20.00 | 0 | 96.9 | 69 | 132 | 20.01 | 3.25 | 20 | |
| 1,2-Dichloropropane | 19.470 | 1.0 | 20.00 | 0 | 97.4 | 75 | 125 | 19.89 | 2.13 | 20 | |
| 1,3,5-Trimethylbenzene | 22.640 | 1.0 | 20.00 | 0 | 113 | 74 | 131 | 21.50 | 5.17 | 20 | |
| 1,3-Dichlorobenzene | 20.390 | 1.0 | 20.00 | 0 | 102 | 75 | 124 | 18.80 | 8.11 | 20 | |
| 1,3-Dichloropropane | 21.730 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | 20.45 | 6.07 | 20 | |
| 1,4-Dichlorobenzene | 20.320 | 0.50 | 20.00 | 0 | 102 | 74 | 123 | 19.36 | 4.84 | 20 | |
| 2,2-Dichloropropane | 17.750 | 1.0 | 20.00 | 0 | 88.8 | 69 | 137 | 18.03 | 1.57 | 20 | |
| 2-Butanone | 238.820 | 10 | 200.0 | 0 | 119 | 49 | 136 | 231.4 | 3.16 | 20 | |
| 2-Chlorotoluene | 20.850 | 1.0 | 20.00 | 0 | 104 | 73 | 126 | 19.40 | 7.20 | 20 | |
| 4-Chlorotoluene | 21.710 | 1.0 | 20.00 | 0 | 109 | 74 | 128 | 19.78 | 9.30 | 20 | |
| 4-Isopropyltoluene | 21.280 | 1.0 | 20.00 | 0 | 106 | 73 | 130 | 20.11 | 5.65 | 20 | |
| 4-Methyl-2-pentanone | 252.090 | 10 | 200.0 | 0 | 126 | 58 | 134 | 245.4 | 2.67 | 20 | |
| Acetone | 271.460 | 10 | 200.0 | 14.47 | 128 | 40 | 135 | 265.3 | 2.29 | 20 | |
| Acrolein | 212.280 | 20 | 200.0 | 0 | 106 | 75 | 125 | 206.5 | 2.77 | 20 | |
| Acrylonitrile | 231.390 | 20 | 200.0 | 0 | 116 | 75 | 125 | 226.0 | 2.33 | 20 | |
| Benzene | 20.180 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 20.00 | 0.896 | 20 | |
| Bromobenzene | 19.990 | 1.0 | 20.00 | 0 | 100 | 76 | 124 | 18.50 | 7.74 | 20 | |
| Bromochloromethane | 22.270 | 1.0 | 20.00 | 0 | 111 | 65 | 129 | 20.29 | 9.30 | 20 | |
| Bromodichloromethane | 19.480 | 0.50 | 20.00 | 0 | 97.4 | 76 | 121 | 19.39 | 0.463 | 20 | |
| Bromoform | 22.020 | 1.0 | 20.00 | 0 | 110 | 69 | 128 | 19.88 | 10.2 | 20 | |
| Bromomethane | 21.350 | 1.0 | 20.00 | 0 | 107 | 53 | 141 | 20.48 | 4.16 | 20 | |
| Carbon disulfide | 21.720 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | 21.66 | 0.277 | 20 | |
| Carbon tetrachloride | 20.470 | 0.50 | 20.00 | 0 | 102 | 66 | 138 | 20.18 | 1.43 | 20 | |
| Chlorobenzene | 19.870 | 0.50 | 20.00 | 0 | 99.4 | 81 | 122 | 18.88 | 5.11 | 20 | |
| Chloroethane | 21.540 | 1.0 | 20.00 | 0 | 108 | 58 | 133 | 22.35 | 3.69 | 20 | |
| Chloroform | 19.820 | 1.0 | 20.00 | 0.7200 | 95.5 | 69 | 128 | 19.96 | 0.704 | 20 | |
| Chloromethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 56 | 131 | 21.52 | 3.16 | 20 | |
| cis-1,2-Dichloroethene | 19.880 | 1.0 | 20.00 | 0 | 99.4 | 72 | 126 | 19.92 | 0.201 | 20 | |
| cis-1,3-Dichloropropene | 20.620 | 0.50 | 20.00 | 0 | 103 | 69 | 131 | 21.10 | 2.30 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
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E Value above quantitation range
R RPD outside accepted recovery limits
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H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-001DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060386**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 20.650 | 0.50 | 20.00 | 0 | 103 | 66 | 133 | 18.84 | 9.17 | 20 | |
| Dibromomethane | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 76 | 125 | 19.98 | 4.77 | 20 | |
| Dichlorodifluoromethane | 17.280 | 1.0 | 20.00 | 0 | 86.4 | 53 | 153 | 17.64 | 2.06 | 20 | |
| Ethylbenzene | 20.440 | 1.0 | 20.00 | 0 | 102 | 73 | 127 | 19.20 | 6.26 | 20 | |
| Freon-113 | 21.570 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | 21.40 | 0.791 | 20 | |
| Hexachlorobutadiene | 20.340 | 0.50 | 20.00 | 0 | 102 | 67 | 131 | 19.19 | 5.82 | 20 | |
| Isopropylbenzene | 21.080 | 1.0 | 20.00 | 0 | 105 | 75 | 127 | 19.90 | 5.76 | 20 | |
| m,p-Xylene | 43.520 | 1.0 | 40.00 | 0 | 109 | 76 | 128 | 41.35 | 5.11 | 20 | |
| Methylene chloride | 22.480 | 1.0 | 20.00 | 0 | 112 | 63 | 137 | 22.65 | 0.753 | 20 | |
| MTBE | 21.490 | 1.0 | 20.00 | 0 | 107 | 65 | 123 | 22.10 | 2.80 | 20 | |
| n-Butylbenzene | 22.560 | 1.0 | 20.00 | 0 | 113 | 69 | 137 | 21.08 | 6.78 | 20 | |
| n-Propylbenzene | 22.300 | 1.0 | 20.00 | 0 | 112 | 72 | 129 | 20.69 | 7.49 | 20 | |
| Naphthalene | 20.400 | 1.0 | 20.00 | 0 | 102 | 54 | 138 | 18.70 | 8.70 | 20 | |
| o-Xylene | 20.730 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | 20.38 | 1.70 | 20 | |
| sec-Butylbenzene | 21.750 | 1.0 | 20.00 | 0 | 109 | 72 | 127 | 20.41 | 6.36 | 20 | |
| Styrene | 18.390 | 1.0 | 20.00 | 0 | 92.0 | 65 | 134 | 17.48 | 5.07 | 20 | |
| tert-Butylbenzene | 22.550 | 1.0 | 20.00 | 0 | 113 | 70 | 129 | 20.66 | 8.75 | 20 | |
| Tetrachloroethene | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 66 | 128 | 18.76 | 3.10 | 20 | |
| Toluene | 19.630 | 0.50 | 20.00 | 0 | 98.2 | 77 | 122 | 19.72 | 0.457 | 20 | |
| trans-1,2-Dichloroethene | 19.420 | 1.0 | 20.00 | 0 | 97.1 | 63 | 137 | 19.55 | 0.667 | 20 | |
| trans-1,3-Dichloropropene | 21.570 | 1.0 | 20.00 | 0 | 108 | 59 | 135 | 21.42 | 0.698 | 20 | |
| Trichloroethene | 18.800 | 1.0 | 20.00 | 0 | 94.0 | 70 | 127 | 18.96 | 0.847 | 20 | |
| Trichlorofluoromethane | 19.410 | 1.0 | 20.00 | 0 | 97.0 | 57 | 129 | 19.79 | 1.94 | 20 | |
| Vinyl chloride | 21.060 | 0.50 | 20.00 | 0 | 105 | 50 | 134 | 21.27 | 0.992 | 20 | |
| Xylenes, Total | 64.250 | 2.0 | 60.00 | 0 | 107 | 75 | 125 | 61.73 | 4.00 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 28.250 | | 25.00 | | 113 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 27.020 | | 25.00 | | 108 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 28.080 | | 25.00 | | 112 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 26.380 | | 25.00 | | 106 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060387**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.960 | 0.50 | 20.00 | 0 | 94.8 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 21.520 | 1.0 | 20.00 | 0 | 108 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.970 | 0.50 | 20.00 | 0 | 105 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.840 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 20.460 | 1.0 | 20.00 | 0 | 102 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.870 | 1.0 | 20.00 | 0 | 104 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.400 | 1.0 | 20.00 | 0 | 107 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 22.440 | 1.0 | 20.00 | 0 | 112 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.070 | 1.0 | 20.00 | 0 | 100 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 22.410 | 1.0 | 20.00 | 0 | 112 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.490 | 2.0 | 20.00 | 0 | 107 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.680 | 1.0 | 20.00 | 0 | 108 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.040 | 1.0 | 20.00 | 0 | 100 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.680 | 0.50 | 20.00 | 0 | 103 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.870 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 21.230 | 1.0 | 20.00 | 0 | 106 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 19.540 | 1.0 | 20.00 | 0 | 97.7 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 22.400 | 1.0 | 20.00 | 0 | 112 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 19.670 | 0.50 | 20.00 | 0 | 98.4 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 17.970 | 1.0 | 20.00 | 0 | 89.8 | 69 | 137 | | | | |
| 2-Butanone | 249.230 | 10 | 200.0 | 0 | 125 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.480 | 1.0 | 20.00 | 0 | 97.4 | 73 | 126 | | | | |
| 4-Chlorotoluene | 20.860 | 1.0 | 20.00 | 0 | 104 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.920 | 1.0 | 20.00 | 0 | 99.6 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 276.690 | 10 | 200.0 | 0 | 138 | 58 | 134 | | | | S |
| Acetone | 267.690 | 10 | 200.0 | 10.06 | 129 | 40 | 135 | | | | |
| Acrolein | 218.070 | 20 | 200.0 | 0 | 109 | 75 | 125 | | | | |
| Acrylonitrile | 239.400 | 20 | 200.0 | 0 | 120 | 75 | 125 | | | | |
| Benzene | 20.980 | 0.50 | 20.00 | 0 | 105 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
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H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060387**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 19.070 | 1.0 | 20.00 | 0 | 95.4 | 76 | 124 | | | | |
| Bromochloromethane | 21.990 | 1.0 | 20.00 | 0 | 110 | 65 | 129 | | | | |
| Bromodichloromethane | 19.560 | 0.50 | 20.00 | 0 | 97.8 | 76 | 121 | | | | |
| Bromoform | 21.360 | 1.0 | 20.00 | 0 | 107 | 69 | 128 | | | | |
| Bromomethane | 22.160 | 1.0 | 20.00 | 0 | 111 | 53 | 141 | | | | |
| Carbon disulfide | 22.230 | 1.0 | 20.00 | 0 | 111 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.680 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | | | | |
| Chlorobenzene | 19.680 | 0.50 | 20.00 | 0 | 98.4 | 81 | 122 | | | | |
| Chloroethane | 22.930 | 1.0 | 20.00 | 0 | 115 | 58 | 133 | | | | |
| Chloroform | 20.670 | 1.0 | 20.00 | 0.3800 | 101 | 69 | 128 | | | | |
| Chloromethane | 22.670 | 1.0 | 20.00 | 0 | 113 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 20.670 | 1.0 | 20.00 | 0 | 103 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.550 | 0.50 | 20.00 | 0 | 113 | 69 | 131 | | | | |
| Dibromochloromethane | 20.380 | 0.50 | 20.00 | 0 | 102 | 66 | 133 | | | | |
| Dibromomethane | 20.760 | 1.0 | 20.00 | 0 | 104 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 17.340 | 1.0 | 20.00 | 0 | 86.7 | 53 | 153 | | | | |
| Ethylbenzene | 20.050 | 1.0 | 20.00 | 0 | 100 | 73 | 127 | | | | |
| Freon-113 | 20.690 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.160 | 0.50 | 20.00 | 0 | 101 | 67 | 131 | | | | |
| Isopropylbenzene | 19.770 | 1.0 | 20.00 | 0 | 98.8 | 75 | 127 | | | | |
| m,p-Xylene | 43.000 | 1.0 | 40.00 | 0 | 108 | 76 | 128 | | | | |
| Methylene chloride | 23.890 | 1.0 | 20.00 | 0 | 119 | 63 | 137 | | | | |
| MTBE | 23.340 | 1.0 | 20.00 | 0 | 117 | 65 | 123 | | | | |
| n-Butylbenzene | 21.000 | 1.0 | 20.00 | 0 | 105 | 69 | 137 | | | | |
| n-Propylbenzene | 20.840 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | | | | |
| Naphthalene | 20.080 | 1.0 | 20.00 | 0 | 100 | 54 | 138 | | | | |
| o-Xylene | 20.530 | 1.0 | 20.00 | 0 | 103 | 80 | 121 | | | | |
| sec-Butylbenzene | 20.610 | 1.0 | 20.00 | 0 | 103 | 72 | 127 | | | | |
| Styrene | 15.730 | 1.0 | 20.00 | 0 | 78.7 | 65 | 134 | | | | |
| tert-Butylbenzene | 21.630 | 1.0 | 20.00 | 0 | 108 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060387**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 19.170 | 1.0 | 20.00 | 0 | 95.9 | 66 | 128 | | | | |
| Toluene | 20.190 | 0.50 | 20.00 | 0 | 101 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 19.350 | 1.0 | 20.00 | 0 | 96.8 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.530 | 1.0 | 20.00 | 0 | 113 | 59 | 135 | | | | |
| Trichloroethene | 20.320 | 1.0 | 20.00 | 0 | 102 | 70 | 127 | | | | |
| Trichlorofluoromethane | 19.870 | 1.0 | 20.00 | 0 | 99.4 | 57 | 129 | | | | |
| Vinyl chloride | 21.750 | 0.50 | 20.00 | 0 | 109 | 50 | 134 | | | | |
| Xylenes, Total | 63.530 | 2.0 | 60.00 | 0 | 106 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.510 | | 25.00 | | 110 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 26.830 | | 25.00 | | 107 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 28.720 | | 25.00 | | 115 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.590 | | 25.00 | | 110 | 81 | 120 | | | | |

Sample ID: **N043470-004DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.410 | 0.50 | 20.00 | 0 | 97.0 | 81 | 129 | 18.96 | 2.35 | 20 | |
| 1,1,1-Trichloroethane | 21.760 | 1.0 | 20.00 | 0 | 109 | 67 | 132 | 21.52 | 1.11 | 20 | |
| 1,1,2,2-Tetrachloroethane | 20.440 | 0.50 | 20.00 | 0 | 102 | 63 | 128 | 20.97 | 2.56 | 20 | |
| 1,1,2-Trichloroethane | 20.710 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | 21.84 | 5.31 | 20 | |
| 1,1-Dichloroethane | 20.920 | 1.0 | 20.00 | 0 | 105 | 69 | 133 | 20.85 | 0.335 | 20 | |
| 1,1-Dichloroethene | 20.950 | 1.0 | 20.00 | 0 | 105 | 68 | 130 | 20.46 | 2.37 | 20 | |
| 1,1-Dichloropropene | 20.630 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | 20.87 | 1.16 | 20 | |
| 1,2,3-Trichlorobenzene | 20.580 | 1.0 | 20.00 | 0 | 103 | 67 | 137 | 21.40 | 3.91 | 20 | |
| 1,2,3-Trichloropropane | 19.790 | 1.0 | 20.00 | 0 | 99.0 | 73 | 124 | 22.44 | 12.6 | 20 | |
| 1,2,4-Trichlorobenzene | 18.000 | 1.0 | 20.00 | 0 | 90.0 | 66 | 134 | 20.07 | 10.9 | 20 | |
| 1,2,4-Trimethylbenzene | 21.150 | 1.0 | 20.00 | 0 | 106 | 74 | 132 | 22.41 | 5.79 | 20 | |
| 1,2-Dibromo-3-chloropropane | 22.600 | 2.0 | 20.00 | 0 | 113 | 50 | 132 | 21.49 | 5.04 | 20 | |
| 1,2-Dibromoethane | 20.100 | 1.0 | 20.00 | 0 | 101 | 80 | 121 | 21.68 | 7.56 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 18.950 | 1.0 | 20.00 | 0 | 94.8 | 71 | 122 | 20.04 | 5.59 | 20 | |
| 1,2-Dichloroethane | 19.010 | 0.50 | 20.00 | 0 | 95.1 | 69 | 132 | 20.68 | 8.42 | 20 | |
| 1,2-Dichloropropane | 19.170 | 1.0 | 20.00 | 0 | 95.9 | 75 | 125 | 20.87 | 8.49 | 20 | |
| 1,3,5-Trimethylbenzene | 20.240 | 1.0 | 20.00 | 0 | 101 | 74 | 131 | 21.23 | 4.77 | 20 | |
| 1,3-Dichlorobenzene | 18.100 | 1.0 | 20.00 | 0 | 90.5 | 75 | 124 | 19.54 | 7.65 | 20 | |
| 1,3-Dichloropropane | 21.100 | 1.0 | 20.00 | 0 | 106 | 73 | 126 | 22.40 | 5.98 | 20 | |
| 1,4-Dichlorobenzene | 18.490 | 0.50 | 20.00 | 0 | 92.5 | 74 | 123 | 19.67 | 6.18 | 20 | |
| 2,2-Dichloropropane | 18.190 | 1.0 | 20.00 | 0 | 91.0 | 69 | 137 | 17.97 | 1.22 | 20 | |
| 2-Butanone | 239.960 | 10 | 200.0 | 0 | 120 | 49 | 136 | 249.2 | 3.79 | 20 | |
| 2-Chlorotoluene | 18.810 | 1.0 | 20.00 | 0 | 94.1 | 73 | 126 | 19.48 | 3.50 | 20 | |
| 4-Chlorotoluene | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 74 | 128 | 20.86 | 7.00 | 20 | |
| 4-Isopropyltoluene | 19.310 | 1.0 | 20.00 | 0 | 96.6 | 73 | 130 | 19.92 | 3.11 | 20 | |
| 4-Methyl-2-pentanone | 246.270 | 10 | 200.0 | 0 | 123 | 58 | 134 | 276.7 | 11.6 | 20 | |
| Acetone | 248.620 | 10 | 200.0 | 10.06 | 119 | 40 | 135 | 267.7 | 7.39 | 20 | |
| Acrolein | 207.650 | 20 | 200.0 | 0 | 104 | 75 | 125 | 218.1 | 4.90 | 20 | |
| Acrylonitrile | 232.720 | 20 | 200.0 | 0 | 116 | 75 | 125 | 239.4 | 2.83 | 20 | |
| Benzene | 19.510 | 0.50 | 20.00 | 0 | 97.6 | 81 | 122 | 20.98 | 7.26 | 20 | |
| Bromobenzene | 18.500 | 1.0 | 20.00 | 0 | 92.5 | 76 | 124 | 19.07 | 3.03 | 20 | |
| Bromochloromethane | 20.830 | 1.0 | 20.00 | 0 | 104 | 65 | 129 | 21.99 | 5.42 | 20 | |
| Bromodichloromethane | 18.150 | 0.50 | 20.00 | 0 | 90.8 | 76 | 121 | 19.56 | 7.48 | 20 | |
| Bromoform | 20.880 | 1.0 | 20.00 | 0 | 104 | 69 | 128 | 21.36 | 2.27 | 20 | |
| Bromomethane | 22.200 | 1.0 | 20.00 | 0 | 111 | 53 | 141 | 22.16 | 0.180 | 20 | |
| Carbon disulfide | 21.820 | 1.0 | 20.00 | 0 | 109 | 75 | 125 | 22.23 | 1.86 | 20 | |
| Carbon tetrachloride | 19.950 | 0.50 | 20.00 | 0 | 99.8 | 66 | 138 | 20.68 | 3.59 | 20 | |
| Chlorobenzene | 19.070 | 0.50 | 20.00 | 0 | 95.4 | 81 | 122 | 19.68 | 3.15 | 20 | |
| Chloroethane | 22.470 | 1.0 | 20.00 | 0 | 112 | 58 | 133 | 22.93 | 2.03 | 20 | |
| Chloroform | 19.890 | 1.0 | 20.00 | 0.3800 | 97.6 | 69 | 128 | 20.67 | 3.85 | 20 | |
| Chloromethane | 22.350 | 1.0 | 20.00 | 0 | 112 | 56 | 131 | 22.67 | 1.42 | 20 | |
| cis-1,2-Dichloroethene | 20.020 | 1.0 | 20.00 | 0 | 100 | 72 | 126 | 20.67 | 3.19 | 20 | |
| cis-1,3-Dichloropropene | 20.290 | 0.50 | 20.00 | 0 | 101 | 69 | 131 | 22.55 | 10.6 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043470-004DMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149709**
Client ID: **ZZZZZZ** Batch ID: **P20VW137** TestNo: **EPA 8260B** Analysis Date: **12/29/2020** SeqNo: **4060388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.690 | 0.50 | 20.00 | 0 | 98.4 | 66 | 133 | 20.38 | 3.44 | 20 | |
| Dibromomethane | 18.850 | 1.0 | 20.00 | 0 | 94.3 | 76 | 125 | 20.76 | 9.64 | 20 | |
| Dichlorodifluoromethane | 16.940 | 1.0 | 20.00 | 0 | 84.7 | 53 | 153 | 17.34 | 2.33 | 20 | |
| Ethylbenzene | 19.230 | 1.0 | 20.00 | 0 | 96.2 | 73 | 127 | 20.05 | 4.18 | 20 | |
| Freon-113 | 20.570 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | 20.69 | 0.582 | 20 | |
| Hexachlorobutadiene | 18.590 | 0.50 | 20.00 | 0 | 93.0 | 67 | 131 | 20.16 | 8.10 | 20 | |
| Isopropylbenzene | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 75 | 127 | 19.77 | 2.51 | 20 | |
| m,p-Xylene | 41.390 | 1.0 | 40.00 | 0 | 103 | 76 | 128 | 43.00 | 3.82 | 20 | |
| Methylene chloride | 23.180 | 1.0 | 20.00 | 0 | 116 | 63 | 137 | 23.89 | 3.02 | 20 | |
| MTBE | 22.540 | 1.0 | 20.00 | 0 | 113 | 65 | 123 | 23.34 | 3.49 | 20 | |
| n-Butylbenzene | 20.290 | 1.0 | 20.00 | 0 | 101 | 69 | 137 | 21.00 | 3.44 | 20 | |
| n-Propylbenzene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 72 | 129 | 20.84 | 4.66 | 20 | |
| Naphthalene | 19.070 | 1.0 | 20.00 | 0 | 95.4 | 54 | 138 | 20.08 | 5.16 | 20 | |
| o-Xylene | 20.030 | 1.0 | 20.00 | 0 | 100 | 80 | 121 | 20.53 | 2.47 | 20 | |
| sec-Butylbenzene | 19.690 | 1.0 | 20.00 | 0 | 98.4 | 72 | 127 | 20.61 | 4.57 | 20 | |
| Styrene | 14.490 | 1.0 | 20.00 | 0 | 72.4 | 65 | 134 | 15.73 | 8.21 | 20 | |
| tert-Butylbenzene | 20.210 | 1.0 | 20.00 | 0 | 101 | 70 | 129 | 21.63 | 6.79 | 20 | |
| Tetrachloroethene | 18.000 | 1.0 | 20.00 | 0 | 90.0 | 66 | 128 | 19.17 | 6.30 | 20 | |
| Toluene | 19.230 | 0.50 | 20.00 | 0 | 96.2 | 77 | 122 | 20.19 | 4.87 | 20 | |
| trans-1,2-Dichloroethene | 19.470 | 1.0 | 20.00 | 0 | 97.4 | 63 | 137 | 19.35 | 0.618 | 20 | |
| trans-1,3-Dichloropropene | 21.000 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | 22.53 | 7.03 | 20 | |
| Trichloroethene | 18.640 | 1.0 | 20.00 | 0 | 93.2 | 70 | 127 | 20.32 | 8.62 | 20 | |
| Trichlorofluoromethane | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 57 | 129 | 19.87 | 2.76 | 20 | |
| Vinyl chloride | 21.000 | 0.50 | 20.00 | 0 | 105 | 50 | 134 | 21.75 | 3.51 | 20 | |
| Xylenes, Total | 61.420 | 2.0 | 60.00 | 0 | 102 | 75 | 125 | 63.53 | 3.38 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 27.000 | | 25.00 | | 108 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 26.590 | | 25.00 | | 106 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 27.670 | | 25.00 | | 111 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 26.050 | | 25.00 | | 104 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-001

**Client Sample ID:** MW-68-180-EC-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 1,2-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 1,3-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 1,4-Dichlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2,4,5-Trichlorophenol | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2,4,6-Trichlorophenol | ND | 3.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2,4-Dichlorophenol | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2,4-Dimethylphenol | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2,4-Dinitrophenol | ND | 11 | 50 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2,4-Dinitrotoluene | ND | 2.7 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2,6-Dinitrotoluene | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2-Chloronaphthalene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2-Chlorophenol | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2-Methylnaphthalene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2-Nitroaniline | ND | 5.2 | 50 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 2-Nitrophenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 3,3´-Dichlorobenzidine | ND | 2.6 | 20 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 3-Nitroaniline | ND | 2.8 | 50 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4,6-Dinitro-2-methylphenol | ND | 7.6 | 50 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-Bromophenyl-phenylether | ND | 3.2 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-Chloro-3-methylphenol | ND | 3.0 | 50 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-Chloroaniline | ND | 1.6 | 20 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-Chlorophenyl-phenylether | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-Nitroaniline | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-Nitrophenol | ND | 12 | 50 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Acenaphthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Acenaphthylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Anthracene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Benzo(a)anthracene | ND | 3.4 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Benzo(a)pyrene | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Benzo(b)fluoranthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Benzo(g,h,i)perylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Benzo(k)fluoranthene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Benzoic acid | ND | 15 | 50 | | µg/L | 1 | 12/22/2020 09:29 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-001

**Client Sample ID:** MW-68-180-EC-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzyl alcohol | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Bis(2-chloroethoxy)methane | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Bis(2-chloroethyl)ether | ND | 4.3 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Bis(2-chloroisopropyl)ether | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Bis(2-ethylhexyl)phthalate | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Butylbenzylphthalate | ND | 5.2 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Chrysene | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Di-n-butylphthalate | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Di-n-octylphthalate | ND | 2.2 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Dibenz(a,h)anthracene | ND | 5.1 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Dibenzofuran | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Diethylphthalate | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Dimethylphthalate | ND | 3.7 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Fluoranthene | ND | 4.4 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Fluorene | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Hexachlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Hexachlorobutadiene | ND | 3.8 | 20 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Hexachloroethane | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Indeno(1,2,3-cd)pyrene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Isophorone | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| N-Nitrosodi-n-propylamine | ND | 5.0 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| N-Nitrosodiphenylamine | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Naphthalene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Nitrobenzene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Pentachlorophenol | ND | 20 | 50 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Phenanthrene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Phenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Pyrene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Surr: 1,2-Dichlorobenzene-d4 | 55.9 | 0 | 27-100 | | %REC | 1 | 12/22/2020 09:29 PM |
| Surr: 2,4,6-Tribromophenol | 76.6 | 0 | 42-124 | | %REC | 1 | 12/22/2020 09:29 PM |
| Surr: 2-Chlorophenol-d4 | 66.1 | 0 | 34-98 | | %REC | 1 | 12/22/2020 09:29 PM |
| Surr: 2-Fluorobiphenyl | 74.8 | 0 | 48-120 | | %REC | 1 | 12/22/2020 09:29 PM |
| Surr: 2-Fluorophenol | 64.6 | 0 | 20-120 | | %REC | 1 | 12/22/2020 09:29 PM |
| Surr: 4-Terphenyl-d14 | 66.9 | 0 | 51-135 | | %REC | 1 | 12/22/2020 09:29 PM |
| Surr: Nitrobenzene-d5 | 66.4 | 0 | 41-120 | | %REC | 1 | 12/22/2020 09:29 PM |
| Surr: Phenol-d5 | 41.9 | 0 | 20-120 | | %REC | 1 | 12/22/2020 09:29 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-002

**Client Sample ID:** MW-939-EC-Q420
**Collection Date:** 12/16/2020 10:28:00 AM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 1,2-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 1,3-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 1,4-Dichlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2,4,5-Trichlorophenol | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2,4,6-Trichlorophenol | ND | 3.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2,4-Dichlorophenol | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2,4-Dimethylphenol | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2,4-Dinitrophenol | ND | 11 | 50 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2,4-Dinitrotoluene | ND | 2.7 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2,6-Dinitrotoluene | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2-Chloronaphthalene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2-Chlorophenol | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2-Methylnaphthalene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2-Nitroaniline | ND | 5.2 | 50 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 2-Nitrophenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 3,3´-Dichlorobenzidine | ND | 2.6 | 20 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 3-Nitroaniline | ND | 2.8 | 50 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4,6-Dinitro-2-methylphenol | ND | 7.6 | 50 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-Bromophenyl-phenylether | ND | 3.2 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-Chloro-3-methylphenol | ND | 3.0 | 50 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-Chloroaniline | ND | 1.6 | 20 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-Chlorophenyl-phenylether | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-Nitroaniline | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-Nitrophenol | ND | 12 | 50 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Acenaphthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Acenaphthylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Anthracene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Benzo(a)anthracene | ND | 3.4 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Benzo(a)pyrene | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Benzo(b)fluoranthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Benzo(g,h,i)perylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Benzo(k)fluoranthene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Benzoic acid | ND | 15 | 50 | | µg/L | 1 | 12/22/2020 09:56 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-002

**Client Sample ID:** MW-939-EC-Q420
**Collection Date:** 12/16/2020 10:28:00 AM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzyl alcohol | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Bis(2-chloroethoxy)methane | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Bis(2-chloroethyl)ether | ND | 4.3 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Bis(2-chloroisopropyl)ether | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Bis(2-ethylhexyl)phthalate | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Butylbenzylphthalate | ND | 5.2 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Chrysene | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Di-n-butylphthalate | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Di-n-octylphthalate | ND | 2.2 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Dibenz(a,h)anthracene | ND | 5.1 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Dibenzofuran | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Diethylphthalate | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Dimethylphthalate | ND | 3.7 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Fluoranthene | ND | 4.4 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Fluorene | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Hexachlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Hexachlorobutadiene | ND | 3.8 | 20 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Hexachloroethane | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Indeno(1,2,3-cd)pyrene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Isophorone | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| N-Nitrosodi-n-propylamine | ND | 5.0 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| N-Nitrosodiphenylamine | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Naphthalene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Nitrobenzene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Pentachlorophenol | ND | 20 | 50 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Phenanthrene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Phenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Pyrene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Surr: 1,2-Dichlorobenzene-d4 | 106 | 0 | 27-100 | S | %REC | 1 | 12/22/2020 09:56 PM |
| Surr: 2,4,6-Tribromophenol | 158 | 0 | 42-124 | S | %REC | 1 | 12/22/2020 09:56 PM |
| Surr: 2-Chlorophenol-d4 | 121 | 0 | 34-98 | S | %REC | 1 | 12/22/2020 09:56 PM |
| Surr: 2-Fluorobiphenyl | 140 | 0 | 48-120 | S | %REC | 1 | 12/22/2020 09:56 PM |
| Surr: 2-Fluorophenol | 119 | 0 | 20-120 | | %REC | 1 | 12/22/2020 09:56 PM |
| Surr: 4-Terphenyl-d14 | 129 | 0 | 51-135 | | %REC | 1 | 12/22/2020 09:56 PM |
| Surr: Nitrobenzene-d5 | 122 | 0 | 41-120 | S | %REC | 1 | 12/22/2020 09:56 PM |
| Surr: Phenol-d5 | 76.4 | 0 | 20-120 | | %REC | 1 | 12/22/2020 09:56 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-003

**Client Sample ID:** MW-68-240-EC-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 1,2-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 1,3-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 1,4-Dichlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2,4,5-Trichlorophenol | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2,4,6-Trichlorophenol | ND | 3.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2,4-Dichlorophenol | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2,4-Dimethylphenol | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2,4-Dinitrophenol | ND | 11 | 50 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2,4-Dinitrotoluene | ND | 2.7 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2,6-Dinitrotoluene | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2-Chloronaphthalene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2-Chlorophenol | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2-Methylnaphthalene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2-Nitroaniline | ND | 5.2 | 50 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 2-Nitrophenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 3,3´-Dichlorobenzidine | ND | 2.6 | 20 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 3-Nitroaniline | ND | 2.8 | 50 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4,6-Dinitro-2-methylphenol | ND | 7.6 | 50 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-Bromophenyl-phenylether | ND | 3.2 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-Chloro-3-methylphenol | ND | 3.0 | 50 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-Chloroaniline | ND | 1.6 | 20 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-Chlorophenyl-phenylether | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-Nitroaniline | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-Nitrophenol | ND | 12 | 50 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Acenaphthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Acenaphthylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Anthracene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Benzo(a)anthracene | ND | 3.4 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Benzo(a)pyrene | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Benzo(b)fluoranthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Benzo(g,h,i)perylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Benzo(k)fluoranthene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Benzoic acid | ND | 15 | 50 | | µg/L | 1 | 12/22/2020 10:22 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-003

**Client Sample ID:** MW-68-240-EC-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzyl alcohol | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Bis(2-chloroethoxy)methane | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Bis(2-chloroethyl)ether | ND | 4.3 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Bis(2-chloroisopropyl)ether | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Bis(2-ethylhexyl)phthalate | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Butylbenzylphthalate | ND | 5.2 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Chrysene | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Di-n-butylphthalate | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Di-n-octylphthalate | ND | 2.2 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Dibenz(a,h)anthracene | ND | 5.1 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Dibenzofuran | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Diethylphthalate | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Dimethylphthalate | ND | 3.7 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Fluoranthene | ND | 4.4 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Fluorene | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Hexachlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Hexachlorobutadiene | ND | 3.8 | 20 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Hexachloroethane | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Indeno(1,2,3-cd)pyrene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Isophorone | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| N-Nitrosodi-n-propylamine | ND | 5.0 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| N-Nitrosodiphenylamine | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Naphthalene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Nitrobenzene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Pentachlorophenol | ND | 20 | 50 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Phenanthrene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Phenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Pyrene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 10:22 PM |
| Surr: 1,2-Dichlorobenzene-d4 | 61.3 | 0 | 27-100 | | %REC | 1 | 12/22/2020 10:22 PM |
| Surr: 2,4,6-Tribromophenol | 72.7 | 0 | 42-124 | | %REC | 1 | 12/22/2020 10:22 PM |
| Surr: 2-Chlorophenol-d4 | 69.1 | 0 | 34-98 | | %REC | 1 | 12/22/2020 10:22 PM |
| Surr: 2-Fluorobiphenyl | 69.4 | 0 | 48-120 | | %REC | 1 | 12/22/2020 10:22 PM |
| Surr: 2-Fluorophenol | 72.2 | 0 | 20-120 | | %REC | 1 | 12/22/2020 10:22 PM |
| Surr: 4-Terphenyl-d14 | 63.6 | 0 | 51-135 | | %REC | 1 | 12/22/2020 10:22 PM |
| Surr: Nitrobenzene-d5 | 69.6 | 0 | 41-120 | | %REC | 1 | 12/22/2020 10:22 PM |
| Surr: Phenol-d5 | 44.1 | 0 | 20-120 | | %REC | 1 | 12/22/2020 10:22 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-004

**Client Sample ID:** MW-940-EC-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 1,2-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 1,3-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 1,4-Dichlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2,4,5-Trichlorophenol | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2,4,6-Trichlorophenol | ND | 3.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2,4-Dichlorophenol | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2,4-Dimethylphenol | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2,4-Dinitrophenol | ND | 11 | 50 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2,4-Dinitrotoluene | ND | 2.7 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2,6-Dinitrotoluene | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2-Chloronaphthalene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2-Chlorophenol | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2-Methylnaphthalene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2-Nitroaniline | ND | 5.2 | 50 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 2-Nitrophenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 3,3´-Dichlorobenzidine | ND | 2.6 | 20 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 3-Nitroaniline | ND | 2.8 | 50 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4,6-Dinitro-2-methylphenol | ND | 7.6 | 50 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-Bromophenyl-phenylether | ND | 3.2 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-Chloro-3-methylphenol | ND | 3.0 | 50 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-Chloroaniline | ND | 1.6 | 20 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-Chlorophenyl-phenylether | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-Nitroaniline | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-Nitrophenol | ND | 12 | 50 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Acenaphthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Acenaphthylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Anthracene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Benzo(a)anthracene | ND | 3.4 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Benzo(a)pyrene | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Benzo(b)fluoranthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Benzo(g,h,i)perylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Benzo(k)fluoranthene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Benzoic acid | ND | 15 | 50 | | µg/L | 1 | 12/22/2020 10:48 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-004

**Client Sample ID:** MW-940-EC-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzyl alcohol | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Bis(2-chloroethoxy)methane | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Bis(2-chloroethyl)ether | ND | 4.3 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Bis(2-chloroisopropyl)ether | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Bis(2-ethylhexyl)phthalate | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Butylbenzylphthalate | ND | 5.2 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Chrysene | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Di-n-butylphthalate | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Di-n-octylphthalate | ND | 2.2 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Dibenz(a,h)anthracene | ND | 5.1 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Dibenzofuran | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Diethylphthalate | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Dimethylphthalate | ND | 3.7 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Fluoranthene | ND | 4.4 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Fluorene | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Hexachlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Hexachlorobutadiene | ND | 3.8 | 20 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Hexachloroethane | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Indeno(1,2,3-cd)pyrene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Isophorone | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| N-Nitrosodi-n-propylamine | ND | 5.0 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| N-Nitrosodiphenylamine | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Naphthalene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Nitrobenzene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Pentachlorophenol | ND | 20 | 50 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Phenanthrene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Phenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Pyrene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 10:48 PM |
| Surr: 1,2-Dichlorobenzene-d4 | 59.2 | 0 | 27-100 | | %REC | 1 | 12/22/2020 10:48 PM |
| Surr: 2,4,6-Tribromophenol | 76.0 | 0 | 42-124 | | %REC | 1 | 12/22/2020 10:48 PM |
| Surr: 2-Chlorophenol-d4 | 69.3 | 0 | 34-98 | | %REC | 1 | 12/22/2020 10:48 PM |
| Surr: 2-Fluorobiphenyl | 68.4 | 0 | 48-120 | | %REC | 1 | 12/22/2020 10:48 PM |
| Surr: 2-Fluorophenol | 70.6 | 0 | 20-120 | | %REC | 1 | 12/22/2020 10:48 PM |
| Surr: 4-Terphenyl-d14 | 68.0 | 0 | 51-135 | | %REC | 1 | 12/22/2020 10:48 PM |
| Surr: Nitrobenzene-d5 | 67.5 | 0 | 41-120 | | %REC | 1 | 12/22/2020 10:48 PM |
| Surr: Phenol-d5 | 45.3 | 0 | 20-120 | | %REC | 1 | 12/22/2020 10:48 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-005

**Client Sample ID:** MW-68BR-280-EC-Q420
**Collection Date:** 12/16/2020 8:50:00 AM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 1,2-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 1,3-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 1,4-Dichlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2,4,5-Trichlorophenol | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2,4,6-Trichlorophenol | ND | 3.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2,4-Dichlorophenol | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2,4-Dimethylphenol | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2,4-Dinitrophenol | ND | 11 | 50 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2,4-Dinitrotoluene | ND | 2.7 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2,6-Dinitrotoluene | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2-Chloronaphthalene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2-Chlorophenol | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2-Methylnaphthalene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2-Nitroaniline | ND | 5.2 | 50 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 2-Nitrophenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 3,3´-Dichlorobenzidine | ND | 2.6 | 20 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 3-Nitroaniline | ND | 2.8 | 50 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4,6-Dinitro-2-methylphenol | ND | 7.6 | 50 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-Bromophenyl-phenylether | ND | 3.2 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-Chloro-3-methylphenol | ND | 3.0 | 50 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-Chloroaniline | ND | 1.6 | 20 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-Chlorophenyl-phenylether | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-Nitroaniline | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-Nitrophenol | ND | 12 | 50 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Acenaphthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Acenaphthylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Anthracene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Benzo(a)anthracene | ND | 3.4 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Benzo(a)pyrene | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Benzo(b)fluoranthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Benzo(g,h,i)perylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Benzo(k)fluoranthene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Benzoic acid | ND | 15 | 50 | | µg/L | 1 | 12/22/2020 11:14 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-005

**Client Sample ID:** MW-68BR-280-EC-Q420
**Collection Date:** 12/16/2020 8:50:00 AM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzyl alcohol | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Bis(2-chloroethoxy)methane | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Bis(2-chloroethyl)ether | ND | 4.3 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Bis(2-chloroisopropyl)ether | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Bis(2-ethylhexyl)phthalate | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Butylbenzylphthalate | ND | 5.2 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Chrysene | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Di-n-butylphthalate | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Di-n-octylphthalate | ND | 2.2 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Dibenz(a,h)anthracene | ND | 5.1 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Dibenzofuran | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Diethylphthalate | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Dimethylphthalate | ND | 3.7 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Fluoranthene | ND | 4.4 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Fluorene | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Hexachlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Hexachlorobutadiene | ND | 3.8 | 20 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Hexachloroethane | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Indeno(1,2,3-cd)pyrene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Isophorone | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| N-Nitrosodi-n-propylamine | ND | 5.0 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| N-Nitrosodiphenylamine | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Naphthalene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Nitrobenzene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Pentachlorophenol | ND | 20 | 50 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Phenanthrene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Phenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Pyrene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 11:14 PM |
| Surr: 1,2-Dichlorobenzene-d4 | 62.8 | 0 | 27-100 | | %REC | 1 | 12/22/2020 11:14 PM |
| Surr: 2,4,6-Tribromophenol | 70.7 | 0 | 42-124 | | %REC | 1 | 12/22/2020 11:14 PM |
| Surr: 2-Chlorophenol-d4 | 70.4 | 0 | 34-98 | | %REC | 1 | 12/22/2020 11:14 PM |
| Surr: 2-Fluorobiphenyl | 72.0 | 0 | 48-120 | | %REC | 1 | 12/22/2020 11:14 PM |
| Surr: 2-Fluorophenol | 65.0 | 0 | 20-120 | | %REC | 1 | 12/22/2020 11:14 PM |
| Surr: 4-Terphenyl-d14 | 68.8 | 0 | 51-135 | | %REC | 1 | 12/22/2020 11:14 PM |
| Surr: Nitrobenzene-d5 | 70.6 | 0 | 41-120 | | %REC | 1 | 12/22/2020 11:14 PM |
| Surr: Phenol-d5 | 45.6 | 0 | 20-120 | | %REC | 1 | 12/22/2020 11:14 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-006

**Client Sample ID:** MW-941-EC-Q420
**Collection Date:** 12/16/2020 9:00:00 AM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 1,2-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 1,3-Dichlorobenzene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 1,4-Dichlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2,4,5-Trichlorophenol | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2,4,6-Trichlorophenol | ND | 3.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2,4-Dichlorophenol | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2,4-Dimethylphenol | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2,4-Dinitrophenol | ND | 11 | 50 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2,4-Dinitrotoluene | ND | 2.7 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2,6-Dinitrotoluene | ND | 4.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2-Chloronaphthalene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2-Chlorophenol | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2-Methylnaphthalene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2-Nitroaniline | ND | 5.2 | 50 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 2-Nitrophenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 3,3´-Dichlorobenzidine | ND | 2.6 | 20 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 3-Nitroaniline | ND | 2.8 | 50 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4,6-Dinitro-2-methylphenol | ND | 7.6 | 50 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-Bromophenyl-phenylether | ND | 3.2 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-Chloro-3-methylphenol | ND | 3.0 | 50 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-Chloroaniline | ND | 1.6 | 20 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-Chlorophenyl-phenylether | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-Methylphenol | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-Nitroaniline | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-Nitrophenol | ND | 12 | 50 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Acenaphthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Acenaphthylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Anthracene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Benzo(a)anthracene | ND | 3.4 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Benzo(a)pyrene | ND | 2.6 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Benzo(b)fluoranthene | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Benzo(g,h,i)perylene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Benzo(k)fluoranthene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Benzoic acid | ND | 15 | 50 | | µg/L | 1 | 12/22/2020 11:40 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-006

**Client Sample ID:** MW-941-EC-Q420
**Collection Date:** 12/16/2020 9:00:00 AM
**Matrix:** GROUNDWATER

## SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Benzyl alcohol | ND | 6.7 | 20 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Bis(2-chloroethoxy)methane | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Bis(2-chloroethyl)ether | ND | 4.3 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Bis(2-chloroisopropyl)ether | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Bis(2-ethylhexyl)phthalate | ND | 3.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Butylbenzylphthalate | ND | 5.2 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Chrysene | ND | 3.5 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Di-n-butylphthalate | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Di-n-octylphthalate | ND | 2.2 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Dibenz(a,h)anthracene | ND | 5.1 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Dibenzofuran | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Diethylphthalate | ND | 4.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Dimethylphthalate | ND | 3.7 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Fluoranthene | ND | 4.4 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Fluorene | ND | 3.6 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Hexachlorobenzene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Hexachlorobutadiene | ND | 3.8 | 20 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Hexachloroethane | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Indeno(1,2,3-cd)pyrene | ND | 2.8 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Isophorone | ND | 4.6 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| N-Nitrosodi-n-propylamine | ND | 5.0 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| N-Nitrosodiphenylamine | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Naphthalene | ND | 2.9 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Nitrobenzene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Pentachlorophenol | ND | 20 | 50 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Phenanthrene | ND | 3.1 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Phenol | ND | 4.2 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Pyrene | ND | 4.1 | 10 | | µg/L | 1 | 12/22/2020 11:40 PM |
| Surr: 1,2-Dichlorobenzene-d4 | 54.0 | 0 | 27-100 | | %REC | 1 | 12/22/2020 11:40 PM |
| Surr: 2,4,6-Tribromophenol | 61.4 | 0 | 42-124 | | %REC | 1 | 12/22/2020 11:40 PM |
| Surr: 2-Chlorophenol-d4 | 60.4 | 0 | 34-98 | | %REC | 1 | 12/22/2020 11:40 PM |
| Surr: 2-Fluorobiphenyl | 60.8 | 0 | 48-120 | | %REC | 1 | 12/22/2020 11:40 PM |
| Surr: 2-Fluorophenol | 54.9 | 0 | 20-120 | | %REC | 1 | 12/22/2020 11:40 PM |
| Surr: 4-Terphenyl-d14 | 63.2 | 0 | 51-135 | | %REC | 1 | 12/22/2020 11:40 PM |
| Surr: Nitrobenzene-d5 | 61.2 | 0 | 41-120 | | %REC | 1 | 12/22/2020 11:40 PM |
| Surr: Phenol-d5 | 38.6 | 0 | 20-120 | | %REC | 1 | 12/22/2020 11:40 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270_W_PGE**

Sample ID: **LCS-83566** SampType: **LCS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **LCSW** Batch ID: **83566** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056897**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 53.780 | 10 | 100.0 | 0 | 53.8 | 37 | 120 | | | | |
| 1,2-Dichlorobenzene | 55.040 | 10 | 100.0 | 0 | 55.0 | 33 | 120 | | | | |
| 1,3-Dichlorobenzene | 53.370 | 10 | 100.0 | 0 | 53.4 | 32 | 120 | | | | |
| 1,4-Dichlorobenzene | 56.440 | 10 | 100.0 | 0 | 56.4 | 32 | 120 | | | | |
| 2,4,5-Trichlorophenol | 67.100 | 10 | 100.0 | 0 | 67.1 | 49 | 120 | | | | |
| 2,4,6-Trichlorophenol | 73.460 | 10 | 100.0 | 0 | 73.5 | 49 | 126 | | | | |
| 2,4-Dichlorophenol | 68.180 | 10 | 100.0 | 0 | 68.2 | 48 | 120 | | | | |
| 2,4-Dimethylphenol | 63.370 | 10 | 100.0 | 0 | 63.4 | 28 | 120 | | | | |
| 2,4-Dinitrophenol | 55.610 | 50 | 100.0 | 0 | 55.6 | 25 | 130 | | | | |
| 2,4-Dinitrotoluene | 59.220 | 10 | 100.0 | 0 | 59.2 | 51 | 120 | | | | |
| 2,6-Dinitrotoluene | 59.790 | 10 | 100.0 | 0 | 59.8 | 49 | 120 | | | | |
| 2-Chloronaphthalene | 58.090 | 10 | 100.0 | 0 | 58.1 | 49 | 120 | | | | |
| 2-Chlorophenol | 68.440 | 10 | 100.0 | 0 | 68.4 | 37 | 120 | | | | |
| 2-Methylnaphthalene | 53.140 | 10 | 100.0 | 0 | 53.1 | 46 | 120 | | | | |
| 2-Methylphenol | 78.250 | 10 | 100.0 | 0 | 78.2 | 38 | 120 | | | | |
| 2-Nitroaniline | 71.530 | 50 | 100.0 | 0 | 71.5 | 48 | 120 | | | | |
| 2-Nitrophenol | 65.580 | 10 | 100.0 | 0 | 65.6 | 39 | 123 | | | | |
| 3,3´-Dichlorobenzidine | 103.120 | 20 | 150.0 | 0 | 68.7 | 20 | 120 | | | | |
| 3-Nitroaniline | 70.850 | 50 | 100.0 | 0 | 70.8 | 20 | 126 | | | | |
| 4,6-Dinitro-2-methylphenol | 66.970 | 50 | 100.0 | 0 | 67.0 | 40 | 130 | | | | |
| 4-Bromophenyl-phenylether | 74.350 | 10 | 100.0 | 0 | 74.4 | 52 | 120 | | | | |
| 4-Chloro-3-methylphenol | 68.270 | 50 | 100.0 | 0 | 68.3 | 47 | 120 | | | | |
| 4-Chloroaniline | 57.190 | 20 | 100.0 | 0 | 57.2 | 20 | 120 | | | | |
| 4-Chlorophenyl-phenylether | 70.740 | 10 | 100.0 | 0 | 70.7 | 50 | 120 | | | | |
| 4-Methylphenol | 69.950 | 10 | 100.0 | 0 | 70.0 | 32 | 120 | | | | |
| 4-Nitroaniline | 73.530 | 20 | 100.0 | 0 | 73.5 | 36 | 120 | | | | |
| 4-Nitrophenol | 78.630 | 50 | 100.0 | 0 | 78.6 | 20 | 120 | | | | |
| Acenaphthene | 71.170 | 10 | 100.0 | 0 | 71.2 | 47 | 120 | | | | |
| Acenaphthylene | 72.440 | 10 | 100.0 | 0 | 72.4 | 50 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270_W_PGE**

Sample ID: **LCS-83566** SampType: **LCS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **LCSW** Batch ID: **83566** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056897**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Anthracene | 83.220 | 10 | 100.0 | 0 | 83.2 | 54 | 120 | | | | |
| Benzo(a)anthracene | 83.510 | 10 | 100.0 | 0 | 83.5 | 56 | 100 | | | | |
| Benzo(a)pyrene | 78.580 | 10 | 100.0 | 0 | 78.6 | 53 | 120 | | | | |
| Benzo(b)fluoranthene | 86.000 | 10 | 100.0 | 0 | 86.0 | 45 | 124 | | | | |
| Benzo(g,h,i)perylene | 88.750 | 10 | 100.0 | 0 | 88.8 | 38 | 123 | | | | |
| Benzo(k)fluoranthene | 85.810 | 10 | 100.0 | 0 | 85.8 | 45 | 124 | | | | |
| Benzoic acid | 48.070 | 50 | 100.0 | 0 | 48.1 | 20 | 120 | | | | |
| Benzyl alcohol | 73.610 | 20 | 100.0 | 0 | 73.6 | 30 | 120 | | | | |
| Bis(2-chloroethoxy)methane | 76.170 | 10 | 100.0 | 0 | 76.2 | 46 | 120 | | | | |
| Bis(2-chloroethyl)ether | 76.030 | 10 | 100.0 | 0 | 76.0 | 37 | 120 | | | | |
| Bis(2-chloroisopropyl)ether | 70.760 | 10 | 100.0 | 0 | 70.8 | 26 | 131 | | | | |
| Bis(2-ethylhexyl)phthalate | 87.370 | 10 | 100.0 | 0 | 87.4 | 42 | 126 | | | | |
| Butylbenzylphthalate | 85.380 | 10 | 100.0 | 0 | 85.4 | 46 | 120 | | | | |
| Chrysene | 84.400 | 10 | 100.0 | 0 | 84.4 | 55 | 120 | | | | |
| Di-n-butylphthalate | 89.800 | 10 | 100.0 | 0 | 89.8 | 54 | 120 | | | | |
| Di-n-octylphthalate | 86.570 | 10 | 100.0 | 0 | 86.6 | 37 | 137 | | | | |
| Dibenz(a,h)anthracene | 92.410 | 10 | 100.0 | 0 | 92.4 | 42 | 127 | | | | |
| Dibenzofuran | 58.740 | 10 | 100.0 | 0 | 58.7 | 54 | 120 | | | | |
| Diethylphthalate | 76.580 | 10 | 100.0 | 0 | 76.6 | 41 | 120 | | | | |
| Dimethylphthalate | 79.090 | 10 | 100.0 | 0 | 79.1 | 25 | 127 | | | | |
| Fluoranthene | 79.600 | 10 | 100.0 | 0 | 79.6 | 54 | 120 | | | | |
| Fluorene | 75.490 | 10 | 100.0 | 0 | 75.5 | 50 | 120 | | | | |
| Hexachlorobenzene | 63.590 | 10 | 100.0 | 0 | 63.6 | 52 | 120 | | | | |
| Hexachlorobutadiene | 57.540 | 20 | 100.0 | 0 | 57.5 | 27 | 120 | | | | |
| Hexachloroethane | 58.160 | 10 | 100.0 | 0 | 58.2 | 28 | 120 | | | | |
| Indeno(1,2,3-cd)pyrene | 94.470 | 10 | 100.0 | 0 | 94.5 | 43 | 125 | | | | |
| Isophorone | 82.750 | 10 | 100.0 | 0 | 82.8 | 50 | 120 | | | | |
| N-Nitrosodi-n-propylamine | 75.680 | 10 | 100.0 | 0 | 75.7 | 34 | 128 | | | | |
| N-Nitrosodiphenylamine | 78.310 | 10 | 100.0 | 0 | 78.3 | 48 | 120 | | | | |
| Naphthalene | 68.590 | 10 | 100.0 | 0 | 68.6 | 39 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270_W_PGE**

Sample ID: **LCS-83566** SampType: **LCS** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **LCSW** Batch ID: **83566** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056897**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrobenzene | 58.360 | 10 | 100.0 | 0 | 58.4 | 44 | 120 | | | | |
| Pentachlorophenol | 70.950 | 50 | 100.0 | 0 | 71.0 | 38 | 120 | | | | |
| Phenanthrene | 82.590 | 10 | 100.0 | 0 | 82.6 | 51 | 120 | | | | |
| Phenol | 74.070 | 10 | 100.0 | 0 | 74.1 | 20 | 120 | | | | |
| Pyrene | 82.230 | 10 | 100.0 | 0 | 82.2 | 49 | 128 | | | | |
| Surr: 1,2-Dichlorobenzene-d4 | 57.660 | | 100.0 | | 57.7 | 27 | 100 | | | | |
| Surr: 2,4,6-Tribromophenol | 64.870 | | 100.0 | | 64.9 | 42 | 124 | | | | |
| Surr: 2-Chlorophenol-d4 | 63.080 | | 100.0 | | 63.1 | 34 | 98 | | | | |
| Surr: 2-Fluorobiphenyl | 63.140 | | 100.0 | | 63.1 | 48 | 120 | | | | |
| Surr: 2-Fluorophenol | 74.810 | | 100.0 | | 74.8 | 20 | 120 | | | | |
| Surr: 4-Terphenyl-d14 | 55.970 | | 100.0 | | 56.0 | 51 | 135 | | | | |
| Surr: Nitrobenzene-d5 | 59.350 | | 100.0 | | 59.4 | 41 | 120 | | | | |
| Surr: Phenol-d5 | 65.260 | | 100.0 | | 65.3 | 20 | 120 | | | | |

Sample ID: **LCSD-83566** SampType: **LCSD** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **LCSS02** Batch ID: **83566** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056898**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | 54.940 | 10 | 100.0 | 0 | 54.9 | 37 | 120 | 53.78 | 2.13 | 20 | |
| 1,2-Dichlorobenzene | 54.030 | 10 | 100.0 | 0 | 54.0 | 33 | 120 | 55.04 | 1.85 | 20 | |
| 1,3-Dichlorobenzene | 52.760 | 10 | 100.0 | 0 | 52.8 | 32 | 120 | 53.37 | 1.15 | 20 | |
| 1,4-Dichlorobenzene | 55.240 | 10 | 100.0 | 0 | 55.2 | 32 | 120 | 56.44 | 2.15 | 20 | |
| 2,4,5-Trichlorophenol | 68.590 | 10 | 100.0 | 0 | 68.6 | 49 | 120 | 67.10 | 2.20 | 20 | |
| 2,4,6-Trichlorophenol | 74.510 | 10 | 100.0 | 0 | 74.5 | 49 | 126 | 73.46 | 1.42 | 20 | |
| 2,4-Dichlorophenol | 67.630 | 10 | 100.0 | 0 | 67.6 | 48 | 120 | 68.18 | 0.810 | 20 | |
| 2,4-Dimethylphenol | 63.250 | 10 | 100.0 | 0 | 63.3 | 28 | 120 | 63.37 | 0.190 | 20 | |
| 2,4-Dinitrophenol | 57.810 | 50 | 100.0 | 0 | 57.8 | 25 | 130 | 55.61 | 3.88 | 20 | |
| 2,4-Dinitrotoluene | 60.590 | 10 | 100.0 | 0 | 60.6 | 51 | 120 | 59.22 | 2.29 | 20 | |
| 2,6-Dinitrotoluene | 60.680 | 10 | 100.0 | 0 | 60.7 | 49 | 120 | 59.79 | 1.48 | 20 | |
| 2-Chloronaphthalene | 59.280 | 10 | 100.0 | 0 | 59.3 | 49 | 120 | 58.09 | 2.03 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270_W_PGE**

Sample ID: **LCSD-83566** SampType: **LCSD** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **LCSS02** Batch ID: **83566** TestNo: **EPA 8270C EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056898**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2-Chlorophenol | 65.680 | 10 | 100.0 | 0 | 65.7 | 37 | 120 | 68.44 | 4.12 | 20 | |
| 2-Methylnaphthalene | 52.800 | 10 | 100.0 | 0 | 52.8 | 46 | 120 | 53.14 | 0.642 | 20 | |
| 2-Methylphenol | 74.640 | 10 | 100.0 | 0 | 74.6 | 38 | 120 | 78.25 | 4.72 | 20 | |
| 2-Nitroaniline | 70.700 | 50 | 100.0 | 0 | 70.7 | 48 | 120 | 71.53 | 1.17 | 20 | |
| 2-Nitrophenol | 66.450 | 10 | 100.0 | 0 | 66.4 | 39 | 123 | 65.58 | 1.32 | 20 | |
| 3,3´-Dichlorobenzidine | 105.200 | 20 | 150.0 | 0 | 70.1 | 20 | 120 | 103.1 | 2.00 | 20 | |
| 3-Nitroaniline | 71.740 | 50 | 100.0 | 0 | 71.7 | 20 | 126 | 70.85 | 1.25 | 20 | |
| 4,6-Dinitro-2-methylphenol | 68.130 | 50 | 100.0 | 0 | 68.1 | 40 | 130 | 66.97 | 1.72 | 20 | |
| 4-Bromophenyl-phenylether | 75.660 | 10 | 100.0 | 0 | 75.7 | 52 | 120 | 74.35 | 1.75 | 20 | |
| 4-Chloro-3-methylphenol | 67.810 | 50 | 100.0 | 0 | 67.8 | 47 | 120 | 68.27 | 0.676 | 20 | |
| 4-Chloroaniline | 57.370 | 20 | 100.0 | 0 | 57.4 | 20 | 120 | 57.19 | 0.314 | 20 | |
| 4-Chlorophenyl-phenylether | 70.320 | 10 | 100.0 | 0 | 70.3 | 50 | 120 | 70.74 | 0.595 | 20 | |
| 4-Methylphenol | 66.670 | 10 | 100.0 | 0 | 66.7 | 32 | 120 | 69.95 | 4.80 | 20 | |
| 4-Nitroaniline | 73.520 | 20 | 100.0 | 0 | 73.5 | 36 | 120 | 73.53 | 0.0136 | 20 | |
| 4-Nitrophenol | 78.560 | 50 | 100.0 | 0 | 78.6 | 20 | 120 | 78.63 | 0.0891 | 20 | |
| Acenaphthene | 72.030 | 10 | 100.0 | 0 | 72.0 | 47 | 120 | 71.17 | 1.20 | 20 | |
| Acenaphthylene | 73.060 | 10 | 100.0 | 0 | 73.1 | 50 | 120 | 72.44 | 0.852 | 20 | |
| Anthracene | 81.720 | 10 | 100.0 | 0 | 81.7 | 54 | 120 | 83.22 | 1.82 | 20 | |
| Benzo(a)anthracene | 84.600 | 10 | 100.0 | 0 | 84.6 | 56 | 100 | 83.51 | 1.30 | 20 | |
| Benzo(a)pyrene | 78.040 | 10 | 100.0 | 0 | 78.0 | 53 | 120 | 78.58 | 0.690 | 20 | |
| Benzo(b)fluoranthene | 90.480 | 10 | 100.0 | 0 | 90.5 | 45 | 124 | 86.00 | 5.08 | 20 | |
| Benzo(g,h,i)perylene | 87.920 | 10 | 100.0 | 0 | 87.9 | 38 | 123 | 88.75 | 0.940 | 20 | |
| Benzo(k)fluoranthene | 81.200 | 10 | 100.0 | 0 | 81.2 | 45 | 124 | 85.81 | 5.52 | 20 | |
| Benzoic acid | 48.710 | 50 | 100.0 | 0 | 48.7 | 20 | 120 | 48.07 | 0 | 20 | |
| Benzyl alcohol | 70.910 | 20 | 100.0 | 0 | 70.9 | 30 | 120 | 73.61 | 3.74 | 20 | |
| Bis(2-chloroethoxy)methane | 75.160 | 10 | 100.0 | 0 | 75.2 | 46 | 120 | 76.17 | 1.33 | 20 | |
| Bis(2-chloroethyl)ether | 73.830 | 10 | 100.0 | 0 | 73.8 | 37 | 120 | 76.03 | 2.94 | 20 | |
| Bis(2-chloroisopropyl)ether | 67.680 | 10 | 100.0 | 0 | 67.7 | 26 | 131 | 70.76 | 4.45 | 20 | |
| Bis(2-ethylhexyl)phthalate | 89.120 | 10 | 100.0 | 0 | 89.1 | 42 | 126 | 87.37 | 1.98 | 20 | |
| Butylbenzylphthalate | 87.090 | 10 | 100.0 | 0 | 87.1 | 46 | 120 | 85.38 | 1.98 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270_W_PGE**

Sample ID: **LCSD-83566** SampType: **LCSD** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **LCSS02** Batch ID: **83566** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056898**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chrysene | 84.790 | 10 | 100.0 | 0 | 84.8 | 55 | 120 | 84.40 | 0.461 | 20 | |
| Di-n-butylphthalate | 90.330 | 10 | 100.0 | 0 | 90.3 | 54 | 120 | 89.80 | 0.588 | 20 | |
| Di-n-octylphthalate | 86.560 | 10 | 100.0 | 0 | 86.6 | 37 | 137 | 86.57 | 0.0116 | 20 | |
| Dibenz(a,h)anthracene | 91.060 | 10 | 100.0 | 0 | 91.1 | 42 | 127 | 92.41 | 1.47 | 20 | |
| Dibenzofuran | 59.570 | 10 | 100.0 | 0 | 59.6 | 54 | 120 | 58.74 | 1.40 | 20 | |
| Diethylphthalate | 76.140 | 10 | 100.0 | 0 | 76.1 | 41 | 120 | 76.58 | 0.576 | 20 | |
| Dimethylphthalate | 79.690 | 10 | 100.0 | 0 | 79.7 | 25 | 127 | 79.09 | 0.756 | 20 | |
| Fluoranthene | 79.410 | 10 | 100.0 | 0 | 79.4 | 54 | 120 | 79.60 | 0.239 | 20 | |
| Fluorene | 76.160 | 10 | 100.0 | 0 | 76.2 | 50 | 120 | 75.49 | 0.884 | 20 | |
| Hexachlorobenzene | 64.340 | 10 | 100.0 | 0 | 64.3 | 52 | 120 | 63.59 | 1.17 | 20 | |
| Hexachlorobutadiene | 58.320 | 20 | 100.0 | 0 | 58.3 | 27 | 120 | 57.54 | 1.35 | 20 | |
| Hexachloroethane | 57.900 | 10 | 100.0 | 0 | 57.9 | 28 | 120 | 58.16 | 0.448 | 20 | |
| Indeno(1,2,3-cd)pyrene | 92.780 | 10 | 100.0 | 0 | 92.8 | 43 | 125 | 94.47 | 1.81 | 20 | |
| Isophorone | 82.600 | 10 | 100.0 | 0 | 82.6 | 50 | 120 | 82.75 | 0.181 | 20 | |
| N-Nitrosodi-n-propylamine | 71.160 | 10 | 100.0 | 0 | 71.2 | 34 | 128 | 75.68 | 6.16 | 20 | |
| N-Nitrosodiphenylamine | 78.160 | 10 | 100.0 | 0 | 78.2 | 48 | 120 | 78.31 | 0.192 | 20 | |
| Naphthalene | 69.070 | 10 | 100.0 | 0 | 69.1 | 39 | 120 | 68.59 | 0.697 | 20 | |
| Nitrobenzene | 58.130 | 10 | 100.0 | 0 | 58.1 | 44 | 120 | 58.36 | 0.395 | 20 | |
| Pentachlorophenol | 71.680 | 50 | 100.0 | 0 | 71.7 | 38 | 120 | 70.95 | 1.02 | 20 | |
| Phenanthrene | 82.540 | 10 | 100.0 | 0 | 82.5 | 51 | 120 | 82.59 | 0.0606 | 20 | |
| Phenol | 70.290 | 10 | 100.0 | 0 | 70.3 | 20 | 120 | 74.07 | 5.24 | 20 | |
| Pyrene | 81.640 | 10 | 100.0 | 0 | 81.6 | 49 | 128 | 82.23 | 0.720 | 20 | |
| Surr: 1,2-Dichlorobenzene-d4 | 55.750 | | 100.0 | | 55.8 | 27 | 100 | | 0 | | |
| Surr: 2,4,6-Tribromophenol | 66.340 | | 100.0 | | 66.3 | 42 | 124 | | 0 | | |
| Surr: 2-Chlorophenol-d4 | 59.730 | | 100.0 | | 59.7 | 34 | 98 | | 0 | | |
| Surr: 2-Fluorobiphenyl | 64.340 | | 100.0 | | 64.3 | 48 | 120 | | 0 | | |
| Surr: 2-Fluorophenol | 74.310 | | 100.0 | | 74.3 | 20 | 120 | | 0 | | |
| Surr: 4-Terphenyl-d14 | 56.050 | | 100.0 | | 56.0 | 51 | 135 | | 0 | | |
| Surr: Nitrobenzene-d5 | 60.180 | | 100.0 | | 60.2 | 41 | 120 | | 0 | | |
| Surr: Phenol-d5 | 61.890 | | 100.0 | | 61.9 | 20 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270_W_PGE**

Sample ID: **MB-83566** SampType: **MBLK** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **PBW** Batch ID: **83566** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056901**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ND | 10 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 10 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 10 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 10 | | | | | | | | | |
| 2,4,5-Trichlorophenol | ND | 10 | | | | | | | | | |
| 2,4,6-Trichlorophenol | ND | 10 | | | | | | | | | |
| 2,4-Dichlorophenol | ND | 10 | | | | | | | | | |
| 2,4-Dimethylphenol | ND | 10 | | | | | | | | | |
| 2,4-Dinitrophenol | ND | 50 | | | | | | | | | |
| 2,4-Dinitrotoluene | ND | 10 | | | | | | | | | |
| 2,6-Dinitrotoluene | ND | 10 | | | | | | | | | |
| 2-Chloronaphthalene | ND | 10 | | | | | | | | | |
| 2-Chlorophenol | ND | 10 | | | | | | | | | |
| 2-Methylnaphthalene | ND | 10 | | | | | | | | | |
| 2-Methylphenol | ND | 10 | | | | | | | | | |
| 2-Nitroaniline | ND | 50 | | | | | | | | | |
| 2-Nitrophenol | ND | 10 | | | | | | | | | |
| 3,3´-Dichlorobenzidine | ND | 20 | | | | | | | | | |
| 3-Nitroaniline | ND | 50 | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | ND | 50 | | | | | | | | | |
| 4-Bromophenyl-phenylether | ND | 10 | | | | | | | | | |
| 4-Chloro-3-methylphenol | ND | 50 | | | | | | | | | |
| 4-Chloroaniline | ND | 20 | | | | | | | | | |
| 4-Chlorophenyl-phenylether | ND | 10 | | | | | | | | | |
| 4-Methylphenol | ND | 10 | | | | | | | | | |
| 4-Nitroaniline | ND | 20 | | | | | | | | | |
| 4-Nitrophenol | ND | 50 | | | | | | | | | |
| Acenaphthene | ND | 10 | | | | | | | | | |
| Acenaphthylene | ND | 10 | | | | | | | | | |
| Anthracene | ND | 10 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270_W_PGE**

Sample ID: **MB-83566** SampType: **MBLK** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **PBW** Batch ID: **83566** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056901**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)anthracene | ND | 10 | | | | | | | | | |
| Benzo(a)pyrene | ND | 10 | | | | | | | | | |
| Benzo(b)fluoranthene | ND | 10 | | | | | | | | | |
| Benzo(g,h,i)perylene | ND | 10 | | | | | | | | | |
| Benzo(k)fluoranthene | ND | 10 | | | | | | | | | |
| Benzoic acid | ND | 50 | | | | | | | | | |
| Benzyl alcohol | ND | 20 | | | | | | | | | |
| Bis(2-chloroethoxy)methane | ND | 10 | | | | | | | | | |
| Bis(2-chloroethyl)ether | ND | 10 | | | | | | | | | |
| Bis(2-chloroisopropyl)ether | ND | 10 | | | | | | | | | |
| Bis(2-ethylhexyl)phthalate | ND | 10 | | | | | | | | | |
| Butylbenzylphthalate | ND | 10 | | | | | | | | | |
| Chrysene | ND | 10 | | | | | | | | | |
| Di-n-butylphthalate | ND | 10 | | | | | | | | | |
| Di-n-octylphthalate | ND | 10 | | | | | | | | | |
| Dibenz(a,h)anthracene | ND | 10 | | | | | | | | | |
| Dibenzofuran | ND | 10 | | | | | | | | | |
| Diethylphthalate | ND | 10 | | | | | | | | | |
| Dimethylphthalate | ND | 10 | | | | | | | | | |
| Fluoranthene | ND | 10 | | | | | | | | | |
| Fluorene | ND | 10 | | | | | | | | | |
| Hexachlorobenzene | ND | 10 | | | | | | | | | |
| Hexachlorobutadiene | ND | 20 | | | | | | | | | |
| Hexachloroethane | ND | 10 | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | ND | 10 | | | | | | | | | |
| Isophorone | ND | 10 | | | | | | | | | |
| N-Nitrosodi-n-propylamine | ND | 10 | | | | | | | | | |
| N-Nitrosodiphenylamine | ND | 10 | | | | | | | | | |
| Naphthalene | ND | 10 | | | | | | | | | |
| Nitrobenzene | ND | 10 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8270_W_PGE**

Sample ID: **MB-83566** SampType: **MBLK** TestCode: **8270_W_PGE** Units: **µg/L** Prep Date: **12/21/2020** RunNo: **149616**
Client ID: **PBW** Batch ID: **83566** TestNo: **EPA 8270C** **EPA 3510C** Analysis Date: **12/22/2020** SeqNo: **4056901**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Pentachlorophenol | ND | 50 | | | | | | | | | |
| Phenanthrene | ND | 10 | | | | | | | | | |
| Phenol | 4.200 | 10 | | | | | | | | | |
| Pyrene | ND | 10 | | | | | | | | | |
| Surr: 1,2-Dichlorobenzene-d4 | 41.450 | | 100.0 | | 41.4 | 27 | 100 | | | | |
| Surr: 2,4,6-Tribromophenol | 49.920 | | 100.0 | | 49.9 | 42 | 124 | | | | |
| Surr: 2-Chlorophenol-d4 | 42.990 | | 100.0 | | 43.0 | 34 | 98 | | | | |
| Surr: 2-Fluorobiphenyl | 47.010 | | 100.0 | | 47.0 | 48 | 120 | | | | S |
| Surr: 2-Fluorophenol | 47.410 | | 100.0 | | 47.4 | 20 | 120 | | | | |
| Surr: 4-Terphenyl-d14 | 56.060 | | 100.0 | | 56.1 | 51 | 135 | | | | |
| Surr: Nitrobenzene-d5 | 45.100 | | 100.0 | | 45.1 | 41 | 120 | | | | |
| Surr: Phenol-d5 | 31.720 | | 100.0 | | 31.7 | 20 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-001

**Client Sample ID:** MW-68-180-EC-Q420
**Collection Date:** 12/16/2020 10:18:00 AM
**Matrix:** GROUNDWATER

## TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 1H-1,2,3,-triazole-4-Carboxaldehyde | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 1H-1,2,3-Triazole | ND | 4.0 | 0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 1H-1,2,4-Triazole | ND | 4.0 | 0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 1-methy-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 3-amino-s-triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 3-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 3-methyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-ethyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| 4-methyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:29 PM |
| Caprolactam | 0.33 | 0 | 0 | | µg/L | 1 | 12/22/2020 09:29 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-002

**Client Sample ID:** MW-939-EC-Q420
**Collection Date:** 12/16/2020 10:28:00 AM
**Matrix:** GROUNDWATER

## TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 1H-1,2,3,-triazole-4-Carboxaldehyde | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 1H-1,2,3-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 1H-1,2,4-Triazole | ND | 4.0 | 0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 1-methy-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 3-amino-s-triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 3-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 3-methyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-ethyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| 4-methyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Caprolactam | 0.32 | 0 | 0 | | µg/L | 1 | 12/22/2020 09:56 PM |
| Oleic acid | 0.0040 | 0 | 0 | | µg/L | 1 | 12/22/2020 09:56 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-003

**Client Sample ID:** MW-68-240-EC-Q420
**Collection Date:** 12/16/2020 12:34:00 PM
**Matrix:** GROUNDWATER

## TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 1H-1,2,3,-triazole-4-Carboxaldehyde | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 1H-1,2,3-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 1H-1,2,4-Triazole | ND | 4.0 | 0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 1-methy-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 3-amino-s-triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 3-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 3-methyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-ethyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |
| 4-methyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:22 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-004

**Client Sample ID:** MW-940-EC-Q420
**Collection Date:** 12/16/2020 12:44:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS** | | | | | | | |
| **EPA 3510C** | | | | **EPA 8270C** | | | |
| RunID: **NV00922-MS3_201222B** QC Batch: **83566** | | | | PrepDate: | | **12/21/2020** | Analyst: **PL** |
| 1-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 1H-1,2,3,-triazole-4-Carboxaldehyde | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 1H-1,2,3-Triazole | ND | 4.0 | 0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 1H-1,2,4-Triazole | ND | 4.0 | 0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 1-methy-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 3-amino-s-triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 3-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 3-methyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-ethyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:48 PM |
| 4-methyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 10:48 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-005

**Client Sample ID:** MW-68BR-280-EC-Q420
**Collection Date:** 12/16/2020 8:50:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS** | | | | | | | |
| **EPA 3510C** | | | | **EPA 8270C** | | | |
| RunID: **NV00922-MS3_201222B** QC Batch: **83566** | | | | PrepDate: | | **12/21/2020** | Analyst: **PL** |
| 1-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 1H-1,2,3,-triazole-4-Carboxaldehyde | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 1H-1,2,3-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 1H-1,2,4-Triazole | ND | 4.0 | 0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 1-methy-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 3-amino-s-triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 3-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 3-methyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-ethyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |
| 4-methyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:14 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043470
**Project:** PG&E Topock - GMP Exotic, 30035275
**Lab ID:** N043470-006

**Client Sample ID:** MW-941-EC-Q420
**Collection Date:** 12/16/2020 9:00:00 AM
**Matrix:** GROUNDWATER

## TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS

**EPA 3510C** **EPA 8270C**

RunID: **NV00922-MS3_201222B** QC Batch: **83566** PrepDate: **12/21/2020** Analyst: **PL**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 1H-1,2,3,-triazole-4-Carboxaldehyde | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 1H-1,2,3-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 1H-1,2,4-Triazole | ND | 4.0 | 0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 1-methy-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 3-amino-s-triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 3-ethyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 3-methyl-1H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-ethyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |
| 4-methyl-4H-1,2,4-Triazole | ND | 4.0 | 4.0 | | µg/L | 1 | 12/22/2020 11:40 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

N043470

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


Page 1 of 1

| | | |

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/16/2020 | Workorder: | N043470 |
| Rep sample Temp (Deg C): | 3.2/3.6/4.1 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☑ | NA ☐ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments: Sample 7 (TB-2) one out of 2 VOAs received with headsapace > 6mm.

Checklist Completed By: BHN BHdez 12/17/2020

Reviewed By: MBC 12/18/2020

**Subject:** RE: PG&E Topock - GMP, 30035275 (ASSET Labs No. N043469) and PG&E Topock - GMP Exotic, 30035275 (ASSET Labs No. N043470)
**From:** "Madsen, Laura" <Laura.Madsen@arcadis.com>
**Date:** 12/17/2020, 11:59 AM
**To:** Yoandra Rodriguez <yoandra@assetlaboratories.com>, "marlon@assetlaboratories.com" <marlon@assetlaboratories.com>
**CC:** "maryann.balilu@assetlaboratoriesph.com" <maryann.balilu@assetlaboratoriesph.com>

Hi Yoandra,
This was a special method request by DTSC. Can you do it by 365.3?

1. Orthophosphate by EPA method 365.2 Changed to EPA method SM4500P-E***[marlon]*** We can only do this by EPA 365.3

Thanks,
Laura

---

**From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**Sent:** Thursday, December 17, 2020 1:34 PM
**To:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Cc:** maryann.balilu@assetlaboratoriesph.com
**Subject:** Re: PG&E Topock - GMP, 30035275 (ASSET Labs No. N043469) and PG&E Topock - GMP Exotic, 30035275 (ASSET Labs No. N043470)

Sorry Laura,

I found another issue for the WO N043470.

The request for Orthophosphate should be 300, correct? So we are doing T. Phosphorus by EPA 365.3 and Orthophosphate by EPA 300.

Thanks,

On 12/17/2020 11:24 AM, Madsen, Laura wrote:

> Correct.
>
> Thanks!
>
> ---
>
> **From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
> **Sent:** Thursday, December 17, 2020 1:24 PM
> **To:** Madsen, Laura <Laura.Madsen@arcadis.com>
> **Cc:** maryann.balilu@assetlaboratoriesph.com; marlon@assetlaboratories.com
> **Subject:** Re: PG&E Topock - GMP, 30035275 (ASSET Labs No. N043469) and PG&E Topock - GMP Exotic, 30035275 (ASSET Labs No. N043470)
>
> Hi Laura,

Noted. I just want to confirm that we will perform MS/MSD on samples marked on the COCs for all analyses except 8270.

Thanks!

On 12/17/2020 11:14 AM, Madsen, Laura wrote:

> Hi Yoandra,
> Apologies, please no MSMSD then. I want to make sure we have enough sample for the analyses.
>
> Sample -07 should be a TB for 8260. The mark for 8270 was a typo.
>
> Thanks,
> Laura
>
> ---
>
> **From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
> **Sent:** Thursday, December 17, 2020 12:51 PM
> **To:** Madsen, Laura <Laura.Madsen@arcadis.com>
> **Cc:** maryann.balilu@assetlaboratoriesph.com; marlon@assetlaboratories.com
> **Subject:** Re: PG&E Topock - GMP, 30035275 (ASSET Labs No. N043469) and PG&E Topock - GMP Exotic, 30035275 (ASSET Labs No. N043470)
>
> Hi Laura,
>
> Two liters are enough to do the extraction for 8270, but if you request MS/MSD then 3L are needed, because 1 L is consumed for the sample, 1L for MS and 1L for MSD.
>
> Moving forward please include in the bottle request if MS/MSD is needed.
>
> In addition, please check the request for 8270 on sample N043470-7 (TB), we received 2 VOAs/HCl.
>
> Please advice how to proceed.
>
> Thanks,
>
> On 12/17/2020 10:13 AM, Madsen, Laura wrote:
>
> > Hi Yoandra,
> > Can you run MS/MSDs on everything but the TICs? I don't think we need MS/MSDs on those.
> >
> > Did we not give you enough volume for the SVOCs? I was told you only needed 2 liters to run the 8270 and TICs for each sample.
> >
> > Thanks,
> > Laura

**From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**Sent:** Thursday, December 17, 2020 11:29 AM
**To:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Cc:** maryann.balilu@assetlaboratoriesph.com
**Subject:** PG&E Topock - GMP, 30035275 (ASSET Labs No. N043469) and PG&E Topock - GMP Exotic, 30035275 (ASSET Labs No. N043470)

Hi Laura,

Please kindly check the attached COCs and confirm if we need to run MS/MSD for all requested samples.

In addition, please note that only 2 amber containers were received for SVOCs.

--
**Thanks,**

**Yoandra Rodriguez**
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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--
**Thanks,**

**Yoandra Rodriguez**
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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--

**Thanks,**

**Yoandra Rodriguez**
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
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--

**Thanks,**

**Yoandra Rodriguez**
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043470

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP Exotic, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043470-001A | MW-68-180-EC-Q420 | 12/16/2020 10:18:00 AM | 12/31/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| N043470-001B | | | 12/31/2020 | | EPA 365.3 | TOTAL PHOSPHORUS | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | | Total Phosphorus Prep | ☐ | ☑ | ☐ | WW |
| N043470-001C | | | 12/31/2020 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: 8270C | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| N043470-001D | | | 12/31/2020 | | EPA 8260B | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| | | | 12/31/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043470-001E | | | 12/31/2020 | | EPA 365.3 | ORTHO PHOSPHATE | ☐ | ☑ | ☐ | WW |
| N043470-002A | MW-939-EC-Q420 | 12/16/2020 10:28:00 AM | 12/31/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043470-002B | | | 12/31/2020 | | EPA 365.3 | TOTAL PHOSPHORUS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | | Total Phosphorus Prep | ☐ | ☐ | ☐ | WW |
| N043470-002C | | | 12/31/2020 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: 8270C | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043470

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP Exotic, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043470-002D | MW-939-EC-Q420 | 12/16/2020 10:28:00 AM | 12/31/2020 | Groundwater | EPA 8260B | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| | | | 12/31/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043470-002E | | | 12/31/2020 | | EPA 365.3 | ORTHO PHOSPHATE | ☐ | ☐ | ☐ | WW |
| N043470-003A | MW-68-240-EC-Q420 | 12/16/2020 12:34:00 PM | 12/31/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| N043470-003B | | | 12/31/2020 | | EPA 365.3 | TOTAL PHOSPHORUS | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | | Total Phosphorus Prep | ☐ | ☑ | ☐ | WW |
| N043470-003C | | | 12/31/2020 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: 8270C | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| N043470-003D | | | 12/31/2020 | | EPA 8260B | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| | | | 12/31/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043470-003E | | | 12/31/2020 | | EPA 365.3 | ORTHO PHOSPHATE | ☐ | ☑ | ☐ | WW |
| N043470-004A | MW-940-EC-Q420 | 12/16/2020 12:44:00 PM | 12/31/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043470-004B | | | 12/31/2020 | | EPA 365.3 | TOTAL PHOSPHORUS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | | Total Phosphorus Prep | ☐ | ☐ | ☐ | WW |
| N043470-004C | | | 12/31/2020 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: 8270C | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043470

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP Exotic, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043470-004C | MW-940-EC-Q420 | 12/16/2020 12:44:00 PM | 12/31/2020 | Groundwater | EPA 8270C | SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| N043470-004D | | | 12/31/2020 | | EPA 8260B | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| | | | 12/31/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043470-004E | | | 12/31/2020 | | EPA 365.3 | ORTHO PHOSPHATE | ☐ | ☐ | ☐ | WW |
| N043470-005A | MW-68BR-280-EC-Q420 | 12/16/2020 8:50:00 AM | 12/31/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| N043470-005B | | | 12/31/2020 | | EPA 365.3 | TOTAL PHOSPHORUS | ☐ | ☑ | ☐ | WW |
| | | | 12/31/2020 | | | Total Phosphorus Prep | ☐ | ☑ | ☐ | WW |
| N043470-005C | | | 12/31/2020 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: 8270C | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| N043470-005D | | | 12/31/2020 | | EPA 8260B | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| | | | 12/31/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043470-005E | | | 12/31/2020 | | EPA 365.3 | ORTHO PHOSPHATE | ☐ | ☑ | ☐ | WW |
| N043470-006A | MW-941-EC-Q420 | 12/16/2020 9:00:00 AM | 12/31/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*17-Dec-20*

**WorkOrder:** N043470

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP Exotic, 30035275 **QC Level:** Level IV **Date Received:** 12/16/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043470-006B | MW-941-EC-Q420 | 12/16/2020 9:00:00 AM | 12/31/2020 | Groundwater | EPA 365.3 | TOTAL PHOSPHORUS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | | Total Phosphorus Prep | ☐ | ☐ | ☐ | WW |
| N043470-006C | | | 12/31/2020 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: 8270C | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | SEMIVOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| | | | 12/31/2020 | | EPA 8270C | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | WW |
| N043470-006D | | | 12/31/2020 | | EPA 8260B | TENTATIVELY IDENTIFIED COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| | | | 12/31/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043470-006E | | | 12/31/2020 | | EPA 365.3 | ORTHO PHOSPHATE | ☐ | ☐ | ☐ | WW |
| N043470-007A | TB-2 | 12/16/2020 8:00:00 AM | 12/31/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N043470-008A | FOLDER | 12/31/2020 | 12/31/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | LAB |
| | | | 12/31/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/31/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/31/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

January 07, 2021

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043487

RE: PG&E Topock - GMP, 30035275

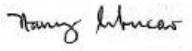
Attention: Dan Bush

Enclosed are the results for sample(s) received on December 17, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Nancy Sibucao
Laboratory Director

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**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043487

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for some samples due to matrix. Samples have high TDS concentration.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043485-001D-MS1, N043485-001D-MSD1, N043485-002D-MS2 and N043485-002D-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043487
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043487-001A | MW-41D-Q420 | Groundwater | 12/17/2020 8:24:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-001B | MW-41D-Q420 | Groundwater | 12/17/2020 8:24:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-001C | MW-41D-Q420 | Groundwater | 12/17/2020 8:24:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-001D | MW-41D-Q420 | Groundwater | 12/17/2020 8:24:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-002A | MW-41M-Q420 | Groundwater | 12/17/2020 8:17:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-002B | MW-41M-Q420 | Groundwater | 12/17/2020 8:17:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-002C | MW-41M-Q420 | Groundwater | 12/17/2020 8:17:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-002D | MW-41M-Q420 | Groundwater | 12/17/2020 8:17:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-003A | MW-41S-Q420 | Groundwater | 12/17/2020 9:02:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-003B | MW-41S-Q420 | Groundwater | 12/17/2020 9:02:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-003C | MW-41S-Q420 | Groundwater | 12/17/2020 9:02:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-003D | MW-41S-Q420 | Groundwater | 12/17/2020 9:02:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-004A | MW-60BR-245-Q420 | Groundwater | 12/17/2020 11:48:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-004B | MW-60BR-245-Q420 | Groundwater | 12/17/2020 11:48:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-004C | MW-60BR-245-Q420 | Groundwater | 12/17/2020 11:48:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-004D | MW-60BR-245-Q420 | Groundwater | 12/17/2020 11:48:00 AM | 12/17/2020 | 1/7/2021 |
| N043487-005A | EB-727-Q420 | Groundwater | 12/17/2020 11:30:00 AM | 12/17/2020 | 1/7/2021 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41D-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217G** | QC Batch: **R149503** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 20000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 07:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41M-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:17:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217G** | QC Batch: **R149503** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 14000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 07:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41S-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217G** | QC Batch: **R149503** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6800 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 07:05 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60BR-245-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 11:48:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201217G** | QC Batch: **R149503** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 17000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/17/2020 07:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043487-001BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149503**
Client ID: **ZZZZZZ** Batch ID: **R149503** TestNo: **EPA 120.1** Analysis Date: **12/17/2020** SeqNo: **4049785**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 20400.000 | 0.10 | | | | | | 20100 | 1.48 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41D-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221F** | QC Batch: **83586** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 13000 | 200 | 200 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41M-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:17:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201221F** | QC Batch: **83586** | | | PrepDate: | **12/21/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 10000 | 100 | 100 | | mg/L | 1 | 12/21/2020 05:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41S-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201222C** | QC Batch: **83599** | | | PrepDate: | **12/22/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3900 | 50 | 50 | | mg/L | 1 | 12/22/2020 05:29 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60BR-245-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 11:48:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201222C** | QC Batch: **83599** | | | PrepDate: | **12/22/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/22/2020 05:29 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83586** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149651** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83586** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058044** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 990.000 | 10 | 1000 | 0 | 99.0 | 80 | 120 | | | | |

| Sample ID: **MB-83586** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149651** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83586** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058045** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043487-001BDUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/21/2020** | RunNo: **149651** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83586** | TestNo: **SM2540C** | | Analysis Date: **12/21/2020** | SeqNo: **4058055** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 12620.000 | 200 | | | | | | 12720 | 0.789 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83599** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/22/2020** | RunNo: **149652** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83599** | TestNo: **SM2540C** | | Analysis Date: **12/22/2020** | SeqNo: **4058057** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 970.000 | 10 | 1000 | 0 | 97.0 | 80 | 120 | | | | |

| Sample ID: **MB-83599** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/22/2020** | RunNo: **149652** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83599** | TestNo: **SM2540C** | | Analysis Date: **12/22/2020** | SeqNo: **4058058** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043538-001BDUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/22/2020** | RunNo: **149652** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83599** | TestNo: **SM2540C** | | Analysis Date: **12/22/2020** | SeqNo: **4058063** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 91000.000 | 1000 | | | | | | 89600 | 1.55 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41D-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201218A** QC Batch: **R149526** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 1.1 | 0.17 | 1.0 | | µg/L | 5 | 12/18/2020 02:37 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201229C** QC Batch: **83603** | | | | PrepDate: | **12/23/2020** | | Analyst: **CEI** |
| Chromium | 1.4 | 0.13 | 1.0 | | µg/L | 1 | 12/29/2020 02:27 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41M-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:17:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201218A** QC Batch: **R149526** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 9.5 | 0.17 | 1.0 | | µg/L | 5 | 12/18/2020 02:57 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201229C** QC Batch: **83603** | | | | PrepDate: | **12/23/2020** | | Analyst: **CEI** |
| Chromium | 8.3 | 0.13 | 1.0 | | µg/L | 1 | 12/29/2020 02:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41S-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201218A** QC Batch: **R149526** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 5.5 | 0.033 | 0.20 | | µg/L | 1 | 12/18/2020 12:27 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201229C** QC Batch: **83603** | | | | PrepDate: | **12/23/2020** | | Analyst: **CEI** |
| Chromium | 5.2 | 0.13 | 1.0 | | µg/L | 1 | 12/29/2020 03:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60BR-245-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 11:48:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201218A** QC Batch: **R149526** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 16 | 0.17 | 1.0 | | µg/L | 5 | 12/18/2020 03:07 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201229C** QC Batch: **83603** | | | | PrepDate: | **12/23/2020** | | Analyst: **CEI** |
| Chromium | 15 | 0.13 | 1.0 | | µg/L | 1 | 12/29/2020 03:31 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-727-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 11:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201218A** | QC Batch: **R149526** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/18/2020 01:42 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149526** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149526** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149526** | TestNo: **EPA 218.6** | | Analysis Date: **12/18/2020** | SeqNo: **4051394** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149526** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149526** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149526** | TestNo: **EPA 218.6** | | Analysis Date: **12/18/2020** | SeqNo: **4051395** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.054 | 0.20 | 5.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N043486-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149526** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149526** | TestNo: **EPA 218.6** | | Analysis Date: **12/18/2020** | SeqNo: **4051397** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 53.741 | 1.0 | 25.00 | 27.98 | 103 | 90 | 110 | | | | |

| Sample ID: **N043486-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149526** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149526** | TestNo: **EPA 218.6** | | Analysis Date: **12/18/2020** | SeqNo: **4051400** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.146 | 0.20 | 1.000 | 1.074 | 107 | 90 | 110 | | | | |

| Sample ID: **N043486-001AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149526** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149526** | TestNo: **EPA 218.6** | | Analysis Date: **12/18/2020** | SeqNo: **4051403** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 53.918 | 1.0 | 25.00 | 27.98 | 104 | 90 | 110 | 53.74 | 0.329 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043486-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051405**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 15.612 | 0.20 | 5.000 | 10.39 | 104 | 90 | 110 | | | | |

Sample ID: **N043487-003ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051406**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.518 | 0.20 | | | | | | 5.547 | 0.515 | 20 | |

Sample ID: **N043486-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051410**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043487-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051412**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.007 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043486-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051414**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.979 | 1.0 | 5.000 | 1.074 | 98.1 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043487-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051416**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 6.281 | 1.0 | 5.000 | 1.076 | 104 | 90 | 110 | | | | |

Sample ID: **N043487-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051421**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 14.585 | 1.0 | 5.000 | 9.548 | 101 | 90 | 110 | | | | |

Sample ID: **N043487-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051422**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 10.708 | 0.20 | 5.000 | 5.547 | 103 | 90 | 110 | | | | |

Sample ID: **N043487-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149526**
Client ID: **ZZZZZZ** Batch ID: **R149526** TestNo: **EPA 218.6** Analysis Date: **12/18/2020** SeqNo: **4051423**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 42.906 | 1.0 | 25.00 | 16.20 | 107 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83603** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149753** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83603** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4063073** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83603** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149753** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83603** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4063074** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.653 | 1.0 | 10.00 | 0 | 96.5 | 85 | 115 | | | | |

| Sample ID: **N043526-001B-MS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149753** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83603** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4063082** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 10.179 | 1.0 | 10.00 | 0.9058 | 92.7 | 75 | 125 | | | | |

| Sample ID: **N043526-001B-MSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149753** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83603** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4063084** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 10.039 | 1.0 | 10.00 | 0.9058 | 91.3 | 75 | 125 | 10.18 | 1.38 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41D-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201223C** | QC Batch: **R149656** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 41 | 1.2 | 5.0 | | mg/L | 1 | 12/23/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41M-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:17:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201223C** | QC Batch: **R149656** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 36 | 1.2 | 5.0 | | mg/L | 1 | 12/23/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41S-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201223C** | QC Batch: **R149656** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 49 | 1.2 | 5.0 | | mg/L | 1 | 12/23/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60BR-245-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 11:48:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201223C** | QC Batch: **R149656** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 24 | 1.2 | 5.0 | | mg/L | 1 | 12/23/2020 04:10 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149656** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149656** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149656** | TestNo: **SM 2320 B** | | Analysis Date: **12/23/2020** | SeqNo: **4058071** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 96.154 | 5.0 | 100.0 | 0 | 96.2 | 85 | 115 | | | | |

| Sample ID: **MB-R149656** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149656** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149656** | TestNo: **SM 2320 B** | | Analysis Date: **12/23/2020** | SeqNo: **4058072** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043487-001BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149656** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149656** | TestNo: **SM 2320 B** | | Analysis Date: **12/23/2020** | SeqNo: **4058078** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 40.598 | 5.0 | | | | | | 40.60 | 0 | 30 | |

| Sample ID: **N043487-001BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149656** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149656** | TestNo: **SM 2320 B** | | Analysis Date: **12/23/2020** | SeqNo: **4058079** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 136.752 | 5.0 | 100.0 | 40.60 | 96.2 | 75 | 125 | | | | |

| Sample ID: **N043487-001BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149656** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149656** | TestNo: **SM 2320 B** | | Analysis Date: **12/23/2020** | SeqNo: **4058080** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 136.752 | 5.0 | 100.0 | 40.60 | 96.2 | 75 | 125 | 136.8 | 0 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-001

**Client Sample ID:** MW-41D-Q420
**Collection Date:** 12/17/2020 8:24:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201219A** QC Batch: **R149551** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/19/2020 07:13 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201222A** QC Batch: **R149640** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6900 | 70 | 1000 | | mg/L | 2000 | 12/22/2020 02:22 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201222A** QC Batch: **R149640** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 760 | 4.0 | 50 | | mg/L | 100 | 12/22/2020 07:16 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-002

**Client Sample ID:** MW-41M-Q420
**Collection Date:** 12/17/2020 8:17:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201219A** QC Batch: **R149551** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/19/2020 07:29 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201222A** QC Batch: **R149640** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 4600 | 35 | 500 | | mg/L | 1000 | 12/22/2020 02:39 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201222A** QC Batch: **R149640** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 560 | 2.0 | 25 | | mg/L | 50 | 12/22/2020 08:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-003

**Client Sample ID:** MW-41S-Q420
**Collection Date:** 12/17/2020 9:02:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201219A** QC Batch: **R149551** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/19/2020 07:45 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201222A** QC Batch: **R149640** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1900 | 17 | 250 | | mg/L | 500 | 12/22/2020 02:55 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201222A** QC Batch: **R149640** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 430 | 2.0 | 25 | | mg/L | 50 | 12/22/2020 04:49 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-004

**Client Sample ID:** MW-60BR-245-Q420
**Collection Date:** 12/17/2020 11:48:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201219A** QC Batch: **R149551** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/19/2020 08:01 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201222A** QC Batch: **R149640** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5600 | 70 | 1000 | | mg/L | 2000 | 12/22/2020 03:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201222A** QC Batch: **R149640** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 780 | 4.0 | 50 | | mg/L | 100 | 12/22/2020 08:21 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149551_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149551** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149551** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052505** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149551_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149551** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149551** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052506** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.231 | 0.50 | 1.250 | 0 | 98.5 | 90 | 110 | | | | |

| Sample ID: **N043485-001AMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149551** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149551** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052510** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.641 | 5.0 | 12.50 | 0.5070 | 97.1 | 80 | 120 | | | | |

| Sample ID: **N043485-001AMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149551** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149551** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052511** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.637 | 5.0 | 12.50 | 0.5070 | 97.0 | 80 | 120 | 12.64 | 0.0316 | 20 | |

| Sample ID: **N043485-004ADUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149551** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149551** | TestNo: **EPA 300.0** | | Analysis Date: **12/19/2020** | SeqNo: **4052513** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.567 | 5.0 | | | | | | 0.7800 | 0 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **MB-R149640_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149640** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149640** | TestNo: **EPA 300.0** | | Analysis Date: **12/22/2020** | SeqNo: **4057682** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149640_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149640** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149640** | TestNo: **EPA 300.0** | | Analysis Date: **12/22/2020** | SeqNo: **4057683** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.970 | 0.50 | 2.000 | 0 | 98.5 | 90 | 110 | | | | |

| Sample ID: **N043468-003AMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149640** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149640** | TestNo: **EPA 300.0** | | Analysis Date: **12/22/2020** | SeqNo: **4057685** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 285.950 | 25 | 100.0 | 192.0 | 94.0 | 80 | 120 | | | | |

| Sample ID: **N043468-003AMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149640** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149640** | TestNo: **EPA 300.0** | | Analysis Date: **12/22/2020** | SeqNo: **4057686** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 286.460 | 25 | 100.0 | 192.0 | 94.5 | 80 | 120 | 286.0 | 0.178 | 20 | |

| Sample ID: **N043485-004ADUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149640** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149640** | TestNo: **EPA 300.0** | | Analysis Date: **12/22/2020** | SeqNo: **4057688** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3369.000 | 500 | | | | | | 3370 | 0.0415 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043485-004AMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149640** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149640** | TestNo: **EPA 300.0** | | Analysis Date: **12/22/2020** | SeqNo: **4057689** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 5241.900 | 500 | 2000 | 3370 | 93.6 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149640_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149640**
Client ID: **PBW** Batch ID: **R149640** TestNo: **EPA 300.0** Analysis Date: **12/22/2020** SeqNo: **4057713**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149640_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149640**
Client ID: **LCSW** Batch ID: **R149640** TestNo: **EPA 300.0** Analysis Date: **12/22/2020** SeqNo: **4057714**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.899 | 0.50 | 4.000 | 0 | 97.5 | 90 | 110 | | | | |

Sample ID: **N043485-002AMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149640**
Client ID: **ZZZZZZ** Batch ID: **R149640** TestNo: **EPA 300.0** Analysis Date: **12/22/2020** SeqNo: **4057718**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 539.645 | 25 | 200.0 | 347.7 | 96.0 | 80 | 120 | | | | |

Sample ID: **N043485-002AMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149640**
Client ID: **ZZZZZZ** Batch ID: **R149640** TestNo: **EPA 300.0** Analysis Date: **12/22/2020** SeqNo: **4057719**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 542.125 | 25 | 200.0 | 347.7 | 97.2 | 80 | 120 | 539.6 | 0.459 | 20 | |

Sample ID: **N043487-003BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149640**
Client ID: **ZZZZZZ** Batch ID: **R149640** TestNo: **EPA 300.0** Analysis Date: **12/22/2020** SeqNo: **4057723**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 421.380 | 25 | | | | | | 430.1 | 2.05 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043487-003BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149640**
Client ID: **ZZZZZZ** Batch ID: **R149640** TestNo: **EPA 300.0** Analysis Date: **12/22/2020** SeqNo: **4057724**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 625.975 | 25 | 200.0 | 430.1 | 97.9 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41D-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.61 | 0.032 | 0.050 | | mg/L | 1 | 12/22/2020 04:01 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41M-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:17:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.59 | 0.032 | 0.050 | | mg/L | 1 | 12/22/2020 04:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41S-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 9:02:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.5 | 0.063 | 0.10 | | mg/L | 2 | 12/22/2020 04:14 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60BR-245-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 11:48:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201222I** | QC Batch: **R149636** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.18 | 0.032 | 0.050 | | mg/L | 1 | 12/22/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R149636** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057237** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R149636** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057238** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.478 | 0.050 | 0.5000 | 0 | 95.5 | 85 | 115 | | | | |

| Sample ID: **N043469-002DDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057240** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 23.715 | 2.5 | | | | | | 23.52 | 0.826 | 20 | |

| Sample ID: **N043469-002DMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057241** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 48.200 | 2.5 | 25.00 | 23.52 | 98.7 | 75 | 125 | | | | |

| Sample ID: **N043469-002DMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **149636** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149636** | TestNo: **SM4500-NO3** | | Analysis Date: **12/22/2020** | SeqNo: **4057242** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 49.030 | 2.5 | 25.00 | 23.52 | 102 | 75 | 125 | 48.20 | 1.71 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-001

**Client Sample ID:** MW-41D-Q420
**Collection Date:** 12/17/2020 8:24:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210104A** | QC Batch: **83607** | | | PrepDate: | | **12/23/2020** | Analyst: **DJ** |
| Boron | 1900 | 370 | 500 | | ug/L | 5 | 1/4/2021 09:25 AM |
| Calcium | 380000 | 420 | 2500 | | ug/L | 5 | 12/31/2020 07:28 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/31/2020 07:28 PM |
| Magnesium | 31000 | 240 | 500 | | ug/L | 5 | 12/31/2020 07:28 PM |
| Sodium | 4300000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 04:48 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-002

**Client Sample ID:** MW-41M-Q420
**Collection Date:** 12/17/2020 8:17:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210104A** | QC Batch: **83607** | | | PrepDate: | | **12/23/2020** | Analyst: **DJ** |
| Boron | 1400 | 370 | 500 | | ug/L | 5 | 1/4/2021 09:29 AM |
| Calcium | 380000 | 420 | 2500 | | ug/L | 5 | 12/31/2020 07:32 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/31/2020 07:32 PM |
| Magnesium | 33000 | 240 | 500 | | ug/L | 5 | 12/31/2020 07:32 PM |
| Sodium | 2700000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 04:51 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-003

**Client Sample ID:** MW-41S-Q420
**Collection Date:** 12/17/2020 9:02:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210102A** | QC Batch: **83607** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Boron | 930 | 74 | 100 | | ug/L | 1 | 1/2/2021 03:26 PM |
| Calcium | 190000 | 85 | 500 | | ug/L | 1 | 12/31/2020 07:36 PM |
| Iron | 21 | 18 | 20 | | ug/L | 1 | 12/31/2020 07:36 PM |
| Magnesium | 26000 | 48 | 100 | | ug/L | 1 | 12/31/2020 07:36 PM |
| Sodium | 1100000 | 9600 | 50000 | | ug/L | 100 | 1/5/2021 04:54 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-004

**Client Sample ID:** MW-60BR-245-Q420
**Collection Date:** 12/17/2020 11:48:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_210104A** | QC Batch: **83607** | | | PrepDate: | **12/23/2020** | | Analyst: **DJ** |
| Boron | 2400 | 370 | 500 | | ug/L | 5 | 1/4/2021 09:37 AM |
| Calcium | 390000 | 420 | 2500 | | ug/L | 5 | 12/31/2020 07:42 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/31/2020 07:42 PM |
| Magnesium | 7000 | 240 | 500 | | ug/L | 5 | 12/31/2020 07:42 PM |
| Sodium | 3600000 | 24000 | 120000 | | ug/L | 250 | 1/5/2021 05:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83607** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/23/2020** RunNo: **149791**
Client ID: **PBW** Batch ID: **83607** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064755**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83607** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/23/2020** RunNo: **149791**
Client ID: **LCSW** Batch ID: **83607** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064756**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 9973.318 | 500 | 10000 | 0 | 99.7 | 85 | 115 | | | | |
| Iron | 104.797 | 20 | 100.0 | 0 | 105 | 85 | 115 | | | | |
| Magnesium | 9729.170 | 100 | 10000 | 0 | 97.3 | 85 | 115 | | | | |

Sample ID: **N043485-001D-MS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/23/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83607** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064760**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 132848.432 | 500 | 10000 | 120100 | 127 | 75 | 125 | | | | S |
| Iron | 106.164 | 20 | 100.0 | 0 | 106 | 75 | 125 | | | | |
| Magnesium | 26483.476 | 100 | 10000 | 16280 | 102 | 75 | 125 | | | | |

Sample ID: **N043485-001D-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/23/2020** RunNo: **149791**
Client ID: **ZZZZZZ** Batch ID: **83607** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/31/2020** SeqNo: **4064763**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 136185.329 | 500 | 10000 | 120100 | 160 | 75 | 125 | 132800 | 2.48 | 20 | S |
| Iron | 113.567 | 20 | 100.0 | 0 | 114 | 75 | 125 | 106.2 | 6.74 | 20 | |
| Magnesium | 26297.326 | 100 | 10000 | 16280 | 100 | 75 | 125 | 26480 | 0.705 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **MB-83607** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065038** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

| Sample ID: **LCS1-83607** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065039** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5008.206 | 100 | 5000 | 0 | 100 | 85 | 115 | | | | |

| Sample ID: **N043485-001D-MS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065043** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5660.235 | 100 | 5000 | 227.7 | 109 | 75 | 125 | | | | |

| Sample ID: **N043485-001D-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065044** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5668.481 | 100 | 5000 | 227.7 | 109 | 75 | 125 | 5660 | 0.146 | 20 | |

| Sample ID: **MB-83607** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066719** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS2-83607** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066720** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18737.185 | 500 | 20000 | 0 | 93.7 | 85 | 115 | | | | |

| Sample ID: **N043485-002D-MS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066731** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 931195.141 | 25000 | 20000 | 960700 | -147 | 75 | 125 | | | | S |

| Sample ID: **N043485-002D-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/23/2020** | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066733** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 924370.623 | 25000 | 20000 | 960700 | -182 | 75 | 125 | 931200 | 0.736 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043485-001D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149791** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/31/2020** | SeqNo: **4064759** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 131920.499 | 500 | 10000 | 120100 | 118 | 80 | 120 | | | | |
| Iron | 108.427 | 20 | 100.0 | 0 | 108 | 80 | 120 | | | | |
| Magnesium | 26351.317 | 100 | 10000 | 16280 | 101 | 80 | 120 | | | | |

| Sample ID: **N043485-001D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149794** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/2/2021** | SeqNo: **4065042** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5628.170 | 100 | 5000 | 227.7 | 108 | 80 | 120 | | | | |

| Sample ID: **N043485-002D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149846** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83607** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **1/5/2021** | SeqNo: **4066727** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 941231.405 | 25000 | 20000 | 960700 | -97.3 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-41D-Q420 |
| **Lab Order:** | N043487 | **Collection Date:** | 12/17/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043487-001 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201229C** QC Batch: **83603** PrepDate: **12/23/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/29/2020 02:27 PM |
| Manganese | 47 | 0.26 | 0.50 | | µg/L | 1 | 12/29/2020 02:27 PM |
| Molybdenum | 81 | 0.21 | 0.50 | | µg/L | 1 | 12/29/2020 02:27 PM |
| Selenium | 0.55 | 0.36 | 0.50 | | µg/L | 1 | 12/29/2020 02:27 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-002

**Client Sample ID:** MW-41M-Q420
**Collection Date:** 12/17/2020 8:17:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201229C** | QC Batch: **83603** | | | | PrepDate: | **12/23/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/29/2020 02:45 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/29/2020 02:45 PM |
| Molybdenum | 26 | 0.21 | 0.50 | | µg/L | 1 | 12/29/2020 02:45 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/29/2020 02:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-003

**Client Sample ID:** MW-41S-Q420
**Collection Date:** 12/17/2020 9:02:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201229C** | QC Batch: **83603** | | | | PrepDate: | **12/23/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/29/2020 03:02 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/29/2020 03:02 PM |
| Molybdenum | 13 | 0.21 | 0.50 | | µg/L | 1 | 12/29/2020 03:02 PM |
| Selenium | 1.9 | 0.36 | 0.50 | | µg/L | 1 | 12/29/2020 03:02 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043487
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043487-004

**Client Sample ID:** MW-60BR-245-Q420
**Collection Date:** 12/17/2020 11:48:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201229C** | QC Batch: **83603** | | | | PrepDate: | **12/23/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/29/2020 03:31 PM |
| Manganese | 1.6 | 0.26 | 0.50 | | µg/L | 1 | 12/29/2020 03:31 PM |
| Molybdenum | 65 | 0.21 | 0.50 | | µg/L | 1 | 12/29/2020 03:31 PM |
| Selenium | 2.9 | 0.36 | 0.50 | | µg/L | 1 | 12/29/2020 03:31 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **MB-83603** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149753** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83603** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4063304** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-83603** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149753** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83603** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4063305** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 9.988 | 0.10 | 10.00 | 0 | 99.9 | 85 | 115 | | | | |
| Manganese | 100.276 | 0.50 | 100.0 | 0 | 100 | 85 | 115 | | | | |
| Molybdenum | 9.940 | 0.50 | 10.00 | 0 | 99.4 | 85 | 115 | | | | |
| Selenium | 9.790 | 0.50 | 10.00 | 0 | 97.9 | 85 | 115 | | | | |

| Sample ID: **N043526-001B-MS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149753** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83603** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4063313** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 14.929 | 0.10 | 10.00 | 4.848 | 101 | 75 | 125 | | | | |
| Manganese | 175.665 | 0.50 | 100.0 | 81.34 | 94.3 | 75 | 125 | | | | |
| Molybdenum | 61.393 | 0.50 | 10.00 | 51.15 | 102 | 75 | 125 | | | | |
| Selenium | 9.883 | 0.50 | 10.00 | 0 | 98.8 | 75 | 125 | | | | |

| Sample ID: **N043526-001B-MSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/23/2020** | RunNo: **149753** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83603** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/29/2020** | SeqNo: **4063315** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 14.760 | 0.10 | 10.00 | 4.848 | 99.1 | 75 | 125 | 14.93 | 1.13 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043487
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043526-001B-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/23/2020** RunNo: **149753**
Client ID: **ZZZZZZ** Batch ID: **83603** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/29/2020** SeqNo: **4063315**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 175.225 | 0.50 | 100.0 | 81.34 | 93.9 | 75 | 125 | 175.7 | 0.251 | 20 | |
| Molybdenum | 61.055 | 0.50 | 10.00 | 51.15 | 99.0 | 75 | 125 | 61.39 | 0.552 | 20 | |
| Selenium | 9.616 | 0.50 | 10.00 | 0 | 96.2 | 75 | 125 | 9.883 | 2.74 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

N043487

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


Page 1 of 1

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | | EDD Requirement | | QA/QC | | Sample Receipt Condition | Y | N |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | | Excel EDD | | RTNE | | 1. Chilled | ✓ | |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | | Geotracker | | RWQCB | ✓ | 2. Headspace | | |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 | Labspec | | CalTrans | | 3. Container Intact | ✓ | |
| Submitted By: Jesse D. Bays | | Phone: 949-727-1400, ext 200 | Fax: | Others | ✓ | LEVEL III | | 4. Seal Present | | ✓ |
| Title: Field Tech | Phone: 916-786-3302 Fax: | | | Specify: RWQCB | | LEVEL IV | | 5. IR number | 2 | |
| Signature: Date: 12/17/20 | Sampled By: Nara Tep | | | Global ID: | | Regulatory | | 6. Method of Cooling: ICE | | |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | | | Specify State: | | Sample Temp: 4.1°C | | |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/17/20 | | | | | | Courier: ASSET | | |
| Project Number: 30035275 | | | | | | | | Tracking No.: | | |

Matrix: Ground x | Potable | NPDES | Surface; Sediment | Soil | Other Solid

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Oxygen and Deuterium isotopes (CFIRM), ice (250 mL poly) | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (Field filt. poly) | Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly) | Bromide, Sulfate, Chloride (EPA 300.0) (1 liter poly) | Fluoride (EPA 300.0) (1 liter poly) | Specific Conductance (EPA 120.1) (1 liter poly) | Total Dissolved Solids (SM02540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 (125 mL poly) | Total Organic Carbon (SM5310C); H2SO4 (3x40 mL VOAs) | Metals Dissolved (EPA7470A FF) Hg; HNO3 (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Potassium (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni (500 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mn (500 mL poly) | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na (500 mL poly) | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6010B), HNO3 Cu, Ni (500 mL poly) | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn (500 mL poly) | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 (500 mL poly) | VOCs (8260) (3x40 mL VOAs) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043487-01 | MW-41D-Q420 | 12/17/2020 | 0824 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 2 | -02 | MW-41M-Q420 | 12/17/2020 | 0817 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 3 | -03 | MW-41S-Q420 | 12/17/2020 | 0902 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 4 | -04 | MW-60BR-245-Q420 | 12/17/2020 | 1148 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 5 | -05 | EB-727-Q420 | 12/17/2020 | 1130 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Relinquished by (Signature and Printed Name): Nara Tep Date/Time: 12/17/20 1415
Received by (Signature and Printed Name): RINA ROMEO ALCANTARA Date/Time: 12/17/20 1415

Relinquished by (Signature and Printed Name): RINA ROMEO ALCANTARA Date/Time: 12/17/20 1643
Received by (Signature and Printed Name): Boikys Hernandez Date/Time: 12/17/20 1643

Relinquished by (Signature and Printed Name): Date/Time:
Received by (Signature and Printed Name): Date/Time:

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.

5. Trip Blanks and Equipment Blanks are billable samples.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. Per subcontract analysis, TAT and Surcharges will vary.

Preservatives:

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

Container Type:

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/17/2020 | Workorder: | N043487 |
| Rep sample Temp (Deg C): | 4.1 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | Other |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/18/2020

Reviewed By: MBC 12/21/2020

# ASSET Laboratories

## WORK ORDER Summary

*18-Dec-20*

**WorkOrder:** N043487

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/17/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se Ag, Tl, V, Zn, K, Na

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043487-001A | MW-41D-Q420 | 12/17/2020 8:24:00 AM | 1/4/2021 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043487-001B | MW41D-Q420 | | 1/4/2021 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043487-001C | MW-41D-Q420 | | 1/4/2021 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043487-001D | | | 1/4/2021 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043487-002A | MW-41M-Q420 | 12/17/2020 8:17:00 AM | 1/4/2021 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043487-002B | | | 1/4/2021 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*18-Dec-20*

**WorkOrder:** N043487

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/17/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se Ag, Tl, V, Zn, K, Na

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043487-002B | MW-41M-Q420 | 12/17/2020 8:17:00 AM | 1/4/2021 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043487-002C | | | 1/4/2021 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043487-002D | | | 1/4/2021 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043487-003A | MW-41S-Q420 | 12/17/2020 9:02:00 AM | 1/4/2021 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043487-003B | | | 1/4/2021 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043487-003C | | | 1/4/2021 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043487-003D | | | 1/4/2021 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*18-Dec-20*

**WorkOrder:** N043487

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/17/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se Ag, Tl, V, Zn, K, Na

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043487-003D | MW-41S-Q420 | 12/17/2020 9:02:00 AM | 1/4/2021 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043487-004A | MW-60BR-245-Q420 | 12/17/2020 11:48:00 AM | 1/4/2021 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043487-004B | | | 1/4/2021 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 1/4/2021 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043487-004C | | | 1/4/2021 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043487-004D | | | 1/4/2021 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 1/4/2021 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043487-005A | EB-727-Q420 | 12/17/2020 11:30:00 AM | 1/4/2021 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043487-006A | FOLDER | 1/4/2021 | 1/4/2021 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 1/4/2021 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 1/4/2021 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889

Date: 01-08-2021
EMAX Batch No.: 20L101

Attn: Laura Madsen

ARCADIS
1410 Rocly Ridge Dr #330
Roseville CA 95661

Subject: Laboratory Report
Project: PG&E TOPOCK-GMP

---

Enclosed is the Laboratory report for samples received on 12/10/20.
The data reported relate only to samples listed below :

| Sample ID | Control # | Col Date | Matrix | Analysis |
|---|---|---|---|---|
| MW-54-085-EB-Q420 | L101-01 | 12/09/20 | WATER | CHROMIUM HEXAVALENT BY IC |
| MW-54-085-Q420 | L101-02 | 12/09/20 | WATER | CHLORIDE BY IC |
| | | | | SULFATE BY IC |
| | | | | CHROMIUM HEXAVALENT BY IC |
| | | | | SPECIFIC CONDUCTANCE |
| | | | | TOTAL DISSOLVED SOLIDS |
| | | | | TOTAL ALKALINITY |
| | | | | DISSOLVED METALS BY ICP-MS |
| | | | | DISSOLVED METALS BY ICP |
| MW-54-140-EB-Q420 | L101-03 | 12/09/20 | WATER | CHROMIUM HEXAVALENT BY IC |
| MW-54-140-Q420 | L101-04 | 12/09/20 | WATER | CHLORIDE BY IC |
| | | | | SULFATE BY IC |
| | | | | CHROMIUM HEXAVALENT BY IC |
| | | | | SPECIFIC CONDUCTANCE |
| | | | | TOTAL DISSOLVED SOLIDS |
| | | | | TOTAL ALKALINITY |
| | | | | DISSOLVED METALS BY ICP-MS |
| | | | | DISSOLVED METALS BY ICP |
| MW-54-195-EB-Q420 | L101-05 | 12/09/20 | WATER | CHROMIUM HEXAVALENT BY IC |
| MW-54-195-Q420 | L101-06 | 12/09/20 | WATER | CHLORIDE BY IC |
| | | | | SULFATE BY IC |
| | | | | CHROMIUM HEXAVALENT BY IC |
| | | | | SPECIFIC CONDUCTANCE |
| | | | | TOTAL DISSOLVED SOLIDS |
| | | | | TOTAL ALKALINITY |
| | | | | DISSOLVED METALS BY ICP-MS |
| | | | | DISSOLVED METALS BY ICP |
| MW-55-045-EB-Q420 | L101-07 | 12/09/20 | WATER | CHROMIUM HEXAVALENT BY IC |
| MW-55-045-Q420 | L101-08 | 12/09/20 | WATER | CHLORIDE BY IC |
| | | | | SULFATE BY IC |
| | | | | CHROMIUM HEXAVALENT BY IC |
| | | | | SPECIFIC CONDUCTANCE |
| | | | | TOTAL DISSOLVED SOLIDS |
| | | | | TOTAL ALKALINITY |
| | | | | DISSOLVED METALS BY ICP |
| | | | | DISSOLVED METALS LIST 1 |
| MW-55-120-Q420 | L101-09 | 12/09/20 | WATER | CHLORIDE BY IC |
| | | | | SULFATE BY IC |
| | | | | CHROMIUM HEXAVALENT BY IC |
| | | | | SPECIFIC CONDUCTANCE |
| | | | | TOTAL DISSOLVED SOLIDS |
| | | | | TOTAL ALKALINITY |
| | | | | DISSOLVED METALS BY ICP |
| | | | | DISSOLVED METALS LIST 1 |

EMAX
LABORATORIES, INC.
1835 W. 205th Street
Torrance, CA 90501
Tel: (310) 618-8889

| Sample ID | Control # | Col Date | Matrix | Analysis |
|---|---|---|---|---|
| MW-56D-Q420 | L101-10 | 12/09/20 | WATER | CHLORIDE BY IC<br>SULFATE BY IC<br>CHROMIUM HEXAVALENT BY IC<br>SPECIFIC CONDUCTANCE<br>TOTAL DISSOLVED SOLIDS<br>TOTAL ALKALINITY<br>DISSOLVED METALS BY ICP<br>DISSOLVED METALS LIST 1 |
| MW-56M-Q420 | L101-11 | 12/09/20 | WATER | CHLORIDE BY IC<br>SULFATE BY IC<br>CHROMIUM HEXAVALENT BY IC<br>SPECIFIC CONDUCTANCE<br>TOTAL DISSOLVED SOLIDS<br>TOTAL ALKALINITY<br>DISSOLVED METALS BY ICP<br>DISSOLVED METALS LIST 1 |
| MW-56S-Q420 | L101-12 | 12/09/20 | WATER | CHLORIDE BY IC<br>SULFATE BY IC<br>CHROMIUM HEXAVALENT BY IC<br>SPECIFIC CONDUCTANCE<br>TOTAL DISSOLVED SOLIDS<br>TOTAL ALKALINITY<br>DISSOLVED METALS BY ICP<br>DISSOLVED METALS LIST 1 |
| MW-924-Q420 | L101-13 | 12/09/20 | WATER | CHLORIDE BY IC<br>SULFATE BY IC<br>CHROMIUM HEXAVALENT BY IC<br>SPECIFIC CONDUCTANCE<br>TOTAL DISSOLVED SOLIDS<br>TOTAL ALKALINITY<br>DISSOLVED METALS BY ICP<br>DISSOLVED METALS LIST 1 |

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912018-15
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672
Arizona Environmental Laboratory License Number AZ0465

# CHAIN OF CUSTODY

EMAX Laboratories, Inc.
1835 W. 205th Street, Torrance, CA 90501
Tel # : 310-618-8889 FAX#: 310-618-0818
Email: info@emaxlabs.com

**PO NUMBER: 30035275**

SAMPLE STORAGE

**EMAX CONTROL NO.** 20L101

**PROJECT CODE:**

CLIENT Arcadis
PROJECT PG&E Topock - GMP
COORDINATOR Dan Bush
TEL 916-786-3302 FAX EMAIL dan.bush@arcadis.com
SEND REPORT TO Dan Bush
COMPANY Arcadis
ADDRESS 1410 Rocly Ridge Dr #330, Roseville, CA 95661
EMAX PM Andy Mai

| MATRIX CODE | PRESERVATIVE CODE |
|---|---|
| DW=Drinking Water | IC = Ice |
| GW=Ground Water | HC = HCl |
| WW=Waste Water | HN=HNO3 |
| SD=Solid Waste SL=Sludge | SH=NaO3 |
| SS=Soil/ Sediment | ST=Na2S2O3 |
| WP=Wipes PP=Pure Products | ZA=Zinc Acetate |
| AR=Air | HS=H2SO4 |
| O= | N=(NH4)2, SO4, NH4, OH |

TAT: ☐ Rush __24__hrs. ☐ Rush __48_hrs ☐ Rush_72_hrs ☑ 7 days ☐ 14 days ☐ 21 days

| LAB | SAMPLE ID CLIENT | SAMPLING LOCATION | DATE | TIME | CONTAINER NO. | SIZE | TYPE | MATRIX CODE | QC | PRESERVATIVE CODE | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-54-085-EB-Q420 | | 12/9/2020 | 8:40 | 1 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 2 | MW-54-085-Q420 | | 12/9/2020 | 9:06 | 4 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 3 | MW-54-140-EB-Q420 | | 12/9/2020 | 7:50 | 1 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 4 | MW-54-140-Q420 | | 12/9/2020 | 8:22 | 4 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 5 | MW-54-195-EB-Q420 | | 12/9/2020 | 7:00 | 1 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 6 | MW-54-195-Q420 | | 12/9/2020 | 7:36 | 4 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 7 | MW-55-045-EB-Q420 | | 12/9/2020 | 8:55 | 1 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 8 | MW-55-045-Q420 | | 12/9/2020 | 9:23 | 4 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 9 | MW-55-120-Q420 | | 12/9/2020 | 8:42 | 3 | mL, 2x 125 mL | Poly | GW | | IC,N | |
| 10 | MW-56D-Q420 | | 12/9/2020 | 11:11 | 3 | mL, 2x 125 mL | Poly | GW | | IC,N | |

ANALYSIS REQUIRED

| PRESERVATIVE CODE | Cr(IV) FF (EPA 218.6) | (NH4)2SO4/NH4OH Cr(IV) FF (EPA 218.6) | (NH4)2SO4/NH4OH (2 X 250 mL Alkalinity, Total as CaCO3 (SM 2320 B) | Chloride, Sulfate (EPA 300.0) | Total Dissolved Solids (SM 2540 C) | Specific Conductance (EPA 120.1) | Dissolved Metals FF (SW 6020) (As, Cr, Mg, Mn, Mo, Se) | Dissolved Metals FF (SW 6010 B) (B, Ca, Fe, Na) | Dissolved Metals FF (SW 6020) (Cr, Mg, Mn, Mo, Se) |
|---|---|---|---|---|---|---|---|---|---|
| IC,N | X | | | | | | | | |
| IC,N | | X | X | X | X | X | X | X | |
| IC,N | X | | | | | | | | |
| IC,N | | X | X | X | X | X | X | X | |
| IC,N | X | | | | | | | | |
| IC,N | | X | X | X | X | X | X | X | |
| IC,N | X | | | | | | | | |
| IC,N | | X | X | X | X | X | | X | X |
| IC,N | X | | X | X | X | X | | X | X |
| IC,N | X | | X | X | X | X | | X | X |

Instructions

| Cooler # | Temp. (°C) | Sample #s |
|---|---|---|
| 1 | 2.1 | |
| 2 | 2.8 | |

SAMPLER Nara Tep/Reggie Tep

COURIER/AIRBILL

| RELINQUISHED BY | Date | Time | RECEIVED BY |
|---|---|---|---|
| | 12/9/20 | 1751 | |
| | 12/10/20 | ~~10:20~~ | |
| | | 10:15 | MF 12/10 |

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

# CHAIN OF CUSTODY

EMAX Laboratories, Inc.

1835 W. 205th Street, Torrance, CA 90501
Tel # : 310-618-8889 FAX#: 310-618-0818
Email: info@emaxlabs.com

**PO NUMBER: 30035275**

SAMPLE STORAGE

**EMAX CONTROL NO.** 20L101

**PROJECT CODE:**

CLIENT Arcadis
PROJECT PG&E Topock - GMP
COORDINATOR Dan Bush
TEL 916-786-3302 FAX EMAIL dan.bush@arcadis.com
SEND REPORT TO Dan Bush
COMPANY Arcadis
ADDRESS 1410 Rocly Ridge Dr #330, Roseville, CA 95661
EMAX PM Andy Mai

| MATRIX CODE | PRESERVATIVE CODE |
|---|---|
| DW=Drinking Water | IC = Ice |
| GW=Ground Water | HC = HCl |
| WW=Waste Water | HN=HNO3 |
| SD=Solid Waste SL=Sludge | SH=NaO3 |
| SS=Soil/ Sediment | ST=Na2S2O3 |
| WP=Wipes PP=Pure Products | ZA=Zinc Acetate |
| AR=Air | HS=H2SO4 |
| O= | N=(NH4)2, SO4, NH4, OH |

ANALYSIS REQUIRED

- Cr(V) FF (EPA 218.6) (NH4)2, SO4, NH4, OH
- Cr(V) FF (EPA 218.6) (NH4)2, SO4, NH4, OH (2 X 250 mL Polys)
- Alkalinity, Total as CaCO3 (SM 2320 B)
- Chloride, Sulfate (EPA 300.0)
- Total Dissolved Solids (SM 2540 C)
- Specific Conductance (EPA 120.1)
- Dissolved Metals (SW 6020) (As, Cr, Mg, Mn, Mo, Se)
- Dissolved Metals (SW 6010 B) (B, Ca, Fe, Na)
- Dissolved Metals FF (SW 6020) (Cr, Mg, Mn, Mo, Se)

TAT

- ☐ Rush __24__hrs.
- ☐ Rush __48_hrs
- ☐ Rush_72_hrs
- ☑ 7 days
- ☐ 14 days
- ☐ 21 days

| LAB | SAMPLE ID CLIENT | SAMPLING LOCATION | DATE | TIME | CONTAINER NO. | SIZE | TYPE | MATRIX CODE | QC | PRESERVATIVE CODE | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 11 | MW-56M-Q420 | | 12/9/2020 | 10:29 | 3 | mL, 500 mL | Poly | GW | | IC,N IC,N IC IC IC IC HN HN HN: X X X X X X X X | |
| 12 | MW-56S-Q420 | | 12/9/2020 | 11:41 | 3 | mL, 500 mL | Poly | GW | | IC,N IC,N IC IC IC IC HN HN HN: X X X X X X X X | |
| 13 | MW-924-Q420 | | 12/9/2020 | 10:39 | 3 | mL, 500 mL | Poly | GW | | IC,N IC,N IC IC IC IC HN HN HN: X X X X X X X X | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | | | | | | | | | |
| 9 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |

Instructions

| Cooler # | Temp. (°C) | Sample #s |
|---|---|---|
| | | |

SAMPLER Nara Tep/Reggie Tep

COURIER/AIRBILL

| RELINQUISHED BY | Date | Time | RECEIVED BY |
|---|---|---|---|
| | 12/9/20 | 1251 | |
| | 12/10/20 | ~~10:40~~ | |
| | | 10:15 | MR 12/10 |

NOTICE: Turn-around-time (TAT) for samples shall not begin untill all discrepancies have been resolved. For samples received and discrepacies resolved after 1500 hrs, TAT shall start at 0800 hrs the next business day. The client is responsible for all cost associted with sample disposal. Samples shall be disposed of as soon as practical (but not prior to fifteen (15) calendar days) after issuance of analytical report unless a different sample disposal schedule is pre-arranged with EMAX. Disposal fee for samples defined by CA Title 22 as non-hazardous shall be $5.00 per sample. EMAX will return hazardous samples to the client at the client's expense unless directed in writing otherwise.

SAMPLE RECEIPT FORM 1

Reference: EMAX-SM02 Rev.11
Form: SM02F1

| Type of Delivery | Airbill / Tracking Number | ECN 20L101 |
|---|---|---|
| ☒ Fedex ☐ UPS ☐ GSO ☐ Others | 7811 6157 8307 / 7811 6157 8318 | Recipient Cecilia Chavez |
| ☐ EMAX Courier ☐ Client Delivery | | Date 12/10/20 Time 10:15 |

## COC INSPECTION

☒ Client Name ☒ Client PM/FC ☒ Sampler Name ☒ Sampling Date/Time ☒ Sample ID ☒ Matrix
☒ Address ☒ Tel # / Fax # ☐ Courier Signature ☒ Analysis Required ☒ Preservative (if any) ☒ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required
Note:

## PACKAGING INSPECTION

Container ☒ Cooler ☐ Box ☐ Other
Condition ☐ Custody Seal ☐ Intact ☐ Damaged
Packaging ☐ Bubble Pack ☐ Styrofoam ☐ Popcorn ☐ Sufficient ☒ bag
Temperatures (Cool, ≤6 °C but not frozen) ☒ Cooler 1 2.1 °C ☒ Cooler 2 2.8 °C ☐ Cooler 3 ____ °C ☐ Cooler 4 ____ °C ☐ Cooler 5 ____ °C
☐ Cooler 6 ____ °C ☐ Cooler 7 ____ °C ☐ Cooler 8 ____ °C ☐ Cooler 9 ____ °C ☐ Cooler 10 ____ °C
*Thermometer:* A - S/N 192381464 (B) - S/N 200291755 C - S/N 200291756 D - S/N 14025267
Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**
Note:

## DISCREPANCIES

| LabSampleID | LabSampleContainerID | Code | ClientSample Label ID / Information | Corrective Action |
|---|---|---|---|---|
| 7 | 16 | D22 | *on label, crossed off FF, COC marks field filtered | R1 |
| 3, 7 ~~11, 12, 13~~ | 6, 16 ~~28, 31, 34~~ | D10 D2 | ~~Label reads 6010 and 6020~~ CL 12/10/20 | R1 |
| 3, 5, 7, 9, 10 | | D12 | COC indicates 2x125 ml received 1x125 ml for CrVI | ok |
| | | | CL 12/10/20 | |

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

**NOTES/OBSERVATIONS:** * All other samples like this one mark field filtered on COC/label.

**LEGEND:**

☐ **Continue to next page.**

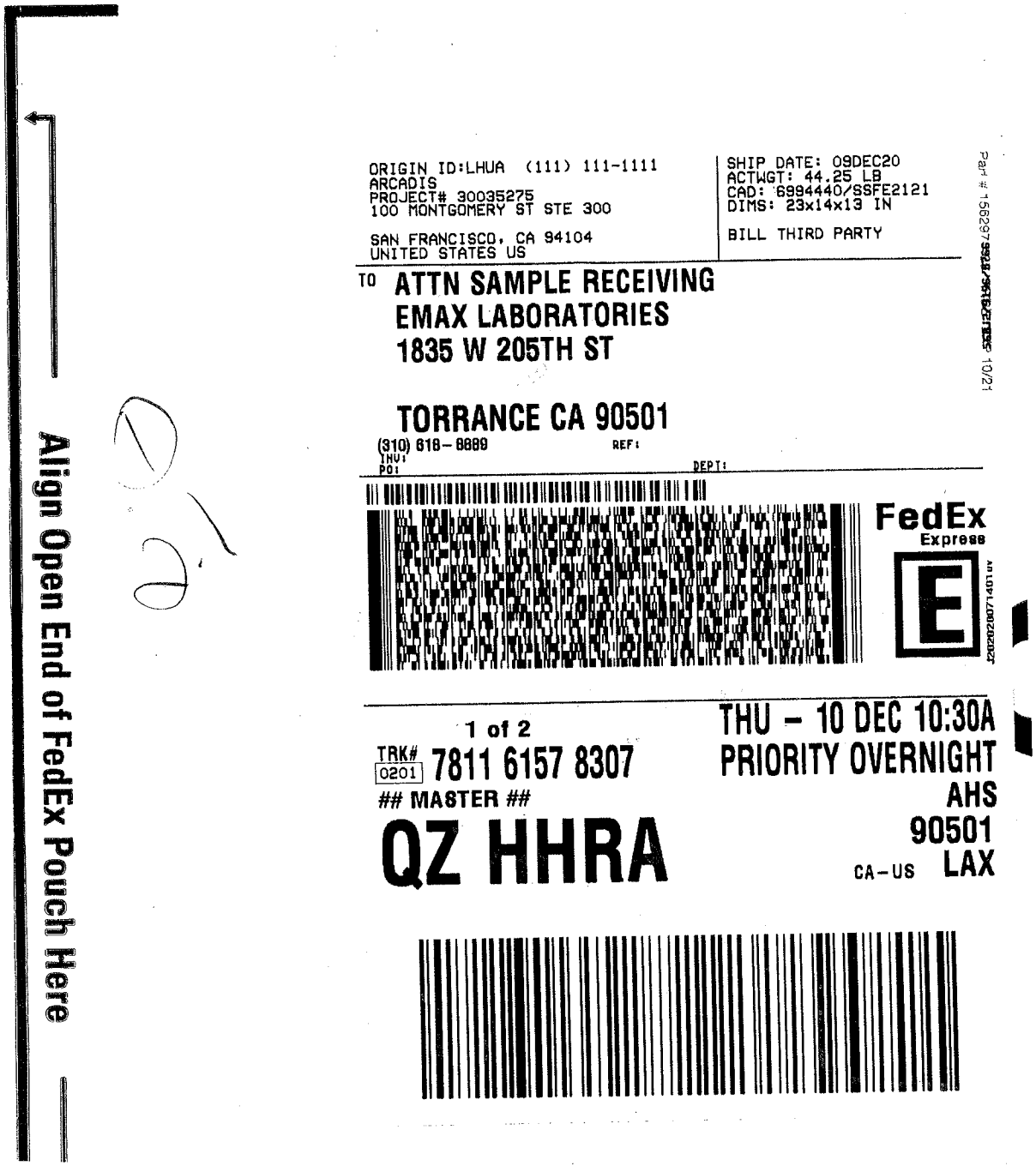
| Code | Description- Sample Management |
|---|---|
| D1 | Analysis is not indicated in ____ |
| (D2) | Analysis mismatch COC vs label |
| D3 | Sample ID mismatch COC vs label |
| D4 | Sample ID is not indicated in ____ |
| D5 | Container -[improper] [leaking] [broken] |
| D6 | Date/Time is not indicated in ____ |
| D7 | Date/Time mismatch COC vs label |
| D8 | Sample listed in COC is not received |
| D9 | Sample received is not listed in COC |
| (D10) | No initial/date on corrections in COC/label |
| (D11) | Container count mismatch COC vs received |
| (D12) | Container size mismatch COC vs received |

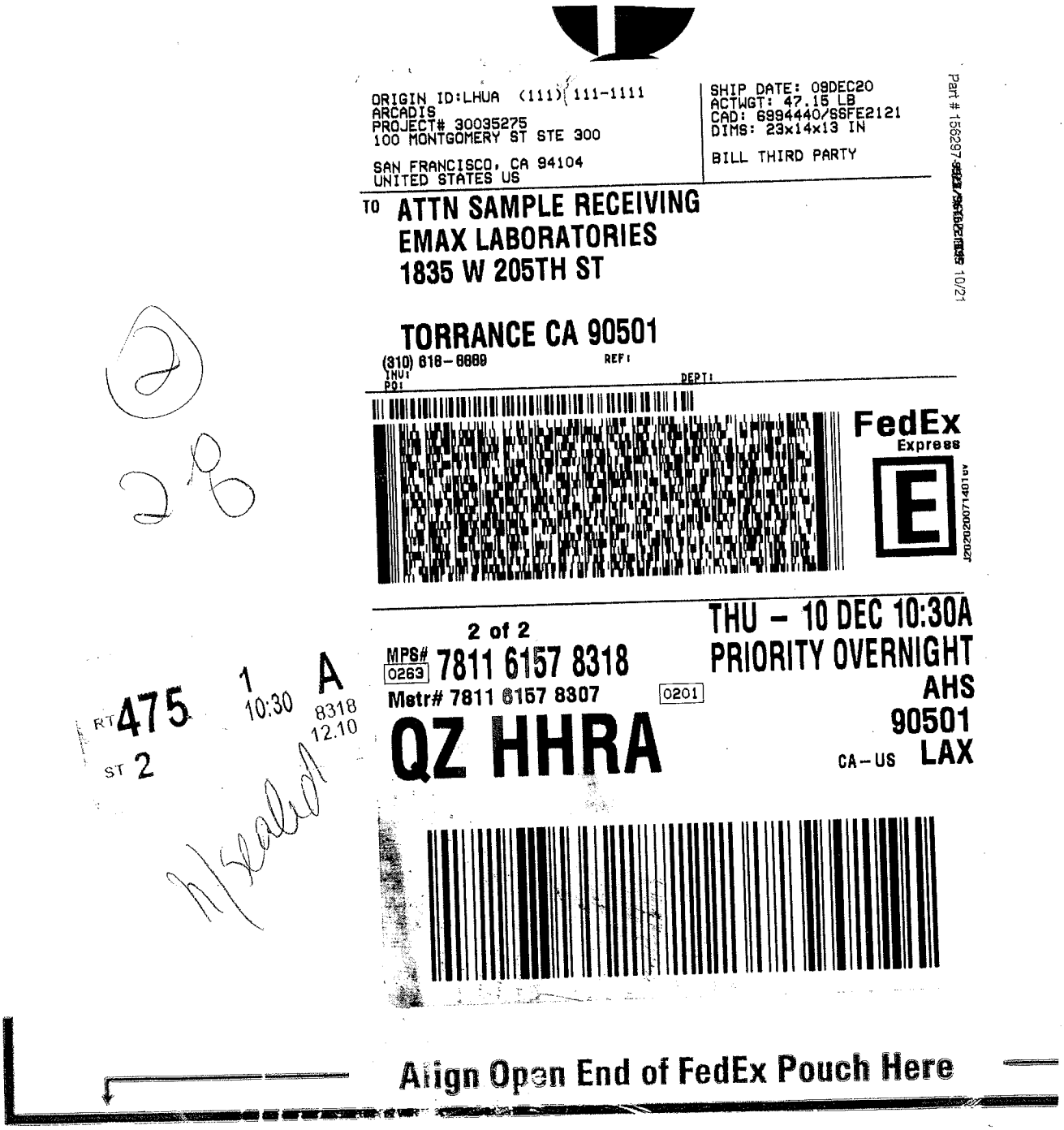
| Code | Description-Sample Management |
|---|---|
| D13 | Out of Holding Time |
| D14 | Bubble is >6mm |
| D15 | No trip blank in cooler |
| D16 | Preservation not indicated in ____ |
| D17 | Preservation mismatch COC vs label |
| D18 | Insufficient chemical preservative |
| D19 | Insufficient Sample |
| D20 | No filtration info for dissolved analysis |
| D21 | No sample for moisture determination |
| (D22) | Field filtered mismatch info. |
| D23 | |
| D24 | |

| Code | Description-Sample Management |
|---|---|
| R1 | Proceed as indicated in ☒ COC ☐ Label |
| R2 | Refer to attached instruction |
| R3 | Cancel the analysis |
| R4 | Use vial with smallest bubble first |
| R5 | Log-in with latest sampling date and time+1 min |
| R6 | Adjust pH as necessary |
| R7 | Filter and preserved as necessary |
| R8 | |
| R9 | |
| R10 | |
| R11 | |
| R12 | |

**REVIEWS:**

Sample Labeling Maria Rivera [signature] Date 12/10/20 12/10/20
SRF [signature] Date 12/10/20
PM [signature] Date 12/10/20


Align Open End of FedEx Pouch Here
ORIGIN ID:LHUA (111) 111-1111
ARCADIS
PROJECT# 30035275
100 MONTGOMERY ST STE 300
SAN FRANCISCO, CA 94104
UNITED STATES US
SHIP DATE: 09DEC20
ACTWGT: 44.25 LB
CAD: 6994440/SSFE2121
DIMS: 23x14x13 IN
BILL THIRD PARTY
TO ATTN SAMPLE RECEIVING
EMAX LABORATORIES
1835 W 205TH ST
TORRANCE CA 90501
(310) 618-8889
REF:
INV:
PO:
DEPT:
FedEx
Express
1 of 2
TRK# 0201 7811 6157 8307
## MASTER ##
QZ HHRA
THU - 10 DEC 10:30A
PRIORITY OVERNIGHT
AHS
90501
CA-US LAX



ORIGIN ID:LHUA (111) 111-1111
ARCADIS
PROJECT# 30035275
100 MONTGOMERY ST STE 300

SAN FRANCISCO, CA 94104
UNITED STATES US

SHIP DATE: 09DEC20
ACTWGT: 47.15 LB
CAD: 6994440/SSFE2121
DIMS: 23x14x13 IN

BILL THIRD PARTY

Part # 156297 10/21

TO ATTN SAMPLE RECEIVING
EMAX LABORATORIES
1835 W 205TH ST

TORRANCE CA 90501
(310) 618-8889 REF:
INV:
PO: DEPT:

FedEx Express

2 of 2
MPS# 0263 7811 6157 8318
Mstr# 7811 6157 8307 0201

THU - 10 DEC 10:30A
PRIORITY OVERNIGHT
AHS
90501
CA-US LAX

QZ HHRA

RT 475 1 A
ST 2 10:30 8318
12.10

Align Open End of FedEx Pouch Here

## REPORTING CONVENTIONS

### DATA QUALIFIERS:

| Lab Qualifier | AFCEE Qualifier | Description |
|---|---|---|
| J | F | Indicates that the analyte is positively identified and the result is less than RL but greater than MDL. |
| N | | Indicates presumptive evidence of a compound. |
| B | B | Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level. |
| E | J | Indicates that the result is above the maximum calibration range or estimated value. |
| * | * | Out of QC limit. |

**Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.**

### ACRONYMS AND ABBREVIATIONS:

| | |
|---|---|
| **CRDL** | Contract Required Detection Limit |
| **RL** | Reporting Limit |
| **MRL** | Method Reporting Limit |
| **PQL** | Practical Quantitation Limit |
| **MDL** | Method Detection Limit |
| **DO** | Diluted out |

### DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

ARCADIS

PG&E TOPOCK-GMP

METALS

SDG#: 20L101

CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

A total of nine(9) water samples were received on 12/10/20 to be analyzed for Dissolved Metals by Trace ICP in accordance with Method SW3010A/6010B (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IPL013WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IPL013WL/IPL013WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: L101-04M/L101-04S - Percent recovery for Sodium(53X) was not within MS/MSD QC limits. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

LAB CHRONICLE
DISSOLVED METALS BY TRACE ICP

Client : ARCADIS
Project : PG&E TOPOCK-GMP

SDG NO. : 20L101
Instrument ID : ID

WATER

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|---|---|---|---|---|---|---|---|---|---|
| MBLK1W | IPL013WB | 1.000 | NA | 12/17/2016:30 | 12/15/2011:23 | ID8L009024 | ID8L009022 | IPL013W | Method Blank |
| LCS1W | IPL013WL | 1.000 | NA | 12/17/2016:34 | 12/15/2011:23 | ID8L009025 | ID8L009022 | IPL013W | Lab Control Sample (LCS) |
| LCD1W | IPL013WC | 1.000 | NA | 12/17/2016:39 | 12/15/2011:23 | ID8L009026 | ID8L009022 | IPL013W | LCS Duplicate |
| MW-54-085-Q420 | L101-02 | 1.000 | NA | 12/17/2016:43 | 12/15/2011:23 | ID8L009027 | ID8L009022 | IPL013W | Field Sample |
| MW-54-140-Q420MS | L101-04M | 1.000 | NA | 12/17/2016:48 | 12/15/2011:23 | ID8L009028 | ID8L009022 | IPL013W | Matrix Spike Sample (MS) |
| MW-54-140-Q420MSD | L101-04S | 1.000 | NA | 12/17/2016:53 | 12/15/2011:23 | ID8L009029 | ID8L009022 | IPL013W | MS Duplicate (MSD) |
| MW-54-140-Q420 | L101-04 | 1.000 | NA | 12/17/2017:03 | 12/15/2011:23 | ID8L009031 | ID8L009022 | IPL013W | Field Sample |
| MW-54-140-Q420 | L101-04J | 5.000 | NA | 12/17/2017:07 | 12/15/2011:23 | ID8L009032 | ID8L009022 | IPL013W | Diluted Sample |
| MW-54-195-Q420 | L101-06 | 1.000 | NA | 12/17/2017:22 | 12/15/2011:23 | ID8L009035 | ID8L009033 | IPL013W | Field Sample |
| MW-55-045-Q420 | L101-08 | 1.000 | NA | 12/17/2017:26 | 12/15/2011:23 | ID8L009036 | ID8L009033 | IPL013W | Field Sample |
| MW-55-120-Q420 | L101-09 | 1.000 | NA | 12/17/2017:31 | 12/15/2011:23 | ID8L009037 | ID8L009033 | IPL013W | Field Sample |
| MW-56D-Q420 | L101-10 | 1.000 | NA | 12/17/2017:36 | 12/15/2011:23 | ID8L009038 | ID8L009033 | IPL013W | Field Sample |
| MW-56M-Q420 | L101-11 | 1.000 | NA | 12/17/2017:41 | 12/15/2011:23 | ID8L009039 | ID8L009033 | IPL013W | Field Sample |
| MW-56S-Q420 | L101-12 | 1.000 | NA | 12/17/2017:46 | 12/15/2011:23 | ID8L009040 | ID8L009033 | IPL013W | Field Sample |
| MW-924-Q420 | L101-13 | 1.000 | NA | 12/17/2017:51 | 12/15/2011:23 | ID8L009041 | ID8L009033 | IPL013W | Field Sample |
| MW-54-140-Q420 | L101-04A | 1.000 | NA | 12/17/2017:56 | 12/15/2011:23 | ID8L009042 | ID8L009033 | IPL013W | Analytical Spike Sample |
| MW-54-085-Q420 | L101-02I | 5.000 | NA | 12/17/2021:06 | 12/15/2011:23 | ID8L009082 | ID8L009080 | IPL013W | Diluted Sample |
| MW-54-140-Q420MS | L101-04M | 10.000 | NA | 12/17/2021:11 | 12/15/2011:23 | ID8L009083 | ID8L009080 | IPL013W | Matrix Spike Sample (MS) |
| MW-54-140-Q420MSD | L101-04S | 10.000 | NA | 12/17/2021:16 | 12/15/2011:23 | ID8L009084 | ID8L009080 | IPL013W | MS Duplicate (MSD) |
| MW-54-140-Q420 | L101-04A | 10.000 | NA | 12/17/2021:21 | 12/15/2011:23 | ID8L009085 | ID8L009080 | IPL013W | Analytical Spike Sample |
| MW-54-140-Q420 | L101-04I | 10.000 | NA | 12/17/2021:26 | 12/15/2011:23 | ID8L009086 | ID8L009080 | IPL013W | Diluted Sample |
| MW-54-140-Q420 | L101-04J | 50.000 | NA | 12/17/2021:30 | 12/15/2011:23 | ID8L009087 | ID8L009080 | IPL013W | Diluted Sample |
| MW-54-195-Q420 | L101-06I | 10.000 | NA | 12/17/2021:35 | 12/15/2011:23 | ID8L009088 | ID8L009080 | IPL013W | Diluted Sample |
| MW-55-120-Q420 | L101-09I | 5.000 | NA | 12/17/2021:40 | 12/15/2011:23 | ID8L009089 | ID8L009080 | IPL013W | Diluted Sample |
| MW-56D-Q420 | L101-10I | 10.000 | NA | 12/17/2021:45 | 12/15/2011:23 | ID8L009090 | ID8L009080 | IPL013W | Diluted Sample |
| MW-56M-Q420 | L101-11I | 10.000 | NA | 12/17/2021:50 | 12/15/2011:23 | ID8L009091 | ID8L009080 | IPL013W | Diluted Sample |
| MW-56S-Q420 | L101-12I | 5.000 | NA | 12/17/2022:04 | 12/15/2011:23 | ID8L009094 | ID8L009092 | IPL013W | Diluted Sample |
| MW-924-Q420 | L101-13I | 10.000 | NA | 12/17/2022:09 | 12/15/2011:23 | ID8L009095 | ID8L009092 | IPL013W | Diluted Sample |

FN - Filename
% Moist - Percent Moisture

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 09:06 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-54-085-Q420 | Date Analyzed: | 12/17/20 16:43 |
| Lab Samp ID: | L101-02 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009027 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009022 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.32 | 0.100 | 0.0500 |
| Calcium | 159 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |

| | | | |
|---|---|---|---|
| Sample ID: | MW-54-085-Q420 | Date Analyzed: | 12/17/20 21:06 |
| Lab Samp ID: | L101-02I | Dilution Factor: | 5 |
| Lab File ID: | ID8L009082 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Sodium | 1870 | 5.00 | 2.50 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 09:06 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-54-085-Q420 | Date Analyzed: | 12/17/20 16:43 |
| Lab Samp ID: | L101-02 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009027 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009022 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.32 | 0.100 | 0.0500 |
| Calcium | 159 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |
| Sodium | 1750E | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 09:06 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-54-085-Q420 | Date Analyzed: | 12/17/20 21:06 |
| Lab Samp ID: | L101-02I | Dilution Factor: | 5 |
| Lab File ID: | ID8L009082 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.32 | 0.500 | 0.250 |
| Calcium | 164 | 5.00 | 2.50 |
| Iron | ND | 1.00 | 0.500 |
| Sodium | 1870 | 5.00 | 2.50 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | |
|---|---|
| Client : ARCADIS | Date Collected: 12/09/20 08:22 |
| Project : PG&E TOPOCK-GMP | Date Received: 12/10/20 |
| SDG NO. : 20L101 | Date Extracted: 12/15/20 11:23 |
| Sample ID: MW-54-140-Q420 | Date Analyzed: 12/17/20 17:03 |
| Lab Samp ID: L101-04 | Dilution Factor: 1 |
| Lab File ID: ID8L009031 | Matrix: WATER |
| Ext Btch ID: IPL013W | % Moisture: NA |
| Calib. Ref.: ID8L009022 | Instrument ID: D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.86 | 0.100 | 0.0500 |
| Calcium | 144 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |

| | |
|---|---|
| Sample ID: MW-54-140-Q420 | Date Analyzed: 12/17/20 21:26 |
| Lab Samp ID: L101-04I | Dilution Factor: 10 |
| Lab File ID: ID8L009086 | Matrix: WATER |
| Ext Btch ID: IPL013W | % Moisture: NA |
| Calib. Ref.: ID8L009080 | Instrument ID: D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Sodium | 2660 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | |
|---|---|
| Sample Amount : 50ml | Final Volume:50ml |
| Prepared by : CKaing | Analyzed by:NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 08:22 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-54-140-Q420 | Date Analyzed: | 12/17/20 17:03 |
| Lab Samp ID: | L101-04 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009031 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009022 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.86 | 0.100 | 0.0500 |
| Calcium | 144 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |
| Sodium | 2340E | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 08:22 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-54-140-Q420 | Date Analyzed: | 12/17/20 21:26 |
| Lab Samp ID: | L101-04I | Dilution Factor: | 10 |
| Lab File ID: | ID8L009086 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.84 | 1.00 | 0.500 |
| Calcium | 146 | 10.0 | 5.00 |
| Iron | ND | 2.00 | 1.00 |
| Sodium | 2660 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 07:36 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-54-195-Q420 | Date Analyzed: | 12/17/20 17:22 |
| Lab Samp ID: | L101-06 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009035 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 2.93 | 0.100 | 0.0500 |
| Calcium | 127 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |

| | | | |
|---|---|---|---|
| Sample ID: | MW-54-195-Q420 | Date Analyzed: | 12/17/20 21:35 |
| Lab Samp ID: | L101-06I | Dilution Factor: | 10 |
| Lab File ID: | ID8L009088 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Sodium | 2980 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 07:36 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-54-195-Q420 | Date Analyzed: | 12/17/20 17:22 |
| Lab Samp ID: | L101-06 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009035 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 2.93 | 0.100 | 0.0500 |
| Calcium | 127 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |
| Sodium | 3550E | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 07:36 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-54-195-Q420 | Date Analyzed: | 12/17/20 21:35 |
| Lab Samp ID: | L101-06I | Dilution Factor: | 10 |
| Lab File ID: | ID8L009088 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 3.22 | 1.00 | 0.500 |
| Calcium | 127 | 10.0 | 5.00 |
| Iron | ND | 2.00 | 1.00 |
| Sodium | 2980 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 09:23 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-55-045-Q420 | Date Analyzed: | 12/17/20 17:26 |
| Lab Samp ID: | L101-08 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009036 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 0.565 | 0.100 | 0.0500 |
| Calcium | 32.9 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |
| Sodium | 231 | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 08:42 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-55-120-Q420 | Date Analyzed: | 12/17/20 17:31 |
| Lab Samp ID: | L101-09 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009037 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.65 | 0.100 | 0.0500 |
| Calcium | 62.9 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |

| | | | |
|---|---|---|---|
| Sample ID: | MW-55-120-Q420 | Date Analyzed: | 12/17/20 21:40 |
| Lab Samp ID: | L101-09I | Dilution Factor: | 5 |
| Lab File ID: | ID8L009089 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Sodium | 2120 | 5.00 | 2.50 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 08:42 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-55-120-Q420 | Date Analyzed: | 12/17/20 17:31 |
| Lab Samp ID: | L101-09 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009037 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.65 | 0.100 | 0.0500 |
| Calcium | 62.9 | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |
| Sodium | 1390E | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 08:42 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-55-120-Q420 | Date Analyzed: | 12/17/20 21:40 |
| Lab Samp ID: | L101-09I | Dilution Factor: | 5 |
| Lab File ID: | ID8L009089 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.40 | 0.500 | 0.250 |
| Calcium | 64.4 | 5.00 | 2.50 |
| Iron | ND | 1.00 | 0.500 |
| Sodium | 2120 | 5.00 | 2.50 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 11:11 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-56D-Q420 | Date Analyzed: | 12/17/20 17:36 |
| Lab Samp ID: | L101-10 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009038 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 2.78 | 0.100 | 0.0500 |
| Calcium | 412 | 1.00 | 0.500 |
| Iron | 1.06 | 0.200 | 0.100 |

| | | | |
|---|---|---|---|
| Sample ID: | MW-56D-Q420 | Date Analyzed: | 12/17/20 21:45 |
| Lab Samp ID: | L101-10I | Dilution Factor: | 10 |
| Lab File ID: | ID8L009090 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Sodium | 4650 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | |
|---|---|
| Client : ARCADIS | Date Collected: 12/09/20 11:11 |
| Project : PG&E TOPOCK-GMP | Date Received: 12/10/20 |
| SDG NO. : 20L101 | Date Extracted: 12/15/20 11:23 |
| Sample ID: MW-56D-Q420 | Date Analyzed: 12/17/20 17:36 |
| Lab Samp ID: L101-10 | Dilution Factor: 1 |
| Lab File ID: ID8L009038 | Matrix: WATER |
| Ext Btch ID: IPL013W | % Moisture: NA |
| Calib. Ref.: ID8L009033 | Instrument ID: D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 2.78 | 0.100 | 0.0500 |
| Calcium | 412 | 1.00 | 0.500 |
| Iron | 1.06 | 0.200 | 0.100 |
| Sodium | 3760E | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | |
|---|---|
| Sample Amount : 50ml | Final Volume:50ml |
| Prepared by : CKaing | Analyzed by:NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 11:11 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-56D-Q420 | Date Analyzed: | 12/17/20 21:45 |
| Lab Samp ID: | L101-10I | Dilution Factor: | 10 |
| Lab File ID: | ID8L009090 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 2.68 | 1.00 | 0.500 |
| Calcium | 430 | 10.0 | 5.00 |
| Iron | ND | 2.00 | 1.00 |
| Sodium | 4650 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | |
|---|---|
| Client : ARCADIS | Date Collected: 12/09/20 10:29 |
| Project : PG&E TOPOCK-GMP | Date Received: 12/10/20 |
| SDG NO. : 20L101 | Date Extracted: 12/15/20 11:23 |
| Sample ID: MW-56M-Q420 | Date Analyzed: 12/17/20 17:41 |
| Lab Samp ID: L101-11 | Dilution Factor: 1 |
| Lab File ID: ID8L009039 | Matrix: WATER |
| Ext Btch ID: IPL013W | % Moisture: NA |
| Calib. Ref.: ID8L009033 | Instrument ID: D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.82 | 0.100 | 0.0500 |
| Calcium | 377 | 1.00 | 0.500 |
| Iron | 2.97 | 0.200 | 0.100 |

| | |
|---|---|
| Sample ID: MW-56M-Q420 | Date Analyzed: 12/17/20 21:50 |
| Lab Samp ID: L101-11I | Dilution Factor: 10 |
| Lab File ID: ID8L009091 | Matrix: WATER |
| Ext Btch ID: IPL013W | % Moisture: NA |
| Calib. Ref.: ID8L009080 | Instrument ID: D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Sodium | 2920 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | |
|---|---|
| Sample Amount : 50ml | Final Volume:50ml |
| Prepared by : CKaing | Analyzed by:NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 10:29 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-56M-Q420 | Date Analyzed: | 12/17/20 17:41 |
| Lab Samp ID: | L101-11 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009039 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.82 | 0.100 | 0.0500 |
| Calcium | 377 | 1.00 | 0.500 |
| Iron | 2.97 | 0.200 | 0.100 |
| Sodium | 2470E | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 10:29 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-56M-Q420 | Date Analyzed: | 12/17/20 21:50 |
| Lab Samp ID: | L101-11I | Dilution Factor: | 10 |
| Lab File ID: | ID8L009091 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009080 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.75 | 1.00 | 0.500 |
| Calcium | 391 | 10.0 | 5.00 |
| Iron | 3.01 | 2.00 | 1.00 |
| Sodium | 2920 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 11:41 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-56S-Q420 | Date Analyzed: | 12/17/20 17:46 |
| Lab Samp ID: | L101-12 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009040 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.99 | 0.100 | 0.0500 |
| Calcium | 144 | 1.00 | 0.500 |
| Iron | 4.92 | 0.200 | 0.100 |

| | | | |
|---|---|---|---|
| Sample ID: | MW-56S-Q420 | Date Analyzed: | 12/17/20 22:04 |
| Lab Samp ID: | L101-12I | Dilution Factor: | 5 |
| Lab File ID: | ID8L009094 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009092 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Sodium | 1200 | 5.00 | 2.50 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 11:41 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-56S-Q420 | Date Analyzed: | 12/17/20 17:46 |
| Lab Samp ID: | L101-12 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009040 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.99 | 0.100 | 0.0500 |
| Calcium | 144 | 1.00 | 0.500 |
| Iron | 4.92 | 0.200 | 0.100 |
| Sodium | 1090E | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 11:41 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-56S-Q420 | Date Analyzed: | 12/17/20 22:04 |
| Lab Samp ID: | L101-12I | Dilution Factor: | 5 |
| Lab File ID: | ID8L009094 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009092 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.95 | 0.500 | 0.250 |
| Calcium | 146 | 5.00 | 2.50 |
| Iron | 4.89 | 1.00 | 0.500 |
| Sodium | 1200 | 5.00 | 2.50 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 10:39 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-924-Q420 | Date Analyzed: | 12/17/20 17:51 |
| Lab Samp ID: | L101-13 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009041 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.83 | 0.100 | 0.0500 |
| Calcium | 375 | 1.00 | 0.500 |
| Iron | 2.95 | 0.200 | 0.100 |

| | | | |
|---|---|---|---|
| Sample ID: | MW-924-Q420 | Date Analyzed: | 12/17/20 22:09 |
| Lab Samp ID: | L101-13I | Dilution Factor: | 10 |
| Lab File ID: | ID8L009095 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009092 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Sodium | 2930 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 10:39 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-924-Q420 | Date Analyzed: | 12/17/20 17:51 |
| Lab Samp ID: | L101-13 | Dilution Factor: | 1 |
| Lab File ID: | ID8L009041 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009033 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.83 | 0.100 | 0.0500 |
| Calcium | 375 | 1.00 | 0.500 |
| Iron | 2.95 | 0.200 | 0.100 |
| Sodium | 2520E | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 10:39 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MW-924-Q420 | Date Analyzed: | 12/17/20 22:09 |
| Lab Samp ID: | L101-13I | Dilution Factor: | 10 |
| Lab File ID: | ID8L009095 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009092 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | 1.77 | 1.00 | 0.500 |
| Calcium | 392 | 10.0 | 5.00 |
| Iron | 3.05 | 2.00 | 1.00 |
| Sodium | 2930 | 10.0 | 5.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

METHOD SW3010A/6010B (DISSOLVED)
DISSOLVED METALS BY TRACE ICP

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | NA |
| Project | : PG&E TOPOCK-GMP | Date Received: | NA |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:23 |
| Sample ID: | MBLK1W | Date Analyzed: | 12/17/20 16:30 |
| Lab Samp ID: | IPL013WB | Dilution Factor: | 1 |
| Lab File ID: | ID8L009024 | Matrix: | WATER |
| Ext Btch ID: | IPL013W | % Moisture: | NA |
| Calib. Ref.: | ID8L009022 | Instrument ID: | D8 |

| PARAMETERS | Result (mg/L) | RL (mg/L) | MDL (mg/L) |
|---|---|---|---|
| Boron | ND | 0.100 | 0.0500 |
| Calcium | ND | 1.00 | 0.500 |
| Iron | ND | 0.200 | 0.100 |
| Sodium | ND | 1.00 | 0.500 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | NTan |

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW3010A/6010B (DISSOLVED)

| | | | |
|---|---|---|---|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR: | 1.000 | 1.000 | 1.000 |
| SAMPLE ID | : MBLK1W | LCS1W | LCD1W |
| LAB SAMPLE ID | : IPL013WB | IPL013WL | IPL013WC |
| LAB FILE ID | : ID8L009024 | ID8L009025 | ID8L009026 |
| DATE PREPARED | : 12/15/20 11:23 | 12/15/20 11:23 | 12/15/20 11:23 |
| DATE ANALYZED | : 12/17/20 16:30 | 12/17/20 16:34 | 12/17/20 16:39 |
| PREP BATCH | : IPL013W | IPL013W | IPL013W |
| CALIBRATION REF: | ID8L009022 | ID8L009022 | ID8L009022 |

ACCESSION:

| PARAMETERS | MBResult (mg/L) | SpikeAmt (mg/L) | LCSResult (mg/L) | LCSRec (%) | SpikeAmt (mg/L) | LCDResult (mg/L) | LCDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 0.5 | 0.511 | 102 | 0.5 | 0.515 | 103 | 1 | 85-115 | 20 |
| Calcium | ND | 50 | 52.9 | 106 | 50 | 52.9 | 106 | 0 | 85-115 | 20 |
| Iron | ND | 5 | 5.02 | 100 | 5 | 5.05 | 101 | 1 | 85-115 | 20 |
| Sodium | ND | 50 | 52.8 | 106 | 50 | 52.9 | 106 | 0 | 85-115 | 20 |

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW3010A/6010B (DISSOLVED)

| | | | |
|---|---|---|---|
| MATRIX | : WATER | | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 | 1 |
| SAMPLE ID | : MW-54-140-Q420 | MW-54-140-Q420MS | MW-54-140-Q420MSD |
| LAB SAMPLE ID | : L101-04 | L101-04M | L101-04S |
| LAB FILE ID | : ID8L009031 | ID8L009028 | ID8L009029 |
| DATE PREPARED | : 12/15/20 11:23 | 12/15/20 11:23 | 12/15/20 11:23 |
| DATE ANALYZED | : 12/17/20 17:03 | 12/17/20 16:48 | 12/17/20 16:53 |
| PREP BATCH | : IPL013W | IPL013W | IPL013W |
| CALIBRATION REF | : ID8L009022 | ID8L009022 | ID8L009022 |

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 1.86 | .5 | 2.43 | 114 | .5 | 2.41 | 110 | 1 | 75-125 | 20 |
| Calcium | 144 | 50 | 197 | 106 | 50 | 198 | 108 | 1 | 75-125 | 20 |
| Iron | ND | 5 | 5.14 | 103 | 5 | 5.16 | 103 | 0 | 75-125 | 20 |

PSResult - Parent Sample Result

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW3010A/6010B (DISSOLVED)

| | | | |
|---|---|---|---|
| MATRIX | : WATER | | % MOISTURE: NA |
| DILUTION FACTOR | : 10 | 10 | 10 |
| SAMPLE ID | : MW-54-140-Q420 | MW-54-140-Q420MS | MW-54-140-Q420MSD |
| LAB SAMPLE ID | : L101-04I | L101-04M | L101-04S |
| LAB FILE ID | : ID8L009086 | ID8L009083 | ID8L009084 |
| DATE PREPARED | : 12/15/20 11:23 | 12/15/20 11:23 | 12/15/20 11:23 |
| DATE ANALYZED | : 12/17/20 21:26 | 12/17/20 21:11 | 12/17/20 21:16 |
| PREP BATCH | : IPL013W | IPL013W | IPL013W |
| CALIBRATION REF | : ID8L009080 | ID8L009080 | ID8L009080 |

ACCESSION:

| PARAMETERS | PSResult (mg/L) | SpikeAmt (mg/L) | MSResult (mg/L) | MSRec (%) | SpikeAmt (mg/L) | MSDResult (mg/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2660 | 50 | 2740 | 160* | 50 | 2740 | 160* | 0 | 75-125 | 20 |

PSResult - Parent Sample Result
* Out of QC limit

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW3010A/6010B (DISSOLVED)

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 5 |
| SAMPLE ID | : MW-54-140-Q420 | MW-54-140-Q420 |
| LAB SAMPLE ID | : L101-04 | L101-04J |
| LAB FILE ID | : ID8L009031 | ID8L009032 |
| DATE PREPARED | : 12/15/20 11:23 | 12/15/20 11:23 |
| DATE ANALYZED | : 12/17/20 17:03 | 12/17/20 17:07 |
| PREP BATCH | : IPL013W | IPL013W |
| CALIBRATION REF | : ID8L009022 | ID8L009022 |

ACCESSION:

| PARAMETERS | Sample Result (mg/L) | SD Result (mg/L) | %Difference (%) | Max %D (%) |
|---|---|---|---|---|
| Boron | 1.86 | 1.91 | 3 | 10 |
| Calcium | 144 | 148 | 3 | 10 |
| Iron | ND | ND | 0 | 10 |

SD - Serial Dilution

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW3010A/6010B (DISSOLVED)

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 10 | 50 |
| SAMPLE ID | : MW-54-140-Q420 | MW-54-140-Q420 |
| LAB SAMPLE ID | : L101-04I | L101-04J |
| LAB FILE ID | : ID8L009086 | ID8L009087 |
| DATE PREPARED | : 12/15/20 11:23 | 12/15/20 11:23 |
| DATE ANALYZED | : 12/17/20 21:26 | 12/17/20 21:30 |
| PREP BATCH | : IPL013W | IPL013W |
| CALIBRATION REF | : ID8L009080 | ID8L009080 |

ACCESSION:

| PARAMETERS | Sample Result (mg/L) | SD Result (mg/L) | %Difference (%) | Max %D (%) |
|---|---|---|---|---|
| Sodium | 2660 | 2770 | 4 | 10 |

SD - Serial Dilution

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW3010A/6010B (DISSOLVED)

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 |
| SAMPLE ID | : MW-54-140-Q420 | MW-54-140-Q420 |
| LAB SAMPLE ID | : L101-04 | L101-04A |
| LAB FILE ID | : ID8L009031 | ID8L009042 |
| DATE PREPARED | : 12/15/20 11:23 | 12/15/20 11:23 |
| DATE ANALYZED | : 12/17/20 17:03 | 12/17/20 17:56 |
| PREP BATCH | : IPL013W | IPL013W |
| CALIBRATION REF | : ID8L009022 | ID8L009033 |

ACCESSION:

| PARAMETERS | Sample Result (mg/L) | Spike Amt (mg/L) | AS Result (mg/L) | AS Rec (%) | QC Limit (%) |
|---|---|---|---|---|---|
| Boron | 1.86 | 0.5 | 2.41 | 110 | 75-125 |
| Calcium | 144 | 50 | 195 | 102 | 75-125 |
| Iron | ND | 5 | 5.29 | 106 | 75-125 |

AS - Analytical Spike

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW3010A/6010B (DISSOLVED)

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 10 | 10 |
| SAMPLE ID | : MW-54-140-Q420 | MW-54-140-Q420 |
| LAB SAMPLE ID | : L101-04I | L101-04A |
| LAB FILE ID | : ID8L009086 | ID8L009085 |
| DATE PREPARED | : 12/15/20 11:23 | 12/15/20 11:23 |
| DATE ANALYZED | : 12/17/20 21:26 | 12/17/20 21:21 |
| PREP BATCH | : IPL013W | IPL013W |
| CALIBRATION REF | : ID8L009080 | ID8L009080 |

ACCESSION:

| PARAMETERS | Sample Result (mg/L) | Spike Amt (mg/L) | AS Result (mg/L) | AS Rec (%) | QC Limit (%) |
|---|---|---|---|---|---|
| Sodium | 2660 | 500 | 3180 | 104 | 75-125 |

AS - Analytical Spike

# ICP (6010) QC CHECK TABLE

| QC | ICV | CCV | ICSAB | ICSA |
|---|---|---|---|---|
| Limit% | 90-110 | 90-110 | 80-120 | 80-120 |
| Comp | mg/L | mg/L | mg/L | mg/L |
| Al | 100 | 100 | 400 | 400 |
| Sb | 1.5 | 1.5 | 1 | 0 |
| As | 1 | 1 | 1 | 0 |
| Ba | 2 | 2 | 0.5 | 0 |
| Be | 1.5 | 1.5 | 0.5 | 0 |
| B | 2.5 | 2.5 | 1 | 0 |
| Cd | 2 | 2 | 1 | 0 |
| Ca | 75 | 75 | 500 | 500 |
| Cr | 2.5 | 2.5 | 0.5 | 0 |
| Co | 1 | 1 | 0.5 | 0 |
| Cu | 2.5 | 2.5 | 0.5 | 0 |
| Fe | 25 | 25 | 200 | 200 |
| Pb | 2.5 | 2.5 | 1 | 0 |
| Li | 0.5 | 0.5 | 1 | 0 |
| Mg | 60 | 60 | 200 | 200 |
| Mn | 2.5 | 2.5 | 0.5 | 0 |
| Mo | 2.5 | 2.5 | 1 | 0 |
| Ni | 2.5 | 2.5 | 1 | 0 |
| K | 60 | 60 | 75 | 0 |
| Se | 1 | 1 | 1 | 0 |
| Ag | 0.5 | 0.5 | 1 | 0 |
| Na | 60 | 60 | 75 | 0 |
| Sr | 0.5 | 0.5 | 0.5 | 0 |
| Tl | 2.5 | 2.5 | 1 | 0 |
| Sn | 0.5 | 0.5 | 1 | 0 |
| Ti | 0.5 | 0.5 | 1 | 0 |
| V | 1.5 | 1.5 | 0.5 | 0 |
| Zn | 2.5 | 2.5 | 1 | 0 |

EMAX LABORATORIES, INC.

# ANALYSIS RUN LOG
*for*
ICP

**Note:** For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

**Start Date:** 12/17/20 14:40
**End Date:** 12/17/20 22:18

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-6010 | 8 |
| ☐ EMAX-6010C | 2 |
| ☐ EMAX-200.7 | 5 |
| ☐ EMAX- | |

**Book #:** AD8-059
**Instrument No.:** D8
**Analytical Batch:** ID8L009
**Analytical Sequence:** S-20L6010(V13)
**Method File:** 20L6010(V13)
**Database:** EMAX28
**Micropipette ID:** ☐ A42761570
**Micropipette ID:** ☑ 942780530
**Micropipette ID:** ☑ M34663I
**Micropipette ID:** ☑ A42761570
**Micropipette ID:** ☐

**Comments:**

QC OK
"Na OK"
L101-02, 09 & 12 diluted at 5X
1mL → 5mL
L101-04, 06, 10, 11 & 13 diluted at 10X
0.5mL → 5mL

L446-02 Ag OK for dilution

CCB7 Ag > LOD L488-03 for reanalysis

CCBs Na 7 MDL. samples detected Na > 10X CCBs conc levels TH 12/22/20

| | STANDARDS ID | | STANDARDS ID |
|---|---|---|---|
| S0 | SMIB24-2101 | S26 | SMIB23-4501 |
| S1 | N/A | S27 | ↓ 4502 |
| S2 | ↓ | S28 | SMIB24-1101 |
| S3 | ↓ | S29 | ↓ 1102 |
| S4 | ↓ | S30 | 0601 |
| S5 | ↓ | S31 | ↓ 0602 |
| S6 | ↓ | ICV | SMIB23-4801 |
| S7 | ↓ | CCV | SMIB24-0701 |
| S8 | ↓ | ICSA | ↓ 1402 |
| S9 | ↓ | ICSAB | SMIB23-4802 |
| S10 | ↓ | CRI/MRL | ↓ 4901 |
| S11 | ↓ | CRI/MRL | SMIB24-0402 |
| S12 | ↓ | CRI/MRL | SMIB23-4901(2X) |
| S16 | ↓ | CRI/MRL | SMIB24-0401 |
| S17 | ↓ | Internal Standard | SMIB018-0803 |
| S18 | ↓ | Post-Spike 1 | ↓ 1210 |
| S20 | SMIB24-1001 | Post-Spike 2 | ↓ 1301 |
| S21 | ↓ 1002 | Post-Spike 3 | ↓ 1302 |
| S22 | ↓ 1201 | | |
| S23 | ↓ 0801 | | |
| S24 | ↓ 2102 | | |
| S25 | SMIB23-4602 | | |

**Analyzed By:** NT
**Date:** 12/17/20

INITIAL CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW3010A/6010B (DISSOLVED)
Sequence : ID8L009
InstrumentID: D8

| | | ICV | | | | ICSA1 | | | ICSAB1 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Samp ID : | | ICV | | | | ICSA1 | | | ICSAB1 | | |
| QC Limit : | | %R:90-110/RSD:<5 | | | | %R:80-120/<LOD | | | %R:80-120 | | |
| Lab File ID : | | ID8L009014 | | | | ID8L009020 | | | ID8L009021 | | |
| DateAnalyed : | | 12/17/2015:42 | | | | 12/17/2016:10 | | | 12/17/2016:15 | | |
| Parameter | | Result | ICV EV | RSD | %Recovery | Result | ICSA EV | %Rec/LOD | Result | ICSAB EV | %Recovery |
| Aluminum | | 103.22 | 100 | .28591 | 103 | 399.37 | 400 | 100 | 389.45 | 400 | 97 |
| Antimony | | 1.3424 | 1.5 | .03827 | 89* | .01942 | 0 | >0.0071 | .96453 | 1 | 96 |
| Arsenic | | 1.0050 | 1.0 | .07686 | 100 | .00488 | 0 | <0.0071 | 1.0838 | 1 | 108 |
| Barium | | 1.9871 | 2.0 | .14218 | 99 | .00015 | 0 | <0.0022 | .51479 | 0.5 | 103 |
| Beryllium | | 1.4613 | 1.5 | .11870 | 97 | -.00003 | 0 | <0.0007 | .49791 | 0.5 | 100 |
| Boron | T | 2.4530 | 2.5 | .15858 | 98 | .07048 | 0 | >0.05 | 1.0490 | 1.0 | 105 |
| Cadmium | | 1.8857 | 2.0 | .08392 | 94 | .00050 | 0 | =0.0005 | .93801 | 1 | 94 |
| Calcium | T | 78.261 | 75 | .07475 | 104 | 508.45 | 500 | 102 | 508.16 | 500 | 102 |
| Chromium | | 2.4237 | 2.5 | .15207 | 97 | -.00049 | 0 | <0.0010 | .50375 | 0.5 | 101 |
| Cobalt | | .95979 | 1.0 | .10536 | 96 | -.00048 | 0 | <0.0010 | .49986 | 0.5 | 100 |
| Copper | | 2.4257 | 2.5 | .28727 | 97 | .00079 | 0 | <0.0023 | .50874 | 0.5 | 102 |
| Iron | T | 23.706 | 25 | .16005 | 95 | 189.81 | 200 | 95 | 186.98 | 200 | 93 |
| Lead | | 2.3900 | 2.5 | .09193 | 96 | .00066 | 0 | <0.0032 | .97660 | 1 | 98 |
| Lithium | | .51622 | 0.5 | .26597 | 103 | .00849 | 0 | >0.0060 | 1.1246 | 1 | 112 |
| Magnesium | | 58.889 | 60 | .20801 | 98 | 199.62 | 200 | 100 | 198.00 | 200 | 99 |
| Manganese | | 2.3229 | 2.5 | .00570 | 93 | .00046 | 0 | <0.0092 | .46779 | 0.5 | 94 |
| Molybdenum | | 2.4601 | 2.5 | .09138 | 98 | -.00023 | 0 | <0.0008 | 1.0503 | 1 | 105 |
| Nickel | | 2.4743 | 2.5 | .10905 | 99 | -.00139 | 0 | <0.0019 | 1.0293 | 1 | 103 |
| Potassium | | 61.633 | 60 | .11837 | 103 | -.03266 | 0 | <0.2757 | 83.865 | 75 | 112 |
| Selenium | | 1.0011 | 1.0 | .16657 | 100 | -.00299 | 0 | <0.0078 | 1.0381 | 1 | 104 |
| Silver | | .47767 | 0.5 | .38560 | 96 | -.00030 | 0 | <0.0013 | 1.0450 | 1 | 104 |
| Sodium | T | 62.522 | 60 | .04611 | 104 | .01663 | 0 | <0.5 | 83.733 | 75 | 112 |
| Strontium | | .48453 | 0.5 | .04040 | 97 | -.00175 | 0 | >0.0017 | .50491 | 0.5 | 101 |
| Thallium | | 2.2339 | 2.5 | .14055 | 89* | .00036 | 0 | <0.0046 | .84060 | 1 | 84 |
| Tin | | .52157 | 0.5 | .43184 | 104 | -.00186 | 0 | <0.0026 | 1.0844 | 1 | 108 |
| Titanium | | .50744 | 0.5 | .06643 | 101 | .00211 | 0 | <0.0111 | 1.0557 | 1 | 106 |
| Vanadium | | 1.4854 | 1.5 | .16959 | 99 | -.00144 | 0 | >0.0009 | .50982 | 0.5 | 102 |
| Zinc | | 2.6437 | 2.5 | .06582 | 106 | .00344 | 0 | <0.0322 | 1.1119 | 1 | 111 |

Unit: mg/L
T: Target analyte
EV: Expected Value
Comment: * Out of QC limit

CONTINUING CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : SW3010A/6010B (DISSOLVED)
Sequence : ID8L009
Instrument ID: D8

| CCV SampleID | | : CCV1 | | | CCV2 | | | CCV3 | | | CCV7 | | | CCV8 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CCV DataFileID | | : ID8L009022 | | | ID8L009033 | | | ID8L009043 | | | ID8L009080 | | | ID8L009092 | | |
| CCV DateTime | | : 12/17/20 16:20 | | | 12/17/20 17:12 | | | 12/17/20 18:01 | | | 12/17/20 20:57 | | | 12/17/20 21:55 | | |
| PARAMETER | | CCV EV | RESULT | %REC | RESULT | %REC | RSD | RESULT | %REC | RSD | RESULT | %REC | RSD | RESULT | %REC | RSD |
| Aluminum | | 100 | 103 | 103 | 104 | 104 | .21973 | 107 | 107 | .19291 | 106 | 106 | .26386 | 105 | 105 | .16757 |
| Antimony | | 1.5 | 1.34 | 90 | 1.36 | 91 | .61834 | 1.4 | 93 | .08138 | 1.38 | 92 | .24995 | 1.36 | 91 | .86698 |
| Arsenic | | 1.0 | 1.01 | 101 | 1.01 | 101 | 1.0148 | 1.02 | 102 | .36503 | 1.02 | 102 | .55167 | 1.02 | 102 | .36891 |
| Barium | | 2.0 | 2.01 | 101 | 1.96 | 98 | .49926 | 1.93 | 97 | .24546 | 1.98 | 99 | .46553 | 1.99 | 99 | .38613 |
| Beryllium | | 1.5 | 1.48 | 99 | 1.44 | 96 | .32780 | 1.43 | 96 | .19598 | 1.44 | 96 | .36733 | 1.45 | 97 | .40589 |
| Boron | T | 2.5 | 2.46 | 99 | 2.48 | 99 | .21970 | 2.55 | 102 | .10092 | 2.51 | 100 | .02411 | 2.5 | 100 | .08688 |
| Cadmium | | 2.0 | 1.9 | 95 | 1.99 | 99 | .50436 | 2.02 | 101 | .06944 | 2.02 | 101 | .27466 | 2.01 | 101 | .46357 |
| Calcium | T | 75 | 78.5 | 105 | 79 | 105 | .02612 | 79.4 | 106 | .12653 | 79.3 | 106 | .13267 | 79.5 | 106 | .02757 |
| Chromium | | 2.5 | 2.44 | 98 | 2.5 | 100 | .16696 | 2.53 | 101 | .10269 | 2.53 | 101 | .20050 | 2.54 | 101 | .12137 |
| Cobalt | | 1.0 | 0.961 | 96 | 0.984 | 98 | .15224 | 1.01 | 101 | .10858 | 1 | 100 | .19374 | 0.996 | 100 | .24276 |
| Copper | | 2.5 | 2.42 | 97 | 2.41 | 96 | .32243 | 2.48 | 99 | .14944 | 2.45 | 98 | .14855 | 2.43 | 97 | .03064 |
| Iron | T | 25 | 24 | 96 | 24.8 | 99 | .36179 | 24.8 | 99 | .15104 | 24.9 | 100 | .19294 | 24.9 | 100 | .17905 |
| Lead | | 2.5 | 2.39 | 96 | 2.47 | 99 | .22078 | 2.53 | 101 | .23559 | 2.51 | 100 | .12890 | 2.49 | 99 | .26330 |
| Lithium | | 0.5 | 0.519 | 104 | 0.519 | 104 | .43059 | 0.514 | 103 | .50833 | 0.526 | 105 | .66028 | 0.527 | 105 | .11302 |
| Magnesium | | 60 | 59.2 | 99 | 59.9 | 100 | .17974 | 59.4 | 99 | .15243 | 59.6 | 99 | .28746 | 59.7 | 100 | .24876 |
| Manganese | | 2.5 | 2.33 | 93 | 2.32 | 93 | .16165 | 2.29 | 92 | .21162 | 2.27 | 91 | .15030 | 2.27 | 91 | .33020 |
| Molybdenum | | 2.5 | 2.45 | 98 | 2.45 | 98 | .15343 | 2.49 | 100 | .17515 | 2.48 | 99 | .19452 | 2.47 | 99 | .11284 |
| Nickel | | 2.5 | 2.47 | 99 | 2.5 | 100 | .17114 | 2.54 | 102 | .10700 | 2.52 | 101 | .13094 | 2.51 | 101 | .12156 |
| Potassium | | 60 | 61.4 | 102 | 61.8 | 103 | .03625 | 62.8 | 105 | .23405 | 63.1 | 105 | .04969 | 63.6 | 106 | .20157 |
| Selenium | | 1.0 | 1.01 | 101 | 1.02 | 102 | .63626 | 1.05 | 105 | .26725 | 1.03 | 103 | .33738 | 1.02 | 102 | .54498 |
| Silver | | 0.5 | 0.479 | 96 | 0.489 | 98 | .44915 | 0.5 | 100 | .20281 | 0.548 | 110 | .28890 | 0.491 | 98 | .11753 |
| Sodium | T | 60 | 62.6 | 104 | 62.8 | 105 | .31598 | 63.4 | 106 | .15508 | 63.4 | 106 | .20391 | 63.9 | 107 | .15728 |
| Strontium | | 0.5 | 0.486 | 97 | 0.481 | 96 | .12963 | 0.487 | 97 | .22435 | 0.488 | 98 | .20124 | 0.489 | 98 | .09195 |
| Thallium | | 2.5 | 2.24 | 90 | 2.32 | 93 | .56757 | 2.37 | 95 | .22811 | 2.35 | 94 | .29878 | 2.35 | 94 | .54265 |
| Tin | | 0.5 | 0.522 | 104 | 0.53 | 106 | .60160 | 0.539 | 108 | .49356 | 0.537 | 107 | .13625 | 0.536 | 107 | .36323 |
| Titanium | | 0.5 | 0.513 | 103 | 0.506 | 101 | .55213 | 0.498 | 100 | .27207 | 0.506 | 101 | .76577 | 0.509 | 102 | .95256 |
| Vanadium | | 1.5 | 1.5 | 100 | 1.52 | 101 | .23703 | 1.53 | 102 | .09470 | 1.53 | 102 | .15598 | 1.53 | 102 | .25428 |
| Zinc | | 2.5 | 2.66 | 106 | 2.76 | 110 | .18546 | 2.8 | 112* | .08256 | 2.8 | 112* | .17797 | 2.8 | 112* | .10462 |

| CCV SampleID | | : CCV9 | | | |
|---|---|---|---|---|---|
| CCV DataFileID | | : ID8L009096 | | | |
| CCV DateTime | | : 12/17/20 22:14 | | | |
| PARAMETER | | CCV EV | RESULT | %REC | RSD |
| Aluminum | | 100 | 105 | 105 | .28079 |
| Antimony | | 1.5 | 1.37 | 92 | .22433 |
| Arsenic | | 1.0 | 1.03 | 103 | .10376 |
| Barium | | 2.0 | 1.97 | 99 | .48715 |
| Beryllium | | 1.5 | 1.45 | 96 | .53043 |
| Boron | T | 2.5 | 2.49 | 99 | .10691 |
| Cadmium | | 2.0 | 2.03 | 102 | .22627 |
| Calcium | T | 75 | 79.6 | 106 | .03058 |
| Chromium | | 2.5 | 2.53 | 101 | .17506 |
| Cobalt | | 1.0 | 0.99 | 99 | .33154 |
| Copper | | 2.5 | 2.41 | 96 | .34365 |
| Iron | T | 25 | 24.8 | 99 | .20838 |
| Lead | | 2.5 | 2.47 | 99 | .44125 |
| Lithium | | 0.5 | 0.526 | 105 | .82707 |
| Magnesium | | 60 | 59.9 | 100 | .30298 |

| | | | | | |
|---|---|---|---|---|---|
| Manganese | | 2.5 | 2.28 | 91 | .10070 |
| Molybdenum | | 2.5 | 2.47 | 99 | .28985 |
| Nickel | | 2.5 | 2.51 | 100 | .26328 |
| Potassium | | 60 | 63.7 | 106 | .17512 |
| Selenium | | 1.0 | 1.03 | 103 | .44661 |
| Silver | | 0.5 | 0.485 | 97 | .23956 |
| Sodium | T | 60 | 64 | 107 | .24703 |
| Strontium | | 0.5 | 0.489 | 98 | .12181 |
| Thallium | | 2.5 | 2.38 | 95 | .03063 |
| Tin | | 0.5 | 0.534 | 107 | .47561 |
| Titanium | | 0.5 | 0.506 | 101 | .44476 |
| Vanadium | | 1.5 | 1.53 | 102 | .18644 |
| Zinc | | 2.5 | 2.8 | 112* | .20117 |

Unit: ug/L
T: Target analyte
%Rec QC Limit: 90-110
RSD QC Limit: <5
CCV EV: CCV Expected Value ug/L
Comment: * Out of QC limit

CONTINUING CALIBRATION BLANK SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : SW3010A/6010B (DISSOLVED)
Sequence : ID8L009
Instrument ID: D8

| CB SampleID | | : ICB | CCB1 | CCB2 | CCB3 | CCB7 |
|---|---|---|---|---|---|---|
| CB DataFileID | | : ID8L009015 | ID8L009023 | ID8L009034 | ID8L009044 | ID8L009081 |
| CB DateTime | | : 12/17/2015:47 | 12/17/2016:25 | 12/17/2017:17 | 12/17/2018:06 | 12/17/2021:02 |

| PARAMETER | | 3XIDL | RESULT | <3XIDL> | RESULT | <3XIDL> | RESULT | <3XIDL> | RESULT | <3XIDL> | RESULT | <3XIDL> |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | | 0.0553 | 0.004 | <0.0553 | 0.01 | <0.0553 | 0.006 | <0.0553 | 0.005 | <0.0553 | 0.009 | <0.0553 |
| Antimony | | 0.0071 | 0.002 | <0.0071 | 0.002 | <0.0071 | 0.003 | <0.0071 | 0.006 | <0.0071 | 0.001 | <0.0071 |
| Arsenic | | 0.0071 | 0.002 | <0.0071 | 0.001 | <0.0071 | 0.0009 | <0.0071 | 0.0005 | <0.0071 | 0.001 | <0.0071 |
| Barium | | 0.0022 | 0.0002 | <0.0022 | 0.00005 | <0.0022 | 0.0001 | <0.0022 | 0.0004 | <0.0022 | 0.0003 | <0.0022 |
| Beryllium | | 0.0007 | 0.00004 | <0.0007 | 0.00006 | <0.0007 | 0.00001 | <0.0007 | 0.00001 | <0.0007 | 0.00002 | <0.0007 |
| Boron | T | 0.05 | 0.010 | <0.05 | 0.01 | <0.05 | 0.02 | <0.05 | 0.02 | <0.05 | 0.01 | <0.05 |
| Cadmium | | 0.0005 | 0.00007 | <0.0005 | 0.00006 | <0.0005 | 0.00002 | <0.0005 | 0.0001 | <0.0005 | 0.0001 | <0.0005 |
| Calcium | T | 0.5 | 0.02 | <0.5 | 0.02 | <0.5 | 0.02 | <0.5 | 0.01 | <0.5 | 0.001 | <0.5 |
| Chromium | | 0.0010 | 0.0003 | <0.0010 | 0.0003 | <0.0010 | 0.0004 | <0.0010 | 0.0004 | <0.0010 | 0.0006 | <0.0010 |
| Cobalt | | 0.0010 | 0.0001 | <0.0010 | 0.00004 | <0.0010 | 0.0005 | <0.0010 | 0.0004 | <0.0010 | 0.0005 | <0.0010 |
| Copper | | 0.0023 | 0.0002 | <0.0023 | 0.0002 | <0.0023 | 0.0002 | <0.0023 | 0.0001 | <0.0023 | 0.0002 | <0.0023 |
| Iron | T | 0.1 | 0.0004 | <0.1 | 0.002 | <0.1 | 0.004 | <0.1 | 0.0002 | <0.1 | 0.005 | <0.1 |
| Lead | | 0.0032 | 0.00009 | <0.0032 | 0.0004 | <0.0032 | 0.0006 | <0.0032 | 0.0005 | <0.0032 | 0.001 | <0.0032 |
| Lithium | | 0.0060 | 0.002 | <0.0060 | 0.001 | <0.0060 | 0.0010 | <0.0060 | 0.0006 | <0.0060 | 0.0001 | <0.0060 |
| Magnesium | | 0.2710 | 0.005 | <0.2710 | 0.007 | <0.2710 | 0.01 | <0.2710 | 0.01 | <0.2710 | 0.01 | <0.2710 |
| Manganese | | 0.0092 | 0.0004 | <0.0092 | 0.0002 | <0.0092 | 0.0002 | <0.0092 | 0.0002 | <0.0092 | 0.0005 | <0.0092 |
| Molybdenum | | 0.0008 | 0.00091 | >0.0008 | 0.0008 | <0.0008 | 0.0006 | <0.0008 | 0.0006 | <0.0008 | 0.0005 | <0.0008 |
| Nickel | | 0.0019 | 0.00003 | <0.0019 | 0.00006 | <0.0019 | 0.00005 | <0.0019 | 0.0002 | <0.0019 | 0.00009 | <0.0019 |
| Potassium | | 0.2757 | 0.04 | <0.2757 | 0.03 | <0.2757 | 0.08 | <0.2757 | 0.1 | <0.2757 | 0.09 | <0.2757 |
| Selenium | | 0.0078 | 0.0009 | <0.0078 | 0.002 | <0.0078 | 0.001 | <0.0078 | 0.001 | <0.0078 | 0.0002 | <0.0078 |
| Silver | | 0.0013 | 0.0001 | <0.0013 | 0.0002 | <0.0013 | 0.0007 | <0.0013 | 0.0005 | <0.0013 | 0.033 | >0.0013 |
| Sodium | T | 0.5 | 0.02 | <0.5 | 0.02 | <0.5 | 0.72 | >0.5 | 1.5 | >0.5 | 0.4 | <0.5 |
| Strontium | | 0.0017 | 0.0002 | <0.0017 | 0.00002 | <0.0017 | 0.0007 | <0.0017 | 0.0005 | <0.0017 | 0.0005 | <0.0017 |
| Thallium | | 0.0046 | 0.002 | <0.0046 | 0.002 | <0.0046 | 0.002 | <0.0046 | 0.002 | <0.0046 | 0.002 | <0.0046 |
| Tin | | 0.0026 | 0.0005 | <0.0026 | 0.0003 | <0.0026 | 0.0002 | <0.0026 | 0.0002 | <0.0026 | 0.0001 | <0.0026 |
| Titanium | | 0.0111 | 0.0004 | <0.0111 | 0.0004 | <0.0111 | 0.0002 | <0.0111 | 0.0009 | <0.0111 | 0.00004 | <0.0111 |
| Vanadium | | 0.0009 | 0.00001 | <0.0009 | 0.00006 | <0.0009 | 0.0004 | <0.0009 | 0.0004 | <0.0009 | 0.0003 | <0.0009 |
| Zinc | | 0.0322 | 0.0008 | <0.0322 | 0.003 | <0.0322 | 0.003 | <0.0322 | 0.002 | <0.0322 | 0.003 | <0.0322 |

| CB SampleID | | : CCB8 | CCB9 |
|---|---|---|---|
| CB DataFileID | | : ID8L009093 | ID8L009097 |
| CB DateTime | | : 12/17/2021:59 | 12/17/2022:18 |

| PARAMETER | | 3XIDL | RESULT | <3XIDL> | RESULT | <3XIDL> |
|---|---|---|---|---|---|---|
| Aluminum | | 0.0553 | 0.009 | <0.0553 | 0.009 | <0.0553 |
| Antimony | | 0.0071 | 0.002 | <0.0071 | 0.002 | <0.0071 |
| Arsenic | | 0.0071 | 0.0002 | <0.0071 | 0.001 | <0.0071 |
| Barium | | 0.0022 | 0.0003 | <0.0022 | 0.0001 | <0.0022 |
| Beryllium | | 0.0007 | 0.00002 | <0.0007 | 0.00006 | <0.0007 |
| Boron | T | 0.5 | 0.01 | <0.05 | 0.01 | <0.05 |
| Cadmium | | 0.0005 | 0.00004 | <0.0005 | 0.0001 | <0.0005 |
| Calcium | T | 0.5 | 0.008 | <0.5 | 0.008 | <0.5 |
| Chromium | | 0.0010 | 0.0004 | <0.0010 | 0.0005 | <0.0010 |
| Cobalt | | 0.0010 | 0.0005 | <0.0010 | 0.0005 | <0.0010 |
| Copper | | 0.0023 | 0.0002 | <0.0023 | 0.0001 | <0.0023 |
| Iron | T | 0.1 | 0.005 | <0.1 | 0.004 | <0.1 |
| Lead | | 0.0032 | 0.0006 | <0.0032 | 0.0004 | <0.0032 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Lithium | | 0.0060 | 0.0008 | <0.0060 | 0.0001 | <0.0060 |
| Magnesium | | 0.2710 | 0.02 | <0.2710 | 0.02 | <0.2710 |
| Manganese | | 0.0092 | 0.0003 | <0.0092 | 0.00006 | <0.0092 |
| Molybdenum | | 0.0008 | 0.0005 | <0.0008 | 0.0005 | <0.0008 |
| Nickel | | 0.0019 | 0.00007 | <0.0019 | 0.0001 | <0.0019 |
| Potassium | | 0.2757 | 0.09 | <0.2757 | 0.10 | <0.2757 |
| Selenium | | 0.0078 | 0.002 | <0.0078 | 0.001 | <0.0078 |
| Silver | | 0.0013 | 0.0004 | <0.0013 | 0.0006 | <0.0013 |
| Sodium | T | 0.5 | 0.52 | >0.5 | 0.5 | <0.5 |
| Strontium | | 0.0017 | 0.0005 | <0.0017 | 0.0006 | <0.0017 |
| Thallium | | 0.0046 | 0.002 | <0.0046 | 0.002 | <0.0046 |
| Tin | | 0.0026 | 0.0002 | <0.0026 | 0.0009 | <0.0026 |
| Titanium | | 0.0111 | 0.0006 | <0.0111 | 0.0009 | <0.0111 |
| Vanadium | | 0.0009 | 0.0006 | <0.0009 | 0.0005 | <0.0009 |
| Zinc | | 0.0322 | 0.003 | <0.0322 | 0.003 | <0.0322 |

| | |
|---|---|
| Unit: | mg/L |
| CB: | Calibration Blank |
| T: | Target analyte |
| Acceptance Criteria: | CCB Result <LOD |
| Comment: | |

SEQUENCE FILE : ID8L009

| 4-18 | 19-33 | 34-43 | 44-53 | 54-63 |
|---|---|---|---|---|
| LFID | LSID | TIME | DATE | DF |
| ID8L009001 | S0 | 14:40 | 12/17/20 | 1.000 |
| ID8L009002 | S20 | 14:44 | 12/17/20 | 1.000 |
| ID8L009003 | S21 | 14:49 | 12/17/20 | 1.000 |
| ID8L009004 | S22 | 14:54 | 12/17/20 | 1.000 |
| ID8L009005 | S23 | 14:59 | 12/17/20 | 1.000 |
| ID8L009006 | S24 | 15:04 | 12/17/20 | 1.000 |
| ID8L009007 | S25 | 15:08 | 12/17/20 | 1.000 |
| ID8L009008 | S26 | 15:13 | 12/17/20 | 1.000 |
| ID8L009009 | S27 | 15:18 | 12/17/20 | 1.000 |
| ID8L009010 | S28 | 15:23 | 12/17/20 | 1.000 |
| ID8L009011 | S29 | 15:28 | 12/17/20 | 1.000 |
| ID8L009012 | S30 | 15:32 | 12/17/20 | 1.000 |
| ID8L009013 | S31 | 15:37 | 12/17/20 | 1.000 |
| ID8L009014 | ICV | 15:42 | 12/17/20 | 1.000 |
| ID8L009015 | ICB | 15:47 | 12/17/20 | 1.000 |
| ID8L009016 | MRLL1701 | 15:51 | 12/17/20 | 1.000 |
| ID8L009017 | MRLL1702 | 15:56 | 12/17/20 | 1.000 |
| ID8L009018 | MRLL1703 | 16:01 | 12/17/20 | 1.000 |
| ID8L009019 | MRLL1704 | 16:06 | 12/17/20 | 1.000 |
| ID8L009020 | ICSA1 | 16:10 | 12/17/20 | 1.000 |
| ID8L009021 | ICSAB1 | 16:15 | 12/17/20 | 1.000 |
| ID8L009022 | CCV1 | 16:20 | 12/17/20 | 1.000 |
| ID8L009023 | CCB1 | 16:25 | 12/17/20 | 1.000 |
| ID8L009024 | IPL013WB | 16:30 | 12/17/20 | 1.000 |
| ID8L009025 | IPL013WL | 16:34 | 12/17/20 | 1.000 |
| ID8L009026 | IPL013WC | 16:39 | 12/17/20 | 1.000 |
| ID8L009027 | L101-02 | 16:43 | 12/17/20 | 1.000 |
| ID8L009028 | L101-04M | 16:48 | 12/17/20 | 1.000 |
| ID8L009029 | L101-04S | 16:53 | 12/17/20 | 1.000 |
| ID8L009030 | L101-04A | 16:58 | 12/17/20 | 1.000 |
| ID8L009031 | L101-04 | 17:03 | 12/17/20 | 1.000 |
| ID8L009032 | L101-04J | 17:07 | 12/17/20 | 5.000 |
| ID8L009033 | CCV2 | 17:12 | 12/17/20 | 1.000 |
| ID8L009034 | CCB2 | 17:17 | 12/17/20 | 1.000 |
| ID8L009035 | L101-06 | 17:22 | 12/17/20 | 1.000 |
| ID8L009036 | L101-08 | 17:26 | 12/17/20 | 1.000 |
| ID8L009037 | L101-09 | 17:31 | 12/17/20 | 1.000 |
| ID8L009038 | L101-10 | 17:36 | 12/17/20 | 1.000 |
| ID8L009039 | L101-11 | 17:41 | 12/17/20 | 1.000 |
| ID8L009040 | L101-12 | 17:46 | 12/17/20 | 1.000 |
| ID8L009041 | L101-13 | 17:51 | 12/17/20 | 1.000 |
| ID8L009042 | L101-04A | 17:56 | 12/17/20 | 1.000 |
| ID8L009043 | CCV3 | 18:01 | 12/17/20 | 1.000 |
| ID8L009044 | CCB3 | 18:06 | 12/17/20 | 1.000 |
| ID8L009045 | IPL016WB | 18:10 | 12/17/20 | 1.000 |
| ID8L009046 | IPL016WL | 18:15 | 12/17/20 | 1.000 |
| ID8L009047 | IPL016WC | 18:20 | 12/17/20 | 1.000 |
| ID8L009048 | L105-01 | 18:24 | 12/17/20 | 1.000 |
| ID8L009049 | L105-02 | 18:29 | 12/17/20 | 1.000 |
| ID8L009050 | L105-03 | 18:34 | 12/17/20 | 1.000 |
| ID8L009051 | CCV4 | 18:39 | 12/17/20 | 1.000 |
| ID8L009052 | CCB4 | 18:43 | 12/17/20 | 1.000 |
| ID8L009053 | TXL004SB | 18:48 | 12/17/20 | 1.000 |
| ID8L009054 | L085-01 | 18:53 | 12/17/20 | 1.000 |
| ID8L009055 | L085-02M | 18:58 | 12/17/20 | 1.000 |
| ID8L009056 | L085-02S | 19:02 | 12/17/20 | 1.000 |
| ID8L009057 | L085-02A | 19:07 | 12/17/20 | 1.000 |
| ID8L009058 | L085-02 | 19:12 | 12/17/20 | 1.000 |
| ID8L009059 | L085-02J | 19:17 | 12/17/20 | 5.000 |
| ID8L009060 | CCV5 | 19:21 | 12/17/20 | 1.000 |
| ID8L009061 | CCB5 | 19:26 | 12/17/20 | 1.000 |
| ID8L009062 | TXL005SB | 19:31 | 12/17/20 | 1.000 |

| | | | | |
|---|---|---|---|---|
| ID8L009063 | L446-01M | 19:36 | 12/17/20 | 1.000 |
| ID8L009064 | L446-01S | 19:40 | 12/17/20 | 1.000 |
| ID8L009065 | L446-01A | 19:45 | 12/17/20 | 1.000 |
| ID8L009066 | L446-01 | 19:50 | 12/17/20 | 1.000 |
| ID8L009067 | L446-01J | 19:55 | 12/17/20 | 5.000 |
| ID8L009068 | L446-04 | 20:00 | 12/17/20 | 1.000 |
| ID8L009069 | L448-01 | 20:04 | 12/17/20 | 1.000 |
| ID8L009070 | L448-02 | 20:09 | 12/17/20 | 1.000 |
| ID8L009071 | CCV6 | 20:14 | 12/17/20 | 1.000 |
| ID8L009072 | CCB6 | 20:19 | 12/17/20 | 1.000 |
| ID8L009073 | TXL006WB | 20:24 | 12/17/20 | 1.000 |
| ID8L009074 | L446-02M | 20:28 | 12/17/20 | 1.000 |
| ID8L009075 | L446-02S | 20:33 | 12/17/20 | 1.000 |
| ID8L009076 | L446-02A | 20:38 | 12/17/20 | 1.000 |
| ID8L009077 | L446-02 | 20:42 | 12/17/20 | 1.000 |
| ID8L009078 | L446-02J | 20:47 | 12/17/20 | 5.000 |
| ID8L009079 | L488-03 | 20:52 | 12/17/20 | 1.000 |
| ID8L009080 | CCV7 | 20:57 | 12/17/20 | 1.000 |
| ID8L009081 | CCB7 | 21:02 | 12/17/20 | 1.000 |
| ID8L009082 | L101-02I | 21:06 | 12/17/20 | 5.000 |
| ID8L009083 | L101-04M | 21:11 | 12/17/20 | 10.000 |
| ID8L009084 | L101-04S | 21:16 | 12/17/20 | 10.000 |
| ID8L009085 | L101-04A | 21:21 | 12/17/20 | 10.000 |
| ID8L009086 | L101-04I | 21:26 | 12/17/20 | 10.000 |
| ID8L009087 | L101-04J | 21:30 | 12/17/20 | 50.000 |
| ID8L009088 | L101-06I | 21:35 | 12/17/20 | 10.000 |
| ID8L009089 | L101-09I | 21:40 | 12/17/20 | 5.000 |
| ID8L009090 | L101-10I | 21:45 | 12/17/20 | 10.000 |
| ID8L009091 | L101-11I | 21:50 | 12/17/20 | 10.000 |
| ID8L009092 | CCV8 | 21:55 | 12/17/20 | 1.000 |
| ID8L009093 | CCB8 | 21:59 | 12/17/20 | 1.000 |
| ID8L009094 | L101-12I | 22:04 | 12/17/20 | 5.000 |
| ID8L009095 | L101-13I | 22:09 | 12/17/20 | 10.000 |
| ID8L009096 | CCV9 | 22:14 | 12/17/20 | 1.000 |
| ID8L009097 | CCB9 | 22:18 | 12/17/20 | 1.000 |

| | Pos ID | Rack | Row | Col | Type | Samplename | Comment | Date File | Anaylst | Cnt | Check | Check Table | Fail Action |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | 0 | Unk | S0 | | ID8L009001 | NTan | 1 | ☒ | unk6010C | --- |
| 2 | 0 | 0 | 0 | 0 | Unk | S20 | | ID8L009002 | NTan | 1 | ☒ | unk6010C | --- |
| 3 | 0 | 0 | 0 | 0 | Unk | S21 | | ID8L009003 | NTan | 1 | ☒ | unk6010C | --- |
| 4 | 0 | 0 | 0 | 0 | Unk | S22 | | ID8L009004 | NTan | 1 | ☒ | unk6010C | --- |
| 5 | 0 | 0 | 0 | 0 | Unk | S23 | | ID8L009005 | NTan | 1 | ☒ | unk6010C | --- |
| 6 | 0 | 0 | 0 | 0 | Unk | S24 | | ID8L009006 | NTan | 1 | ☒ | unk6010C | --- |
| 7 | 0 | 0 | 0 | 0 | Unk | S25 | | ID8L009007 | NTan | 1 | ☒ | unk6010C | --- |
| 8 | 0 | 0 | 0 | 0 | Unk | S26 | | ID8L009008 | NTan | 1 | ☒ | unk6010C | --- |
| 9 | 0 | 0 | 0 | 0 | Unk | S27 | | ID8L009009 | NTan | 1 | ☒ | unk6010C | --- |
| 10 | 0 | 0 | 0 | 0 | Unk | S28 | | ID8L009010 | NTan | 1 | ☒ | unk6010C | --- |
| 11 | 0 | 0 | 0 | 0 | Unk | S29 | | ID8L009011 | NTan | 1 | ☒ | unk6010C | --- |
| 12 | 0 | 0 | 0 | 0 | Unk | S30 | | ID8L009012 | NTan | 1 | ☒ | unk6010C | --- |
| 13 | 0 | 0 | 0 | 0 | Unk | S31 | | ID8L009013 | NTan | 1 | ☒ | unk6010C | --- |
| 14 | 1 | 2 | 1 | 1 | QC | ICV | | ID8L009014 | NTan | 1 | ☒ | CCV | None |
| 15 | 2 | 2 | 2 | 1 | QC | ICB | | ID8L009015 | NTan | 1 | ☒ | LOD | None |
| 16 | 3 | 2 | 3 | 1 | QC | MRLL1701 | | ID8L009016 | NTan | 1 | ☒ | MRL-EMAX | None |
| 17 | 4 | 2 | 4 | 1 | QC | MRLL1702 | | ID8L009017 | NTan | 1 | ☒ | MRL-AFCEE | None |
| 18 | 5 | 2 | 5 | 1 | Unk | MRLL1703 | E2X | ID8L009018 | NTan | 1 | ☒ | unk6010C | --- |
| 19 | 6 | 2 | 6 | 1 | Unk | MRLL1704 | 4e | ID8L009019 | NTan | 1 | ☒ | unk6010C | --- |
| 20 | 7 | 2 | 7 | 1 | QC | ICSA1 | | ID8L009020 | NTan | 1 | ☒ | ICSA-DoD | None |
| 21 | 8 | 2 | 8 | 1 | QC | ICSAB1 | | ID8L009021 | NTan | 1 | ☒ | ICSAB | None |
| 22 | 9 | 2 | 9 | 1 | QC | CCV1 | | ID8L009022 | NTan | 1 | ☒ | CCV | None |
| 23 | 10 | 2 | 10 | 1 | QC | CCB1 | | ID8L009023 | NTan | 1 | ☒ | LOD | None |
| 24 | 11 | 2 | 11 | 1 | QC | IPL013WB | | ID8L009024 | NTan | 1 | ☒ | 1/2LOQ | None |
| 25 | 12 | 2 | 12 | 1 | QC | IPL013WL | | ID8L009025 | NTan | 1 | ☒ | LCS | None |
| 26 | 13 | 2 | 1 | 2 | QC | IPL013WC | | ID8L009026 | NTan | 1 | ☒ | LCS | None |
| 27 | 14 | 2 | 2 | 2 | Unk | L101-02 | Na | ID8L009027 | NTan | 1 | ☒ | unk | --- |
| 28 | 15 | 2 | 3 | 2 | Unk | L101-04M | Na | ID8L009028 | NTan | 1 | ☒ | unk | --- |
| 29 | 16 | 2 | 4 | 2 | Unk | L101-04S | Na | ID8L009029 | NTan | 1 | ☒ | unk | --- |
| 30 | 17 | 2 | 5 | 2 | Unk | L101-04A | NO SPIKE | ID8L009030 | NTan | 1 | ☒ | unk | --- |
| 31 | 18 | 2 | 6 | 2 | Unk | L101-04 | Na | ID8L009031 | NTan | 1 | ☒ | unk | --- |
| 32 | 19 | 2 | 7 | 2 | Unk | L101-04J | 5X | ID8L009032 | NTan | 1 | ☒ | unk | --- |
| 33 | 20 | 2 | 8 | 2 | QC | CCV2 | | ID8L009033 | NTan | 1 | ☒ | CCV | None |
| 34 | 21 | 2 | 9 | 2 | QC | CCB2 | | ID8L009034 | NTan | 1 | ☒ | LOD | None |
| 35 | 22 | 2 | 10 | 2 | Unk | L101-06 | Na | ID8L009035 | NTan | 1 | ☒ | unk | --- |
| 36 | 23 | 2 | 11 | 2 | Unk | L101-08 | | ID8L009036 | NTan | 1 | ☒ | unk | --- |
| 37 | 24 | 2 | 12 | 2 | Unk | L101-09 | Na | ID8L009037 | NTan | 1 | ☒ | unk | --- |
| 38 | 25 | 2 | 1 | 3 | Unk | L101-10 | Na | ID8L009038 | NTan | 1 | ☒ | unk | --- |
| 39 | 26 | 2 | 2 | 3 | Unk | L101-11 | Na | ID8L009039 | NTan | 1 | ☒ | unk | --- |
| 40 | 27 | 2 | 3 | 3 | Unk | L101-12 | Na | ID8L009040 | NTan | 1 | ☒ | unk | --- |

| | Pos ID | Rack | Row | Col | Type | Samplename | Comment | Data File | Anaylst | Corr | Check | Check Table | Fail Action |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 41 | 28 | 2 | 4 | 3 | Unk | L101-13 | Na | ID8L009041 | NTan | 1 | ☒ | unk | --- |
| 42 | 179 | 4 | 11 | 5 | Unk | L101-04A | REPREP | ID8L009042 | NTan | 1 | ☒ | unk | --- |
| 43 | 29 | 2 | 5 | 3 | QC | CCV3 | Zn | ID8L009043 | NTan | 1 | ☒ | CCV | None |
| 44 | 30 | 2 | 6 | 3 | QC | CCB3 | Na | ID8L009044 | NTan | 1 | ☒ | LOD | None |
| 45 | 31 | 2 | 7 | 3 | QC | IPL016WB | Na | ID8L009045 | NTan | 1 | ☒ | 1/2LOQ | None |
| 46 | 32 | 2 | 8 | 3 | QC | IPL016WL | | ID8L009046 | NTan | 1 | ☒ | LCS-WDoD | None |
| 47 | 33 | 2 | 9 | 3 | QC | IPL016WC | Zn | ID8L009047 | NTan | 1 | ☒ | LCS-WDoD | None |
| 48 | 46 | 2 | 10 | 4 | Unk | L105-01 | | ID8L009048 | NTan | 1 | ☒ | unk6010C | --- |
| 49 | 47 | 2 | 11 | 4 | Unk | L105-02 | | ID8L009049 | NTan | 1 | ☒ | unk6010C | --- |
| 50 | 48 | 2 | 12 | 4 | Unk | L105-03 | | ID8L009050 | NTan | 1 | ☒ | unk6010C | --- |
| 51 | 49 | 2 | 1 | 5 | QC | CCV4 | Zn | ID8L009051 | NTan | 1 | ☒ | CCV | None |
| 52 | 50 | 2 | 2 | 5 | QC | CCB4 | | ID8L009052 | NTan | 1 | ☒ | LOD | None |
| 53 | 51 | 2 | 3 | 5 | QC | TXL004SB | TCLP | ID8L009053 | NTan | 1 | ☒ | 1/2LOQ | None |
| 54 | 52 | 2 | 4 | 5 | Unk | L085-01 | TCLP | ID8L009054 | NTan | 1 | ☒ | unk | --- |
| 55 | 53 | 2 | 5 | 5 | Unk | L085-02M | TCLP | ID8L009055 | NTan | 1 | ☒ | unk | --- |
| 56 | 54 | 2 | 6 | 5 | Unk | L085-02S | TCLP | ID8L009056 | NTan | 1 | ☒ | unk | --- |
| 57 | 55 | 2 | 7 | 5 | Unk | L085-02A | TCLP | ID8L009057 | NTan | 1 | ☒ | unk | --- |
| 58 | 56 | 2 | 8 | 5 | Unk | L085-02 | TCLP | ID8L009058 | NTan | 1 | ☒ | unk | --- |
| 59 | 57 | 2 | 9 | 5 | Unk | L085-02J | 5X TCLP | ID8L009059 | NTan | 1 | ☒ | unk | --- |
| 60 | 58 | 2 | 10 | 5 | QC | CCV5 | Zn | ID8L009060 | NTan | 1 | ☒ | CCV | None |
| 61 | 59 | 2 | 11 | 5 | QC | CCB5 | | ID8L009061 | NTan | 1 | ☒ | LOD | None |
| 62 | 60 | 2 | 12 | 5 | QC | TXL005SB | TCLP | ID8L009062 | NTan | 1 | ☒ | 1/2LOQ | None |
| 63 | 61 | 3 | 1 | 1 | Unk | L446-01M | TCLP | ID8L009063 | NTan | 1 | ☒ | unk | --- |
| 64 | 62 | 3 | 2 | 1 | Unk | L446-01S | TCLP | ID8L009064 | NTan | 1 | ☒ | unk | --- |
| 65 | 63 | 3 | 3 | 1 | Unk | L446-01A | TCLP | ID8L009065 | NTan | 1 | ☒ | unk | --- |
| 66 | 64 | 3 | 4 | 1 | Unk | L446-01 | TCLP | ID8L009066 | NTan | 1 | ☒ | unk | --- |
| 67 | 65 | 3 | 5 | 1 | Unk | L446-01J | 5X TCLP | ID8L009067 | NTan | 1 | ☒ | unk | --- |
| 68 | 66 | 3 | 6 | 1 | Unk | L446-04 | TCLP | ID8L009068 | NTan | 1 | ☒ | unk | --- |
| 69 | 67 | 3 | 7 | 1 | Unk | L448-01 | TCLP | ID8L009069 | NTan | 1 | ☒ | unk | --- |
| 70 | 68 | 3 | 8 | 1 | Unk | L448-02 | TCLP | ID8L009070 | NTan | 1 | ☒ | unk | --- |
| 71 | 69 | 3 | 9 | 1 | QC | CCV6 | | ID8L009071 | NTan | 1 | ☒ | CCV | None |
| 72 | 70 | 3 | 10 | 1 | QC | CCB6 | | ID8L009072 | NTan | 1 | ☒ | LOD | None |
| 73 | 71 | 3 | 11 | 1 | QC | TXL006WB | TCLP | ID8L009073 | NTan | 1 | ☒ | 1/2LOQ | None |
| 74 | 72 | 3 | 12 | 1 | Unk | L446-02M | TCLP | ID8L009074 | NTan | 1 | ☒ | unk | --- |
| 75 | 73 | 3 | 1 | 2 | Unk | L446-02S | TCLP | ID8L009075 | NTan | 1 | ☒ | unk | --- |
| 76 | 74 | 3 | 2 | 2 | Unk | L446-02A | TCLP | ID8L009076 | NTan | 1 | ☒ | unk | --- |
| 77 | 75 | 3 | 3 | 2 | Unk | L446-02 | TCLP | ID8L009077 | NTan | 1 | ☒ | unk | --- |
| 78 | 76 | 3 | 4 | 2 | Unk | L446-02J | 5X TCLP | ID8L009078 | NTan | 1 | ☒ | unk | --- |
| 79 | 77 | 3 | 5 | 2 | Unk | L488-03 | TCLP | ID8L009079 | NTan | 1 | ☒ | unk | --- |
| 80 | 78 | 3 | 6 | 2 | QC | CCV7 | | ID8L009080 | NTan | 1 | ☒ | CCV | None |

Ag

| | Pos ID | Rack | Row | Col | Type | Sample name | Comment | Date File | Anaylst | Cor | Check | Check Table | Fail Action |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 81 | 79 | 3 | 7 | 2 | QC | CCB7 | Ag | ID8L009081 | NTan | 1 | ☒ | LOD | None |
| 82 | 80 | 3 | 8 | 2 | Unk | L101-02I | 5X | ID8L009082 | NTan | 1 | ☒ | unk | --- |
| 83 | 81 | 3 | 9 | 2 | Unk | L101-04M | 10X | ID8L009083 | NTan | 1 | ☒ | unk | --- |
| 84 | 82 | 3 | 10 | 2 | Unk | L101-04S | 10X | ID8L009084 | NTan | 1 | ☒ | unk | --- |
| 85 | 83 | 3 | 11 | 2 | Unk | L101-04A | 10X | ID8L009085 | NTan | 1 | ☒ | unk | --- |
| 86 | 84 | 3 | 12 | 2 | Unk | L101-04I | 10X | ID8L009086 | NTan | 1 | ☒ | unk | --- |
| 87 | 85 | 3 | 1 | 3 | Unk | L101-04J | 10X | ID8L009087 | NTan | 1 | ☒ | unk | --- |
| 88 | 87 | 3 | 3 | 3 | Unk | L101-06I | 10X | ID8L009088 | NTan | 1 | ☒ | unk | --- |
| 89 | 86 | 3 | 2 | 3 | Unk | L101-09I | 5X | ID8L009089 | NTan | 1 | ☒ | unk | --- |
| 90 | 88 | 3 | 4 | 3 | Unk | L101-10I | 10X | ID8L009090 | NTan | 1 | ☒ | unk | --- |
| 91 | 89 | 3 | 5 | 3 | Unk | L101-11I | 10X | ID8L009091 | NTan | 1 | ☒ | unk | --- |
| 92 | 90 | 3 | 6 | 3 | QC | CCV8 | | ID8L009092 | NTan | 1 | ☒ | CCV | None |
| 93 | 91 | 3 | 7 | 3 | QC | CCB8 | | ID8L009093 | NTan | 1 | ☒ | LOD | None |
| 94 | 92 | 3 | 8 | 3 | Unk | L101-12I | 5X | ID8L009094 | NTan | 1 | ☒ | unk | --- |
| 95 | 93 | 3 | 9 | 3 | Unk | L101-13I | 10X | ID8L009095 | NTan | 1 | ☒ | unk | --- |
| 96 | 94 | 3 | 10 | 3 | QC | CCV9 | | ID8L009096 | NTan | 1 | ☒ | CCV | None |
| 97 | 95 | 3 | 11 | 3 | QC | CCB9 | | ID8L009097 | NTan | 1 | ☒ | LOD | None |

## Status

| | | | | | |
|---|---|---|---|---|---|
| Revision | 13 | | | | |
| Date Created | 08/14/2006 16:36:29 | by admin | | | |
| Date Modified | 12/17/2020 14:35:57 | by admin | | | |
| Date Calibrated | 12/17/2020 15:42:21 | | | | |
| Current Status | by admin | | | | |
| Number of Elements | 31 | | | | |
| Number of Wavelengths | 33 | | | | |
| Calibration Type | External | | | | |
| Notes: | | | | | |

## Analysis Preferences

| | | | | | |
|---|---|---|---|---|---|
| **Sample Options** | # Repeats: | 3 | | | |
| | Delay Time: | 0.0 seconds | | | |
| | Sample Flush Time: | 47 seconds | | | |
| | Analysis mode | Speed | | | |
| **Source** | Sample Introduction | Nebulizer | | | |
| | Plasma View: | Line Selection | | | |
| **Analysis Maximum Integration Times (sec)** | Low WL Range | Axial | 15 | Radial | 15 |
| | High WL Range: | Axial | 10 | Radial | 5 |
| **Calibration Mode** | Concentration | | | | |
| **Trailing Full Frame Options** | Intelli-Frame: | | No | | |
| | Max Integration Time (sec): | | 30 | | |
| | WL Range: | | Low | | |
| | View: | | Axial | | |
| | Auto-Increment Sample Names: | | Yes | | |
| | Use Sample Weight Corrections: | | No | | |

## Source Settings

| | | | |
|---|---|---|---|
| **Nebulizer Pump** | Flush Pump Rate (rpm): | 100 | |
| | Analysis Pump Rate (rpm): | 20 | |
| | Pump Relaxation Time (sec): | 8 | |
| | Pump Tubing Type: | Tygon Orange/White | |
| | RF Power: | 1150 | W |

Sample Name: S020H6010 Acquired: 12/17/2020 14:40:06 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.00143** | **.00003** | **-.00001** | **.00075** | **.00007** | **.00034** | **-.00005** | **.00070** | **.00014** | **-.00084** |
| Stddev | .00002 | .00001 | .00000 | .00016 | .00006 | .00001 | .00001 | .00004 | .00002 | .00006 |
| %RSD | 1.5676 | 18.291 | 52.754 | 21.678 | 94.074 | 2.2924 | 16.335 | 6.1782 | 11.618 | 7.0708 |
| #1 | .00141 | .00003 | -.00001 | .00071 | .00014 | .00033 | -.00005 | .00073 | .00013 | -.00091 |
| #2 | .00143 | .00002 | -.00001 | .00093 | .00001 | .00034 | -.00004 | .00071 | .00015 | -.00082 |
| #3 | .00145 | .00003 | .00000 | .00061 | .00006 | .00033 | -.00005 | .00065 | .00012 | -.00079 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.00034** | **.00017** | **-.00013** | **.00061** | **-.00002** | **-.00008** | **-.00011** | **-.00126** | **-.00184** | **.00001** |
| Stddev | .00001 | .00002 | .00009 | .00011 | .00004 | .00005 | .00013 | .00018 | .00012 | .00000 |
| %RSD | 3.9294 | 13.651 | 70.326 | 18.558 | 206.92 | 67.612 | 113.84 | 14.373 | 6.2665 | 11.276 |
| #1 | .00035 | .00020 | -.00010 | .00053 | -.00004 | -.00009 | -.00024 | -.00106 | -.00179 | .00001 |
| #2 | .00034 | .00016 | -.00023 | .00057 | -.00005 | -.00002 | .00002 | -.00135 | -.00176 | .00001 |
| #3 | .00033 | .00016 | -.00005 | .00074 | .00003 | -.00012 | -.00013 | -.00139 | -.00197 | .00001 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **-.00032** | **.00231** | **-.00075** | **-.00001** | **-.00002** | **.00016** | **-.00013** | **.00091** |
| Stddev | .00001 | .00018 | .00006 | .00000 | .00003 | .00004 | .00002 | .00008 |
| %RSD | 1.8675 | 7.7117 | 8.3616 | 17.712 | 167.96 | 23.940 | 18.462 | 8.2773 |
| #1 | -.00032 | .00252 | -.00077 | -.00002 | .00000 | .00014 | -.00016 | .00100 |
| #2 | -.00032 | .00221 | -.00081 | -.00001 | .00000 | .00013 | -.00011 | .00086 |
| #3 | -.00031 | .00221 | -.00068 | -.00002 | -.00004 | .00020 | -.00012 | .00088 |

Sample Name: S020H6010 Acquired: 12/17/2020 14:40:06 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **7329.1** | **76432.** | **149200.** |
| Stddev | 12.2 | 106. | 315. |
| %RSD | .16679 | .13859 | .21117 |
| #1 | 7326.8 | 76553. | 148960. |
| #2 | 7342.2 | 76358. | 149560. |
| #3 | 7318.1 | 76385. | 149100. |

Sample Name: S20 Acquired: 12/17/2020 14:44:51 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Be | Cd | Pb | Mn |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.99052** | **.14629** | **.20418** | **.13344** |
| Stddev | .00195 | .00058 | .00074 | .00020 |
| %RSD | .19736 | .39853 | .36257 | .14627 |
| #1 | .99202 | .14691 | .20337 | .13362 |
| #2 | .99122 | .14576 | .20437 | .13323 |
| #3 | .98831 | .14620 | .20481 | .13347 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **7694.7** | **81566.** | **157080.** |
| Stddev | 29.7 | 46. | 443. |
| %RSD | .38542 | .05692 | .28198 |
| #1 | 7726.3 | 81540. | 156610. |
| #2 | 7690.3 | 81539. | 157490. |
| #3 | 7667.5 | 81620. | 157140. |

Sample Name: S21 Acquired: 12/17/2020 14:49:35 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Be | Cd | Pb | Mn |
|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **9.9322** | **1.4759** | **2.0741** | **1.3400** |
| Stddev | .0558 | .0063 | .0047 | .0023 |
| %RSD | .56154 | .42482 | .22733 | .17473 |
| #1 | 9.9721 | 1.4766 | 2.0782 | 1.3374 |
| #2 | 9.8685 | 1.4817 | 2.0751 | 1.3411 |
| #3 | 9.9560 | 1.4693 | 2.0689 | 1.3416 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **7223.3** | **76801.** | **148550.** |
| Stddev | 13.5 | 69. | 583. |
| %RSD | .18636 | .08966 | .39260 |
| #1 | 7211.8 | 76875. | 148390. |
| #2 | 7220.1 | 76790. | 148060. |
| #3 | 7238.1 | 76739. | 149190. |

Sample Name: S22 Acquired: 12/17/2020 14:54:28 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Ba | Co | Cu | Fe | V |
|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.54956** | **.16573** | **.30128** | **.01542** | **.14117** |
| Stddev | .00115 | .00051 | .00030 | .00003 | .00016 |
| %RSD | .20999 | .30537 | .09931 | .17700 | .11602 |
| | | | | | |
| #1 | .54838 | .16598 | .30109 | .01539 | .14110 |
| #2 | .55068 | .16607 | .30113 | .01542 | .14105 |
| #3 | .54963 | .16515 | .30163 | .01545 | .14135 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **7324.3** | **77977.** | **150190.** |
| Stddev | 10.9 | 108. | 383. |
| %RSD | .14900 | .13810 | .25476 |
| | | | |
| #1 | 7317.2 | 78061. | 149960. |
| #2 | 7318.9 | 78013. | 149970. |
| #3 | 7336.9 | 77855. | 150630. |

Sample Name: S23 Acquired: 12/17/2020 14:59:12 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Ba | Co | Cu | Fe | V |
|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **5.2590** | **1.6601** | **2.9136** | **1.1432** | **1.4017** |
| Stddev | .0111 | .0028 | .0066 | .0010 | .0007 |
| %RSD | .21098 | .16985 | .22492 | .09216 | .05247 |
| #1 | 5.2709 | 1.6611 | 2.9091 | 1.1434 | 1.4016 |
| #2 | 5.2488 | 1.6623 | 2.9107 | 1.1441 | 1.4025 |
| #3 | 5.2574 | 1.6569 | 2.9211 | 1.1421 | 1.4010 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **7024.6** | **80221.** | **151170.** |
| Stddev | 12.3 | 350. | 549. |
| %RSD | .17478 | .43600 | .36340 |
| #1 | 7022.6 | 80374. | 150630. |
| #2 | 7013.5 | 80468. | 151140. |
| #3 | 7037.8 | 79821. | 151730. |

Sample Name: S24 Acquired: 12/17/2020 15:04:12 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | B | Mo | Na |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **.12120** | **.68660** | **1.0119** |
| Stddev | .00002 | .00166 | .0036 |
| %RSD | .01875 | .24170 | .35321 |
| | | | |
| #1 | .12121 | .68586 | 1.0111 |
| #2 | .12118 | .68850 | 1.0087 |
| #3 | .12122 | .68544 | 1.0158 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **7078.6** | **80583.** | **149530.** |
| Stddev | 18.3 | 225. | 306. |
| %RSD | .25875 | .27939 | .20433 |
| | | | |
| #1 | 7096.6 | 80327. | 149230. |
| #2 | 7079.2 | 80675. | 149840. |
| #3 | 7059.9 | 80749. | 149500. |

Sample Name: S25 Acquired: 12/17/2020 15:08:57 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | B | Mo | Na |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **1.2435** | **7.0485** | **5.8366** |
| Stddev | .0025 | .0139 | .0147 |
| %RSD | .20106 | .19663 | .25200 |
| | | | |
| #1 | 1.2409 | 7.0381 | 5.8493 |
| #2 | 1.2459 | 7.0432 | 5.8205 |
| #3 | 1.2439 | 7.0643 | 5.8400 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **6560.7** | **80701.** | **141330.** |
| Stddev | 20.0 | 285. | 1169. |
| %RSD | .30422 | .35273 | .82744 |
| | | | |
| #1 | 6538.0 | 80989. | 142270. |
| #2 | 6568.6 | 80694. | 140020. |
| #3 | 6575.5 | 80420. | 141700. |

Sample Name: S26 Acquired: 12/17/2020 15:13:48 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Al | Ca | Cr | Ni | K |
|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | .04933 | 1.0305 | .15686 | .89422 | .31823 |
| Stddev | .00007 | .0012 | .00024 | .00055 | .00023 |
| %RSD | .14553 | .11395 | .15022 | .06186 | .07274 |
| #1 | .04941 | 1.0310 | .15659 | .89469 | .31842 |
| #2 | .04929 | 1.0292 | .15703 | .89361 | .31797 |
| #3 | .04928 | 1.0314 | .15696 | .89435 | .31830 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 6907.3 | 82215. | 149230. |
| Stddev | 5.8 | 51. | 126. |
| %RSD | .08327 | .06154 | .08447 |
| #1 | 6909.0 | 82271. | 149310. |
| #2 | 6912.0 | 82172. | 149090. |
| #3 | 6900.9 | 82203. | 149300. |

Sample Name: S27 Acquired: 12/17/2020 15:18:30 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Al | Ca | Cr | Ni | K |
|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **4.5149** | **9.7281** | **1.5419** | **8.9002** | **3.2286** |
| Stddev | .0215 | .0486 | .0024 | .0093 | .0014 |
| %RSD | .47516 | .49968 | .15502 | .10436 | .04436 |
| #1 | 4.4906 | 9.7625 | 1.5402 | 8.8947 | 3.2272 |
| #2 | 4.5313 | 9.7493 | 1.5446 | 8.8950 | 3.2285 |
| #3 | 4.5228 | 9.6725 | 1.5408 | 8.9110 | 3.2301 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5846.4** | **79252.** | **132670.** |
| Stddev | 7.7 | 205. | 312. |
| %RSD | .13207 | .25893 | .23495 |
| #1 | 5848.7 | 79073. | 132750. |
| #2 | 5852.7 | 79208. | 132320. |
| #3 | 5837.8 | 79476. | 132930. |

Sample Name: S28 Acquired: 12/17/2020 15:23:31 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Sb | Mg | Tl |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **.00519** | **.02920** | **.00623** |
| Stddev | .00002 | .00007 | .00004 |
| %RSD | .32676 | .24466 | .57168 |
| #1 | .00518 | .02921 | .00621 |
| #2 | .00518 | .02927 | .00621 |
| #3 | .00521 | .02913 | .00627 |

| Int. Std. | Sc3613_R | Sc3645_A |
|---|---|---|
| Units | Cts/S | Cts/S |
| Avg | **80232.** | **148440.** |
| Stddev | 273. | 311. |
| %RSD | .34072 | .20933 |
| #1 | 80433. | 148480. |
| #2 | 79921. | 148730. |
| #3 | 80343. | 148110. |

Sample Name: S29 Acquired: 12/17/2020 15:28:14 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | Sb | Mg | Tl |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **.05226** | **.28731** | **.05824** |
| Stddev | .00012 | .00077 | .00007 |
| %RSD | .22046 | .26970 | .12498 |
| | | | |
| #1 | .05215 | .28682 | .05816 |
| #2 | .05238 | .28691 | .05829 |
| #3 | .05225 | .28820 | .05828 |

| Int. Std. | Sc3613_R | Sc3645_A |
|---|---|---|
| Units | Cts/S | Cts/S |
| Avg | **81374.** | **146760.** |
| Stddev | 306. | 341. |
| %RSD | .37617 | .23220 |
| | | |
| #1 | 81711. | 146400. |
| #2 | 81114. | 146820. |
| #3 | 81298. | 147070. |

Sample Name: S30 Acquired: 12/17/2020 15:32:57 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | As | Li | Se | Ag | Sr | Sn | Ti | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | **.00096** | **.02314** | **.00131** | **.03691** | **.16687** | **.02233** | **.01656** | **.80024** |
| Stddev | .00001 | .00024 | .00000 | .00012 | .00038 | .00002 | .00009 | .00155 |
| %RSD | .66328 | 1.0518 | .27960 | .31776 | .22579 | .10284 | .56880 | .19419 |
| #1 | .00095 | .02291 | .00131 | .03698 | .16660 | .02232 | .01662 | .79883 |
| #2 | .00096 | .02340 | .00131 | .03678 | .16671 | .02235 | .01645 | .80000 |
| #3 | .00097 | .02311 | .00131 | .03698 | .16730 | .02231 | .01661 | .80191 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **7501.5** | **82742.** | **154660.** |
| Stddev | 15.0 | 172. | 266. |
| %RSD | .20017 | .20829 | .17171 |
| #1 | 7516.7 | 82939. | 154720. |
| #2 | 7501.2 | 82668. | 154880. |
| #3 | 7486.7 | 82619. | 154360. |

Sample Name: S31 Acquired: 12/17/2020 15:37:42 Type: Cal
Method: 20L6010(v13) Mode: IR Corr. Factor: 1.000000
User: admin Date File: Type: Anaylst:
Comment:

| Elem | As | Li | Se | Ag | Sr | Sn | Ti | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S | Cts/S |
| Avg | .00380 | .11166 | .00515 | .17786 | .80517 | .10982 | .08003 | 7.8649 |
| Stddev | .00002 | .00038 | .00001 | .00047 | .00055 | .00014 | .00014 | .0075 |
| %RSD | .57000 | .34215 | .21504 | .26619 | .06888 | .12786 | .17034 | .09540 |
| #1 | .00381 | .11192 | .00516 | .17804 | .80453 | .10998 | .08005 | 7.8719 |
| #2 | .00377 | .11123 | .00514 | .17821 | .80552 | .10976 | .07989 | 7.8658 |
| #3 | .00381 | .11185 | .00516 | .17732 | .80545 | .10971 | .08016 | 7.8570 |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 7400.2 | 81823. | 155370. |
| Stddev | 4.3 | 186. | 232. |
| %RSD | .05845 | .22688 | .14907 |
| #1 | 7405.1 | 81660. | 155170. |
| #2 | 7398.5 | 82025. | 155620. |
| #3 | 7397.0 | 81784. | 155320. |

Sample Name: ICV Acquired: 12/17/2020 15:42:25 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009014 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **103.22** | F **1.3424** | **1.0050** | **1.9871** | **1.4613** | **2.4530** | **1.8857** | **78.261** | **2.4237** | .95979 |
| Stddev | .30 | .0005 | .0008 | .0028 | .0017 | .0039 | .0016 | .059 | .0037 | .00101 |
| %RSD | .28591 | .03827 | .07686 | .14218 | .11870 | .15858 | .08392 | .07475 | .15207 | .10536 |
| #1 | 102.89 | 1.3428 | 1.0056 | 1.9847 | 1.4596 | 2.4526 | 1.8839 | 78.303 | 2.4260 | .96079 |
| #2 | 103.47 | 1.3418 | 1.0053 | 1.9902 | 1.4631 | 2.4570 | 1.8862 | 78.194 | 2.4257 | .95877 |
| #3 | 103.30 | 1.3424 | 1.0041 | 1.9863 | 1.4613 | 2.4493 | 1.8870 | 78.286 | 2.4195 | .95980 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | 1.5000 | | | | | | | | |
| Range | | -10.000% | | | | | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **2.4257** | **23.706** | **2.3900** | **.51622** | **58.889** | **2.3229** | **2.4601** | **2.4743** | **61.633** | **1.0011** |
| Stddev | .0070 | .038 | .0022 | .00137 | .122 | .0001 | .0022 | .0027 | .073 | .0017 |
| %RSD | .28727 | .16005 | .09193 | .26597 | .20801 | .00570 | .09138 | .10905 | .11837 | .16657 |
| #1 | 2.4306 | 23.706 | 2.3925 | .51554 | 58.761 | 2.3231 | 2.4596 | 2.4749 | 61.705 | 1.0017 |
| #2 | 2.4287 | 23.743 | 2.3892 | .51780 | 59.005 | 2.3229 | 2.4581 | 2.4713 | 61.559 | .99916 |
| #3 | 2.4177 | 23.668 | 2.3883 | .51532 | 58.902 | 2.3228 | 2.4625 | 2.4765 | 61.635 | 1.0023 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

Sample Name: ICV Acquired: 12/17/2020 15:42:25 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009014 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.47767** | **62.522** | **.48453** | F **2.2339** | **.52157** | **.50744** | **1.4854** | **2.6437** |
| Stddev | .00184 | .029 | .00020 | .0031 | .00225 | .00034 | .0025 | .0017 |
| %RSD | .38560 | .04611 | .04040 | .14055 | .43184 | .06643 | .16959 | .06582 |
| #1 | .47889 | 62.504 | .48475 | 2.2317 | .51933 | .50708 | 1.4862 | 2.6418 |
| #2 | .47857 | 62.556 | .48438 | 2.2375 | .52153 | .50775 | 1.4874 | 2.6442 |
| #3 | .47555 | 62.507 | .48445 | 2.2326 | .52384 | .50749 | 1.4826 | 2.6451 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | 2.5000 | | | | |
| Range | | | | -10.000% | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **6040.8** | **74214.** | **134170.** |
| Stddev | 6.1 | 260. | 198. |
| %RSD | .10106 | .35077 | .14750 |
| #1 | 6037.3 | 74514. | 134200. |
| #2 | 6037.2 | 74075. | 133950. |
| #3 | 6047.8 | 74052. | 134350. |

Sample Name: ICB Acquired: 12/17/2020 15:47:07 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009015 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00394** | **.00235** | **.00163** | **-.00017** | **.00004** | **.00980** | **.00007** | **.01664** | **.00027** | **.00013** | **.00016** |
| Stddev | .00177 | .00096 | .00074 | .00018 | .00006 | .00033 | .00009 | .00170 | .00020 | .00008 | .00012 |
| %RSD | 44.857 | 41.116 | 45.159 | 111.53 | 150.92 | 3.3832 | 126.73 | 10.197 | 71.212 | 63.373 | 75.399 |
| #1 | .00191 | .00130 | .00248 | -.00001 | .00004 | .01015 | -.00001 | .01476 | .00045 | .00004 | .00003 |
| #2 | .00475 | .00255 | .00120 | -.00012 | -.00002 | .00975 | .00005 | .01805 | .00030 | .00013 | .00026 |
| #3 | .00516 | .00319 | .00121 | -.00037 | .00011 | .00949 | .00017 | .01712 | .00007 | .00020 | .00019 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | | |
| Low Limit | | | | | | | | | | | |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00042** | **-.00009** | **-.00178** | **-.00497** | **.00038** | **.00091** | **-.00003** | **.04110** | **.00089** | **.00010** | **-.01876** |
| Stddev | .00512 | .00071 | .00176 | .01168 | .00010 | .00014 | .00016 | .07470 | .00072 | .00008 | .00568 |
| %RSD | 1208.8 | 777.23 | 99.136 | 234.98 | 26.423 | 15.658 | 527.01 | 181.77 | 80.847 | 72.776 | 30.255 |
| #1 | -.00564 | -.00005 | -.00358 | -.01558 | .00027 | .00107 | .00006 | .12720 | .00116 | .00008 | -.02042 |
| #2 | .00460 | -.00082 | -.00006 | .00754 | .00047 | .00086 | -.00021 | -.00647 | .00007 | .00019 | -.02342 |
| #3 | -.00023 | .00060 | -.00169 | -.00687 | .00040 | .00079 | .00006 | .00257 | .00143 | .00005 | -.01244 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | | |
| Low Limit | | | | | | | | | | | |

Sample Name: ICB Acquired: 12/17/2020 15:47:07 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009015 Type: Anaylst: NTan
Comment:

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00016** | **.00218** | **-.00050** | **.00042** | **.00001** | **.00075** |
| Stddev | .00006 | .00037 | .00031 | .00050 | .00005 | .00005 |
| %RSD | 39.757 | 17.078 | 60.994 | 120.04 | 847.39 | 6.9280 |
| #1 | -.00011 | .00200 | -.00070 | .00094 | -.00004 | .00070 |
| #2 | -.00013 | .00261 | -.00065 | .00036 | .00005 | .00080 |
| #3 | -.00023 | .00194 | -.00015 | -.00005 | .00001 | .00076 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **7140.9** | **75726.** | **146910.** |
| Stddev | 17.8 | 135. | 317. |
| %RSD | .24961 | .17819 | .21562 |
| #1 | 7132.1 | 75675. | 146730. |
| #2 | 7129.2 | 75624. | 147280. |
| #3 | 7161.4 | 75879. | 146730. |

Sample Name: ICSA1 Acquired: 12/17/2020 16:10:51 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009020 Type: Anaylst: NTan
Comment:

TH 12/22/20

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 399.37 | .01942 | F .00488 | .00015 | -.00003 | F .07048 | .00050 | 508.45 | -.00049 |
| Stddev | 3.32 | .00142 | .00336 | .00037 | .00014 | .00085 | .00012 | .62 | .00027 |
| %RSD | .83077 | 7.3322 | 68.741 | 249.26 | 407.92 | 1.2066 | 24.203 | .12167 | 55.816 |
| #1 | 400.21 | .01857 | .00542 | .00051 | -.00012 | .07011 | .00053 | 508.87 | -.00076 |
| #2 | 402.19 | .02107 | .00129 | .00018 | -.00010 | .07146 | .00060 | 508.73 | -.00050 |
| #3 | 395.72 | .01864 | .00794 | -.00024 | .00012 | .06988 | .00036 | 507.74 | -.00021 |
| Check ? | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | .00400 | | | .01000 | | | |
| Low Limit | | | -.00400 | | | -.01000 | | | |

| Elem | Co | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | -.00048 | .00079 | 189.81 | .00066 | .00849 | 199.62 | .00046 | -.00023 | -.00139 |
| Stddev | .00051 | .00019 | .37 | .00118 | .00039 | .19 | .00004 | .00030 | .00021 |
| %RSD | 106.29 | 23.529 | .19751 | 178.22 | 4.5798 | .09528 | 7.7136 | 132.43 | 15.077 |
| #1 | -.00009 | .00101 | 189.82 | .00202 | .00804 | 199.40 | .00042 | -.00023 | -.00162 |
| #2 | -.00105 | .00069 | 189.43 | -.00010 | .00876 | 199.74 | .00046 | .00007 | -.00136 |
| #3 | -.00030 | .00067 | 190.18 | .00006 | .00866 | 199.71 | .00050 | -.00054 | -.00121 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | |
| Low Limit | | | | | | | | | |

Sample Name: ICSA1 Acquired: 12/17/2020 16:10:51 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009020 Type: Anaylst: NTan
Comment:

| Elem | K | Se | Ag | Na | Sr | Tl | Sn | Ti | V |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | -.03266 | -.00299 | -.00030 | .01663 | F -.00175 | .00036 | -.00186 | .00211 | -.00144 |
| Stddev | .04534 | .00372 | .00031 | .00303 | .00022 | .00085 | .00080 | .00071 | .00014 |
| %RSD | 138.81 | 124.40 | 103.10 | 18.243 | 12.840 | 234.72 | 43.173 | 33.749 | 9.4565 |
| #1 | -.04199 | -.00542 | .00003 | .01935 | -.00149 | .00108 | -.00228 | .00284 | -.00129 |
| #2 | -.07261 | -.00485 | -.00034 | .01719 | -.00186 | -.00058 | -.00238 | .00142 | -.00155 |
| #3 | .01661 | .00129 | -.00060 | .01336 | -.00189 | .00058 | -.00094 | .00207 | -.00147 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | .00100 | | | | |
| Low Limit | | | | | -.00100 | | | | |

| Elem | Zn |
|---|---|
| Units | mg/L |
| Avg | .00344 |
| Stddev | .00017 |
| %RSD | 4.8718 |
| #1 | .00363 |
| #2 | .00337 |
| #3 | .00332 |
| Check ? | Chk Pass |
| High Limit | |
| Low Limit | |

Sample Name: ICSA1 Acquired: 12/17/2020 16:10:51 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009020 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5281.3** | 71**142.** | **122590.** |
| Stddev | 6.7 | 175. | 166. |
| %RSD | .12755 | .24662 | .13563 |
| | | | |
| #1 | 5274.3 | 71069. | 122770. |
| #2 | 5287.7 | 71016. | 122450. |
| #3 | 5282.0 | 71343. | 122540. |

Sample Name: ICSAB1 Acquired: 12/17/2020 16:15:47 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009021 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **389.45** | **.96453** | **1.0838** | **.51479** | **.49791** | **1.0490** | **.93801** | **508.16** | **.50375** | **.49986** | **.50874** |
| Stddev | .51 | .00401 | .0062 | .00201 | .00101 | .0010 | .00184 | 4.63 | .00064 | .00086 | .00113 |
| %RSD | .13136 | .41523 | .56730 | .38985 | .20371 | .09741 | .19574 | .91169 | .12746 | .17241 | .22285 |
| #1 | 389.56 | .96690 | 1.0802 | .51694 | .49901 | 1.0480 | .93913 | 513.07 | .50302 | .50005 | .50943 |
| #2 | 388.89 | .96679 | 1.0909 | .51297 | .49769 | 1.0501 | .93900 | 507.56 | .50398 | .50062 | .50935 |
| #3 | 389.89 | .95991 | 1.0803 | .51447 | .49702 | 1.0490 | .93589 | 503.86 | .50424 | .49892 | .50743 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | | |
| Range | | | | | | | | | | | |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **186.98** | **.97660** | **1.1246** | **198.00** | **.46779** | **1.0503** | **1.0293** | **83.865** | **1.0381** | **1.0450** | **83.733** |
| Stddev | .28 | .00134 | .0036 | .41 | .00119 | .0019 | .0021 | .188 | .0033 | .0044 | .245 |
| %RSD | .14970 | .13683 | .32183 | .20841 | .25375 | .18482 | .20079 | .22362 | .32000 | .41980 | .29303 |
| #1 | 186.78 | .97742 | 1.1271 | 198.44 | .46879 | 1.0525 | 1.0317 | 84.042 | 1.0357 | 1.0453 | 84.000 |
| #2 | 187.30 | .97506 | 1.1204 | 197.62 | .46648 | 1.0486 | 1.0283 | 83.669 | 1.0419 | 1.0492 | 83.518 |
| #3 | 186.87 | .97733 | 1.1262 | 197.95 | .46811 | 1.0499 | 1.0280 | 83.882 | 1.0367 | 1.0404 | 83.680 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | | |
| Range | | | | | | | | | | | |

Sample Name: ICSAB1 Acquired: 12/17/2020 16:15:47 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009021 Type: Anaylst: NTan
Comment:

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.50491** | **.84060** | **1.0844** | **1.0557** | **.50982** | **1.1119** |
| Stddev | .00028 | .00284 | .0016 | .0021 | .00020 | .0014 |
| %RSD | .05470 | .33791 | .14940 | .20178 | .03957 | .12286 |
| #1 | .50520 | .84332 | 1.0844 | 1.0558 | .50964 | 1.1117 |
| #2 | .50490 | .84085 | 1.0860 | 1.0535 | .51004 | 1.1134 |
| #3 | .50465 | .83765 | 1.0827 | 1.0577 | .50978 | 1.1107 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | |
| Range | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5327.9** | **71976.** | **124150.** |
| Stddev | 4.9 | 30. | 140. |
| %RSD | .09227 | .04119 | .11252 |
| #1 | 5323.7 | 71945. | 124190. |
| #2 | 5326.7 | 72004. | 123990. |
| #3 | 5333.3 | 71978. | 124260. |

Sample Name: CCV1 Acquired: 12/17/2020 16:20:36 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009022 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 102.92 | F 1.3446 | 1.0092 | 2.0114 | 1.4781 | 2.4626 | 1.9000 | 78.494 | 2.4377 | .96091 |
| Stddev | 1.36 | .0069 | .0062 | .0050 | .0032 | .0029 | .0089 | .102 | .0018 | .00130 |
| %RSD | 1.3221 | .51480 | .61789 | .25024 | .21311 | .11770 | .46742 | .13010 | .07307 | .13483 |
| #1 | 101.76 | 1.3368 | 1.0067 | 2.0167 | 1.4818 | 2.4627 | 1.8920 | 78.381 | 2.4379 | .96240 |
| #2 | 104.42 | 1.3498 | 1.0164 | 2.0109 | 1.4763 | 2.4655 | 1.9096 | 78.519 | 2.4394 | .96026 |
| #3 | 102.57 | 1.3473 | 1.0047 | 2.0066 | 1.4764 | 2.4597 | 1.8986 | 78.581 | 2.4358 | .96006 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | 1.5000 | | | | | | | | |
| Range | | -10.000% | | | | | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 2.4221 | 23.982 | 2.3905 | .51919 | 59.244 | 2.3346 | 2.4478 | 2.4681 | 61.399 | 1.0128 |
| Stddev | .0042 | .035 | .0067 | .00266 | .136 | .0052 | .0022 | .0009 | .007 | .0068 |
| %RSD | .17342 | .14524 | .28054 | .51233 | .22914 | .22243 | .08767 | .03488 | .01167 | .67298 |
| #1 | 2.4233 | 23.992 | 2.3978 | .51866 | 59.187 | 2.3351 | 2.4454 | 2.4677 | 61.406 | 1.0058 |
| #2 | 2.4256 | 24.011 | 2.3893 | .52207 | 59.146 | 2.3292 | 2.4489 | 2.4674 | 61.392 | 1.0194 |
| #3 | 2.4175 | 23.943 | 2.3845 | .51683 | 59.399 | 2.3395 | 2.4492 | 2.4690 | 61.398 | 1.0132 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

Sample Name: CCV1 Acquired: 12/17/2020 16:20:36 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009022 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .47931 | 62.599 | .48552 | F 2.2437 | .52171 | .51339 | 1.4954 | 2.6562 |
| Stddev | .00097 | .056 | .00023 | .0093 | .00133 | .00092 | .0021 | .0031 |
| %RSD | .20194 | .09002 | .04715 | .41414 | .25505 | .18005 | .13918 | .11635 |
| #1 | .47944 | 62.612 | .48538 | 2.2339 | .52264 | .51296 | 1.4947 | 2.6595 |
| #2 | .48021 | 62.647 | .48578 | 2.2524 | .52231 | .51275 | 1.4978 | 2.6559 |
| #3 | .47828 | 62.537 | .48539 | 2.2449 | .52019 | .51445 | 1.4938 | 2.6533 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | 2.5000 | | | | |
| Range | | | | -10.000% | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 6145.1 | 74473. | 135660. |
| Stddev | 14.0 | 592. | 560. |
| %RSD | .22764 | .79487 | .41292 |
| #1 | 6130.2 | 75043. | 135910. |
| #2 | 6147.2 | 74514. | 135020. |
| #3 | 6157.9 | 73861. | 136050. |

Sample Name: CCB1 Acquired: 12/17/2020 16:25:17 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009023 Type: Anaylst: NTan
Comment:

< MDL
HI 12/22/20

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .01264 | .00172 | .00107 | .00005 | .00006 | F .01008 | .00006 | .01909 | .00025 | .00004 |
| Stddev | .00122 | .00098 | .00078 | .00023 | .00001 | .00057 | .00006 | .00115 | .00011 | .00021 |
| %RSD | 9.6356 | 56.791 | 72.324 | 440.72 | 15.140 | 5.6483 | 106.46 | 6.0372 | 44.134 | 461.06 |
| #1 | .01123 | .00268 | .00090 | -.00011 | .00007 | .01073 | -.00001 | .01838 | .00012 | .00026 |
| #2 | .01335 | .00175 | .00040 | -.00004 | .00005 | .00985 | .00006 | .01847 | .00031 | .00002 |
| #3 | .01334 | .00073 | .00192 | .00031 | .00007 | .00966 | .00011 | .02042 | .00031 | -.00015 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | .01000 | | | | |
| Low Limit | | | | | | -.01000 | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00024 | -.00226 | .00035 | -.00113 | .00739 | .00016 | .00077 | .00006 | .03009 | .00179 |
| Stddev | .00012 | .00310 | .00008 | .00047 | .01816 | .00015 | .00014 | .00027 | .01508 | .00117 |
| %RSD | 47.947 | 137.08 | 23.627 | 41.904 | 245.63 | 93.023 | 18.772 | 453.01 | 50.133 | 65.245 |
| #1 | .00021 | -.00466 | .00028 | -.00127 | .01495 | .00025 | .00093 | .00023 | .04130 | .00303 |
| #2 | .00037 | -.00338 | .00045 | -.00152 | -.01333 | -.00001 | .00065 | .00020 | .03603 | .00165 |
| #3 | .00015 | .00124 | .00034 | -.00060 | .02056 | .00026 | .00072 | -.00025 | .01294 | .00070 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | |
| Low Limit | | | | | | | | | | |

Sample Name: CCB1 Acquired: 12/17/2020 16:25:17 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009023 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00022 | .01669 | -.00002 | .00191 | .00025 | -.00044 | -.00006 | .00302 |
| Stddev | .00014 | .01050 | .00016 | .00026 | .00055 | .00044 | .00015 | .00005 |
| %RSD | 62.170 | 62.938 | 949.71 | 13.442 | 215.67 | 99.948 | 241.28 | 1.6468 |
| #1 | .00013 | .02552 | .00014 | .00219 | .00081 | -.00027 | .00000 | .00297 |
| #2 | .00015 | .01947 | -.00002 | .00183 | -.00029 | -.00011 | .00004 | .00304 |
| #3 | .00037 | .00507 | -.00017 | .00170 | .00024 | -.00094 | -.00024 | .00306 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | |
| Low Limit | | | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 7191.3 | 75437. | 146820. |
| Stddev | 7.0 | 693. | 663. |
| %RSD | .09722 | .91827 | .45128 |
| #1 | 7185.6 | 76039. | 146130. |
| #2 | 7189.3 | 75592. | 146880. |
| #3 | 7199.1 | 74680. | 147450. |

Sample Name: IPL013WB Acquired: 12/17/2020 16:30:03 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009024 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00375 | .00094 | .00164 | -.00049 | -.00011 | .00518 | -.00009 | -.00538 | -.00007 | -.00014 | .00039 |
| Stddev | .00086 | .00054 | .00076 | .00013 | .00009 | .00024 | .00002 | .00275 | .00005 | .00031 | .00004 |
| %RSD | 22.986 | 58.023 | 46.444 | 26.386 | 85.784 | 4.6301 | 25.216 | 51.149 | 71.643 | 214.79 | 10.455 |
| #1 | .00291 | .00106 | .00193 | -.00063 | -.00019 | .00512 | -.00009 | -.00222 | -.00009 | .00020 | .00036 |
| #2 | .00371 | .00034 | .00078 | -.00044 | -.00011 | .00497 | -.00006 | -.00727 | -.00012 | -.00038 | .00038 |
| #3 | .00464 | .00141 | .00222 | -.00039 | -.00001 | .00544 | -.00010 | -.00665 | -.00001 | -.00025 | .00044 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | | |
| Low Limit | | | | | | | | | | | |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | -.00703 | -.00075 | -.00255 | -.01558 | .00024 | .00013 | -.00019 | .00376 | .00083 | -.00018 | -.02909 |
| Stddev | .00455 | .00048 | .00139 | .02337 | .00017 | .00008 | .00025 | .01982 | .00232 | .00017 | .00490 |
| %RSD | 64.719 | 63.592 | 54.517 | 150.01 | 70.780 | 61.787 | 130.26 | 527.78 | 280.52 | 92.558 | 16.863 |
| #1 | -.00293 | -.00129 | -.00247 | -.03680 | .00004 | .00014 | -.00030 | -.01229 | .00346 | -.00038 | -.02349 |
| #2 | -.00624 | -.00058 | -.00121 | -.01941 | .00033 | .00004 | -.00037 | .02591 | -.00005 | -.00007 | -.03116 |
| #3 | -.01192 | -.00038 | -.00399 | .00947 | .00034 | .00021 | .00009 | -.00235 | -.00093 | -.00010 | -.03262 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | | |
| Low Limit | | | | | | | | | | | |

Sample Name: IPL013WB Acquired: 12/17/2020 16:30:03 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009024 Type: Anaylst: NTan
Comment:

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | -.00016 | .00048 | -.00060 | -.00014 | -.00036 | -.00001 |
| Stddev | .00011 | .00022 | .00058 | .00066 | .00021 | .00004 |
| %RSD | 66.784 | 45.062 | 95.696 | 485.40 | 56.747 | 492.72 |
| #1 | -.00028 | .00072 | -.00040 | -.00056 | -.00015 | .00004 |
| #2 | -.00011 | .00030 | -.00015 | .00063 | -.00039 | -.00003 |
| #3 | -.00009 | .00042 | -.00125 | -.00048 | -.00056 | -.00003 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | |
| Low Limit | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 7136.3 | 76026. | 145870. |
| Stddev | 12.5 | 235. | 255. |
| %RSD | .17463 | .30887 | .17504 |
| #1 | 7149.0 | 75755. | 145580. |
| #2 | 7135.6 | 76171. | 145980. |
| #3 | 7124.1 | 76152. | 146050. |

Sample Name: IPL013WL Acquired: 12/17/2020 16:34:50 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009025 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **5.4137** | **2.5390** | **.52058** | **.50069** | **.49349** | **.51121** | **.48723** | **52.918** | **.49892** |
| Stddev | .0083 | .0042 | .00250 | .00259 | .00210 | .00025 | .00034 | .033 | .00063 |
| %RSD | .15357 | .16598 | .48108 | .51715 | .42524 | .04857 | .06975 | .06245 | .12635 |
| #1 | 5.4143 | 2.5386 | .51772 | .50326 | .49546 | .51150 | .48694 | 52.938 | .49964 |
| #2 | 5.4218 | 2.5350 | .52166 | .50075 | .49372 | .51102 | .48715 | 52.880 | .49845 |
| #3 | 5.4052 | 2.5434 | .52237 | .49808 | .49128 | .51112 | .48761 | 52.937 | .49869 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Co | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.49041** | **.49362** | **5.0236** | **.48557** | F -.00248 | **50.274** | **.46860** | **.49829** | **.50652** |
| Stddev | .00096 | .00060 | .0315 | .00226 | .00172 | .080 | .00167 | .00049 | .00060 |
| %RSD | .19607 | .12247 | .62662 | .46603 | 69.292 | .15855 | .35612 | .09765 | .11844 |
| #1 | .49023 | .49428 | 5.0398 | .48543 | -.00200 | 50.362 | .47052 | .49812 | .50700 |
| #2 | .48955 | .49347 | 4.9873 | .48338 | -.00438 | 50.206 | .46744 | .49791 | .50671 |
| #3 | .49145 | .49310 | 5.0436 | .48790 | -.00105 | 50.254 | .46785 | .49884 | .50585 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | .50000 | | | | |
| Range | | | | | -20.000% | | | | |

Sample Name: IPL013WL Acquired: 12/17/2020 16:34:50 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009025 Type: Anaylst: NTan
Comment:

| Elem | K | Se | Ag | Na | Sr | Tl | Sn | Ti | V |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **51.571** | **.51764** | **.49589** | **52.809** | **.49268** | **.46606** | **.53604** | **.52585** | **.51098** |
| Stddev | .156 | .00531 | .00167 | .145 | .00083 | .00074 | .00244 | .00230 | .00134 |
| %RSD | .30320 | 1.0250 | .33633 | .27423 | .16827 | .15916 | .45530 | .43756 | .26214 |
| #1 | 51.747 | .52301 | .49773 | 52.924 | .49360 | .46628 | .53592 | .52816 | .51252 |
| #2 | 51.448 | .51240 | .49447 | 52.856 | .49199 | .46523 | .53366 | .52584 | .51034 |
| #3 | 51.518 | .51750 | .49547 | 52.646 | .49245 | .46667 | .53854 | .52356 | .51008 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Zn |
|---|---|
| Units | mg/L |
| Avg | **.53685** |
| Stddev | .00061 |
| %RSD | .11395 |
| #1 | .53671 |
| #2 | .53632 |
| #3 | .53751 |
| Check ? | Chk Pass |
| Value | |
| Range | |

Sample Name: IPL013WL Acquired: 12/17/2020 16:34:50 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009025 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **6253.6** | **74784.** | **136220.** |
| Stddev | 4.9 | 338. | 249. |
| %RSD | .07857 | .45153 | .18257 |
| | | | |
| #1 | 6248.0 | 74741. | 136120. |
| #2 | 6255.3 | 74470. | 136030. |
| #3 | 6257.3 | 75141. | 136500. |

Sample Name: IPL013WC Acquired: 12/17/2020 16:39:25 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009026 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 5.4237 | 2.5635 | .52223 | .50175 | .49316 | .51455 | .49037 | 52.911 | .50096 |
| Stddev | .0046 | .0072 | .00288 | .00111 | .00074 | .00184 | .00148 | .026 | .00147 |
| %RSD | .08551 | .28181 | .55162 | .22174 | .15103 | .35845 | .30218 | .04863 | .29269 |
| #1 | 5.4231 | 2.5718 | .52553 | .50140 | .49318 | .51347 | .49179 | 52.939 | .49992 |
| #2 | 5.4286 | 2.5599 | .52096 | .50085 | .49389 | .51668 | .49048 | 52.888 | .50264 |
| #3 | 5.4194 | 2.5588 | .52021 | .50299 | .49240 | .51349 | .48884 | 52.907 | .50032 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Co | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .49382 | .49742 | 5.0524 | .48902 | F -.00204 | 50.196 | .46756 | .50012 | .50882 |
| Stddev | .00217 | .00168 | .0309 | .00257 | .00206 | .126 | .00026 | .00137 | .00084 |
| %RSD | .43960 | .33810 | .61213 | .52471 | 101.35 | .25117 | .05583 | .27458 | .16510 |
| #1 | .49345 | .49609 | 5.0344 | .48709 | -.00370 | 50.082 | .46726 | .50004 | .50972 |
| #2 | .49615 | .49931 | 5.0881 | .49193 | -.00269 | 50.175 | .46771 | .50153 | .50867 |
| #3 | .49186 | .49686 | 5.0348 | .48804 | .00027 | 50.332 | .46772 | .49879 | .50806 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | .50000 | | | | |
| Range | | | | | -20.000% | | | | |

Sample Name: IPL013WC Acquired: 12/17/2020 16:39:25 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009026 Type: Anaylst: NTan
Comment:

| Elem | K | Se | Ag | Na | Sr | Tl | Sn | Ti | V |
|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 51.652 | .52134 | .50068 | 52.865 | .49298 | .46865 | .53534 | .52717 | .51387 |
| Stddev | .139 | .00157 | .00335 | .056 | .00102 | .00081 | .00153 | .00192 | .00197 |
| %RSD | .26839 | .30088 | .66902 | .10576 | .20646 | .17385 | .28598 | .36466 | .38421 |
| #1 | 51.567 | .52313 | .49822 | 52.895 | .49389 | .46950 | .53704 | .52524 | .51289 |
| #2 | 51.576 | .52061 | .50449 | 52.800 | .49316 | .46859 | .53495 | .52718 | .51614 |
| #3 | 51.812 | .52026 | .49932 | 52.899 | .49188 | .46787 | .53405 | .52909 | .51257 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | |
| Range | | | | | | | | | |

| Elem | Zn |
|---|---|
| Units | mg/L |
| Avg | .53829 |
| Stddev | .00186 |
| %RSD | .34462 |
| #1 | .53701 |
| #2 | .54042 |
| #3 | .53745 |
| Check ? | Chk Pass |
| Value | |
| Range | |

Sample Name: IPL013WC Acquired: 12/17/2020 16:39:25 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009026 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **6222.7** | **75459.** | **135560.** |
| Stddev | 25.7 | 369. | 455. |
| %RSD | .41358 | .48863 | .33537 |
| | | | |
| #1 | 6229.5 | 75792. | 135280. |
| #2 | 6194.3 | 75521. | 135330. |
| #3 | 6244.4 | 75063. | 136090. |

Sample Name: L101-02 Acquired: 12/17/2020 16:43:58 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009027 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .01606 | .00278 | .00741 | .04897 | -.00006 | 1.3247 | -.00023 | 159.08 | .00067 | -.00081 |
| Stddev | .00218 | .00368 | .00429 | .00019 | .00003 | .0007 | .00010 | .06 | .00015 | .00040 |
| %RSD | 13.606 | 132.48 | 57.959 | .39504 | 48.203 | .05269 | 46.143 | .03830 | 22.640 | 49.127 |
| #1 | .01440 | .00378 | .01206 | .04919 | -.00003 | 1.3240 | -.00012 | 159.05 | .00050 | -.00050 |
| #2 | .01524 | .00586 | .00360 | .04889 | -.00009 | 1.3247 | -.00032 | 159.15 | .00076 | -.00067 |
| #3 | .01853 | -.00130 | .00656 | .04883 | -.00006 | 1.3254 | -.00024 | 159.04 | .00076 | -.00126 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00331 | .01803 | -.00075 | .44075 | 79.852 | .70161 | .05033 | .00165 | 17.604 | .00159 |
| Stddev | .00007 | .00797 | .00124 | .00141 | .169 | .00157 | .00030 | .00030 | .106 | .00163 |
| %RSD | 2.2604 | 44.182 | 166.21 | .31887 | .21123 | .22333 | .58641 | 18.377 | .60035 | 102.39 |
| #1 | .00338 | .01592 | -.00108 | .43922 | 79.721 | .70005 | .05065 | .00196 | 17.516 | .00076 |
| #2 | .00332 | .02684 | .00063 | .44106 | 79.793 | .70159 | .05026 | .00165 | 17.575 | .00347 |
| #3 | .00324 | .01133 | -.00179 | .44198 | 80.042 | .70319 | .05007 | .00135 | 17.721 | .00055 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00025 | F 1751.7 | 3.8692 | .00131 | .00086 | .00405 | .00247 | .00577 |
| Stddev | .00013 | 12.4 | .0002 | .00085 | .00056 | .00067 | .00033 | .00014 |
| %RSD | 51.476 | .71011 | .00496 | 64.479 | 65.426 | 16.537 | 13.205 | 2.4170 |
| #1 | .00012 | 1760.9 | 3.8692 | .00172 | .00140 | .00344 | .00230 | .00561 |
| #2 | .00027 | 1737.6 | 3.8689 | .00034 | .00091 | .00477 | .00285 | .00583 |
| #3 | .00037 | 1756.7 | 3.8693 | .00188 | .00028 | .00395 | .00227 | .00586 |

Sample Name: L101-02 Acquired: 12/17/2020 16:43:58 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009027 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 4971.6 | 73009. | 114330. |
| Stddev | 84.9 | 129. | 830. |
| %RSD | 1.7079 | .17722 | .72578 |
| #1 | 5060.0 | 73126. | 115260. |
| #2 | 4964.3 | 73030. | 114070. |
| #3 | 4890.6 | 72870. | 113670. |

Sample Name: L101-04M Acquired: 12/17/2020 16:48:48 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009028 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **5.1647** | **2.7577** | **.60302** | **.54602** | **.49053** | **2.4252** | **.50902** | **196.72** | **.51315** | **.51348** |
| Stddev | .0081 | .0282 | .00374 | .00273 | .00160 | .0006 | .00395 | .25 | .00101 | .00172 |
| %RSD | .15692 | 1.0220 | .62033 | .50060 | .32547 | .02289 | .77509 | .12774 | .19711 | .33502 |
| #1 | 5.1587 | 2.7548 | .60228 | .54877 | .49236 | 2.4246 | .50805 | 196.44 | .51375 | .51527 |
| #2 | 5.1739 | 2.7310 | .59971 | .54597 | .48979 | 2.4257 | .50564 | 196.92 | .51198 | .51333 |
| #3 | 5.1614 | 2.7872 | .60708 | .54331 | .48943 | 2.4252 | .51336 | 196.80 | .51373 | .51183 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.51273** | **5.1373** | **.49108** | **.87355** | **64.963** | **.53613** | **.58230** | **.52962** | **90.038** | **.58240** |
| Stddev | .00032 | .0193 | .00131 | .00163 | .036 | .00044 | .00035 | .00071 | .048 | .00876 |
| %RSD | .06222 | .37487 | .26639 | .18684 | .05598 | .08141 | .06042 | .13352 | .05316 | 1.5048 |
| #1 | .51237 | 5.1441 | .49234 | .87542 | 64.929 | .53650 | .58191 | .53039 | 89.983 | .58444 |
| #2 | .51284 | 5.1522 | .49116 | .87282 | 65.002 | .53624 | .58259 | .52900 | 90.059 | .57279 |
| #3 | .51297 | 5.1156 | .48973 | .87240 | 64.959 | .53565 | .58241 | .52947 | 90.071 | .58995 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.56943** | **F 2455.9** | **3.5268** | **.41295** | **.55404** | **.52568** | **.53482** | **.61292** |
| Stddev | .00140 | 48.3 | .0032 | .00258 | .00394 | .00159 | .00129 | .00130 |
| %RSD | .24665 | 1.9658 | .09148 | .62358 | .71147 | .30276 | .24128 | .21287 |
| #1 | .56886 | 2486.0 | 3.5297 | .41427 | .55742 | .52751 | .53629 | .61416 |
| #2 | .57103 | 2481.5 | 3.5233 | .40999 | .55499 | .52463 | .53387 | .61303 |
| #3 | .56840 | 2400.2 | 3.5275 | .41461 | .54971 | .52491 | .53429 | .61156 |

Sample Name: L101-04M Acquired: 12/17/2020 16:48:48 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009028 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **4758.8** | **67123.** | **107180.** |
| Stddev | 24.0 | 1011. | 454. |
| %RSD | .50405 | 1.5062 | .42362 |
| #1 | 4763.6 | 67708. | 107550. |
| #2 | 4732.8 | 65956. | 107310. |
| #3 | 4780.0 | 67706. | 106670. |

Sample Name: L101-04S Acquired: 12/17/2020 16:53:30 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009029 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **5.0453** | **2.7407** | **.59692** | **.54541** | **.48811** | **2.4097** | **.51151** | **198.02** | **.51387** | **.50903** |
| Stddev | .0104 | .0540 | .00979 | .00029 | .00019 | .0010 | .00913 | .21 | .00088 | .00101 |
| %RSD | .20713 | 1.9715 | 1.6405 | .05268 | .03883 | .04122 | 1.7846 | .10831 | .17098 | .19801 |
| #1 | 5.0334 | 2.8030 | .60756 | .54528 | .48812 | 2.4086 | .52198 | 198.19 | .51485 | .51015 |
| #2 | 5.0531 | 2.7115 | .58829 | .54574 | .48792 | 2.4100 | .50738 | 197.78 | .51315 | .50878 |
| #3 | 5.0493 | 2.7075 | .59490 | .54522 | .48830 | 2.4106 | .50518 | 198.09 | .51361 | .50818 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.50165** | **5.1598** | **.48870** | **.87066** | **65.537** | **.53683** | **.58118** | **.52699** | **90.508** | **.57661** |
| Stddev | .00120 | .0239 | .00122 | .00322 | .074 | .00203 | .00167 | .00114 | .145 | .01307 |
| %RSD | .24018 | .46355 | .24891 | .37020 | .11345 | .37853 | .28777 | .21724 | .16012 | 2.2660 |
| #1 | .50025 | 5.1851 | .49010 | .87114 | 65.473 | .53638 | .58306 | .52826 | 90.593 | .59158 |
| #2 | .50233 | 5.1375 | .48808 | .87362 | 65.518 | .53506 | .57985 | .52603 | 90.341 | .57075 |
| #3 | .50236 | 5.1568 | .48791 | .86722 | 65.618 | .53905 | .58063 | .52668 | 90.590 | .56750 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.56027** | **F 2469.9** | **3.5290** | **.41657** | **.55444** | **.52922** | **.53514** | **.61402** |
| Stddev | .00045 | 27.6 | .0073 | .00816 | .00118 | .00281 | .00066 | .00150 |
| %RSD | .08082 | 1.1157 | .20727 | 1.9580 | .21308 | .53029 | .12268 | .24486 |
| #1 | .55979 | 2501.1 | 3.5361 | .42563 | .55318 | .52633 | .53542 | .61479 |
| #2 | .56070 | 2459.6 | 3.5215 | .41426 | .55552 | .52939 | .53439 | .61498 |
| #3 | .56032 | 2448.9 | 3.5293 | .40981 | .55463 | .53193 | .53561 | .61229 |

Sample Name: L101-04S Acquired: 12/17/2020 16:53:30 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009029 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **4660.0** | **63984.** | **103900.** |
| Stddev | 33.1 | 533. | 1121. |
| %RSD | .70964 | .83313 | 1.0785 |
| #1 | 4697.0 | 64599. | 102690. |
| #2 | 4633.5 | 63641. | 104100. |
| #3 | 4649.4 | 63713. | 104910. |

Sample Name: L101-04 Acquired: 12/17/2020 17:03:02 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009031 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.01534** | **.00433** | **.00460** | **.04280** | **-.00011** | **1.8642** | **-.00034** | **144.43** | **.00073** | **-.00078** |
| Stddev | .00059 | .00234 | .00240 | .00053 | .00004 | .0027 | .00003 | .07 | .00015 | .00015 |
| %RSD | 3.8528 | 54.085 | 52.046 | 1.2472 | 40.284 | .14411 | 7.8810 | .04613 | 20.921 | 18.916 |
| #1 | .01467 | .00224 | .00426 | .04220 | -.00007 | 1.8615 | -.00035 | 144.41 | .00060 | -.00066 |
| #2 | .01552 | .00686 | .00240 | .04320 | -.00009 | 1.8642 | -.00037 | 144.51 | .00069 | -.00074 |
| #3 | .01581 | .00387 | .00715 | .04302 | -.00016 | 1.8669 | -.00032 | 144.38 | .00090 | -.00094 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00048** | **.01815** | **-.00078** | **.84738** | **15.544** | **.06956** | **.05638** | **.00098** | **29.946** | **.00337** |
| Stddev | .00002 | .00069 | .00085 | .00328 | .044 | .00048 | .00008 | .00033 | .053 | .00087 |
| %RSD | 4.9392 | 3.7923 | 108.37 | .38729 | .28418 | .68531 | .14482 | 33.920 | .17853 | 25.854 |
| #1 | .00048 | .01873 | -.00168 | .84360 | 15.499 | .06908 | .05648 | .00136 | 29.890 | .00280 |
| #2 | .00046 | .01833 | .00000 | .84945 | 15.546 | .07004 | .05632 | .00073 | 29.951 | .00437 |
| #3 | .00050 | .01739 | -.00067 | .84909 | 15.587 | .06957 | .05635 | .00084 | 29.997 | .00293 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00000** | **F 2336.7** | **2.9874** | **.00116** | **.00091** | **.00381** | **.00061** | **.00116** |
| Stddev | .0001 | 24.4 | .0024 | .00126 | .00025 | .00084 | .00003 | .00020 |
| %RSD | 11031. | 1.0452 | .08015 | 109.36 | 27.630 | 22.086 | 5.6153 | 17.381 |
| #1 | -.00007 | 2363.1 | 2.9863 | .00140 | .00075 | .00343 | .00060 | .00138 |
| #2 | .00010 | 2331.9 | 2.9902 | .00228 | .00120 | .00477 | .00065 | .00101 |
| #3 | -.00003 | 2315.0 | 2.9858 | -.00021 | .00078 | .00323 | .00059 | .00108 |

Sample Name: L101-04 Acquired: 12/17/2020 17:03:02 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009031 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **4757.0** | **63309.** | **103030.** |
| Stddev | 15.8 | 308. | 444. |
| %RSD | .33235 | .48579 | .43113 |
| #1 | 4760.0 | 62967. | 102700. |
| #2 | 4771.2 | 63564. | 103540. |
| #3 | 4739.9 | 63396. | 102870. |

Sample Name: L101-04J Acquired: 12/17/2020 17:07:53 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009032 Type: Anaylst: NTan
Comment: 5X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .01294 | .00160 | .00095 | .00854 | -.00011 | .38215 | -.00024 | 29.640 | .00083 | -.00085 | .00006 |
| Stddev | .00108 | .00108 | .00118 | .00032 | .00002 | .00042 | .00015 | .017 | .00014 | .00010 | .00004 |
| %RSD | 8.3132 | 67.331 | 123.80 | 3.7032 | 22.752 | .10928 | 62.933 | .05703 | 16.560 | 11.338 | 81.609 |
| #1 | .01405 | .00202 | .00225 | .00874 | -.00010 | .38252 | -.00027 | 29.624 | .00088 | -.00080 | .00009 |
| #2 | .01190 | .00240 | -.00005 | .00871 | -.00014 | .38222 | -.00038 | 29.658 | .00068 | -.00079 | .00007 |
| #3 | .01287 | .00038 | .00065 | .00818 | -.00009 | .38170 | -.00008 | 29.637 | .00094 | -.00096 | .00000 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00500 | -.00235 | .16191 | 3.2531 | .01409 | .01127 | .00021 | 5.6807 | .00134 | -.00075 | 521.26 |
| Stddev | .00146 | .00095 | .00157 | .0117 | .00042 | .00007 | .00008 | .0389 | .00192 | .00048 | 5.41 |
| %RSD | 29.210 | 40.532 | .97110 | .35805 | 2.9635 | .58659 | 38.156 | .68417 | 142.63 | 63.731 | 1.0387 |
| #1 | .00568 | -.00287 | .16346 | 3.2434 | .01403 | .01119 | .00012 | 5.7210 | -.00069 | -.00032 | 515.29 |
| #2 | .00333 | -.00292 | .16194 | 3.2500 | .01370 | .01130 | .00025 | 5.6435 | .00161 | -.00068 | 525.85 |
| #3 | .00600 | -.00125 | .16032 | 3.2660 | .01453 | .01130 | .00025 | 5.6776 | .00311 | -.00127 | 522.63 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .60454 | .00098 | .00008 | .00073 | -.00070 | .00345 |
| Stddev | .00136 | .00130 | .00072 | .00078 | .00021 | .00029 |
| %RSD | .22535 | 132.22 | 889.55 | 106.50 | 30.043 | 8.4825 |
| #1 | .60527 | .00070 | .00030 | .00048 | -.00048 | .00327 |
| #2 | .60538 | .00240 | -.00073 | .00011 | -.00090 | .00379 |
| #3 | .60297 | -.00015 | .00067 | .00161 | -.00073 | .00329 |

Sample Name: L101-04J Acquired: 12/17/2020 17:07:53 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009032 Type: Anaylst: NTan
Comment: 5X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 5186.5 | 62060. | 111650. |
| Stddev | 27.5 | 131. | 179. |
| %RSD | .53088 | .21101 | .16043 |
| #1 | 5177.7 | 62179. | 111840. |
| #2 | 5164.3 | 61920. | 111590. |
| #3 | 5217.3 | 62082. | 111500. |

Sample Name: CCV2 Acquired: 12/17/2020 17:12:45 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009033 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **103.82** | **1.3576** | **1.0061** | **1.9634** | **1.4444** | **2.4839** | **1.9882** | **78.978** | **2.5045** | **.98381** |
| Stddev | .23 | .0084 | .0102 | .0098 | .0047 | .0055 | .0100 | .021 | .0042 | .00150 |
| %RSD | .21973 | .61834 | 1.0148 | .49926 | .32780 | .21970 | .50436 | .02612 | .16696 | .15224 |
| #1 | 103.61 | 1.3645 | 1.0179 | 1.9670 | 1.4441 | 2.4817 | 1.9975 | 78.999 | 2.5068 | .98209 |
| #2 | 104.07 | 1.3601 | 1.0014 | 1.9524 | 1.4398 | 2.4901 | 1.9896 | 78.958 | 2.5070 | .98482 |
| #3 | 103.79 | 1.3483 | .99914 | 1.9710 | 1.4493 | 2.4799 | 1.9776 | 78.978 | 2.4996 | .98452 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **2.4112** | **24.751** | **2.4686** | **.51892** | **59.879** | **2.3229** | **2.4520** | **2.5024** | **61.754** | **1.0176** |
| Stddev | .0078 | .090 | .0055 | .00223 | .108 | .0038 | .0038 | .0043 | .022 | .0065 |
| %RSD | .32243 | .36179 | .22078 | .43059 | .17974 | .16165 | .15343 | .17114 | .03625 | .63626 |
| #1 | 2.4074 | 24.756 | 2.4623 | .51701 | 59.808 | 2.3259 | 2.4478 | 2.4975 | 61.779 | 1.0227 |
| #2 | 2.4202 | 24.837 | 2.4721 | .51837 | 59.827 | 2.3187 | 2.4533 | 2.5044 | 61.741 | 1.0199 |
| #3 | 2.4061 | 24.658 | 2.4715 | .52138 | 60.003 | 2.3242 | 2.4550 | 2.5053 | 61.740 | 1.0103 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

Sample Name: CCV2 Acquired: 12/17/2020 17:12:45 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009033 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.48920** | **62.763** | **.48070** | **2.3204** | **.53008** | **.50577** | **1.5184** | F **2.7554** |
| Stddev | .00220 | .198 | .00062 | .0132 | .00319 | .00279 | .0036 | .0051 |
| %RSD | .44915 | .31598 | .12963 | .56757 | .60160 | .55213 | .23703 | .18546 |
| #1 | .48857 | 62.894 | .48132 | 2.3341 | .52659 | .50469 | 1.5209 | 2.7498 |
| #2 | .49164 | 62.535 | .48007 | 2.3193 | .53078 | .50369 | 1.5202 | 2.7564 |
| #3 | .48739 | 62.860 | .48072 | 2.3079 | .53285 | .50895 | 1.5143 | 2.7599 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail |
| Value | | | | | | | | 2.5000 |
| Range | | | | | | | | 10.000% |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5433.4** | **63029.** | **117570.** |
| Stddev | 19.4 | 221. | 425. |
| %RSD | .35770 | .34984 | .36161 |
| #1 | 5455.7 | 63278. | 117240. |
| #2 | 5424.2 | 62954. | 117430. |
| #3 | 5420.3 | 62856. | 118050. |

Sample Name: CCB2 Acquired: 12/17/2020 17:17:18 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009034 Type: Anaylst: NTan
Comment:

<MDL TH 12/22/20

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00646** | **.00291** | **.00088** | **.00013** | **-.00001** | F **.01703** | **.00002** | **-.01565** | **.00042** | **-.00055** |
| Stddev | .00156 | .00174 | .00129 | .00003 | .00007 | .00056 | .00003 | .00324 | .00017 | .00032 |
| %RSD | 24.078 | 59.726 | 147.26 | 25.307 | 558.16 | 3.3107 | 164.43 | 20.678 | 40.732 | 58.784 |
| #1 | .00823 | .00489 | .00204 | .00011 | -.00008 | .01766 | -.00001 | -.01482 | .00043 | -.00035 |
| #2 | .00585 | .00221 | -.00051 | .00012 | -.00003 | .01682 | .00004 | -.01923 | .00025 | -.00038 |
| #3 | .00530 | .00163 | .00110 | .00017 | .00007 | .01659 | .00002 | -.01291 | .00059 | -.00092 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | .01000 | | | | |
| Low Limit | | | | | | -.01000 | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00016** | **-.00399** | **.00057** | **.00099** | **-.01293** | **-.00020** | **.00063** | **.00005** | **.07658** | **.00121** |
| Stddev | .00005 | .00295 | .00131 | .00075 | .00755 | .00056 | .00012 | .00021 | .03942 | .00089 |
| %RSD | 31.234 | 73.891 | 230.79 | 75.714 | 58.360 | 285.08 | 19.575 | 406.09 | 51.466 | 73.446 |
| #1 | .00020 | -.00497 | .00163 | .00183 | -.00788 | -.00046 | .00068 | -.00019 | .06531 | .00181 |
| #2 | .00019 | -.00068 | -.00089 | .00077 | -.02160 | -.00057 | .00049 | .00017 | .12041 | .00019 |
| #3 | .00011 | -.00633 | .00096 | .00038 | -.00930 | .00045 | .00073 | .00018 | .04403 | .00163 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | |
| Low Limit | | | | | | | | | | |

Sample Name: CCB2 Acquired: 12/17/2020 17:17:18 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009034 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00066** | F **.71877** | **-.00074** | **.00193** | **.00021** | **-.00019** | **-.00044** | **.00267** |
| Stddev | .00035 | .02220 | .00012 | .00034 | .00041 | .00011 | .00006 | .00003 |
| %RSD | 52.649 | 3.0888 | 16.102 | 17.407 | 197.00 | 58.627 | 14.704 | 1.1932 |
| #1 | -.00034 | .73682 | -.00086 | .00160 | .00068 | -.00030 | -.00051 | .00265 |
| #2 | -.00103 | .72550 | -.00073 | .00191 | -.00004 | -.00021 | -.00042 | .00264 |
| #3 | -.00060 | .69398 | -.00062 | .00228 | -.00002 | -.00007 | -.00039 | .00270 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .10000 | | | | | | |
| Low Limit | | -.10000 | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **6040.4** | **61357.** | **122340.** |
| Stddev | 10.6 | 84. | 361. |
| %RSD | .17629 | .13759 | .29545 |
| #1 | 6029.7 | 61454. | 122480. |
| #2 | 6040.6 | 61296. | 121930. |
| #3 | 6051.0 | 61321. | 122610. |

Sample Name: L101-06 Acquired: 12/17/2020 17:22:04 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009035 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00930** | **.00299** | **.00390** | **.04049** | **-.00009** | **2.9265** | **-.00031** | **126.88** | **.00128** | **-.00067** |
| Stddev | .00165 | .00140 | .00345 | .00030 | .00010 | .0046 | .00002 | .19 | .00006 | .00038 |
| %RSD | 17.721 | 46.891 | 88.604 | .74505 | 123.16 | .15898 | 7.0484 | .15007 | 4.8402 | 57.510 |
| #1 | .01105 | .00301 | .00063 | .04064 | -.00020 | 2.9265 | -.00028 | 126.82 | .00132 | -.00055 |
| #2 | .00909 | .00439 | .00355 | .04069 | -.00007 | 2.9218 | -.00031 | 127.10 | .00121 | -.00110 |
| #3 | .00777 | .00158 | .00751 | .04014 | .00001 | 2.9311 | -.00032 | 126.74 | .00131 | -.00036 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00043** | **.10856** | **-.00108** | **1.1704** | **4.6278** | **.31175** | **.11918** | **.00098** | **45.199** | **.00299** |
| Stddev | .00016 | .00986 | .00056 | .0054 | .0272 | .00055 | .00050 | .00023 | .230 | .00217 |
| %RSD | 36.034 | 9.0820 | 51.493 | .46376 | .58689 | .17762 | .41726 | 22.999 | .50940 | 72.708 |
| #1 | .00042 | .09746 | -.00147 | 1.1764 | 4.5964 | .31216 | .11941 | .00107 | 44.942 | .00548 |
| #2 | .00028 | .11631 | -.00044 | 1.1658 | 4.6428 | .31198 | .11861 | .00072 | 45.270 | .00199 |
| #3 | .00059 | .11191 | -.00134 | 1.1690 | 4.6441 | .31112 | .11952 | .00114 | 45.386 | .00150 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00095** | **F 3553.9** | **3.1844** | **.00028** | **.00129** | **.00330** | **-.00091** | **.00023** |
| Stddev | .00036 | 37.7 | .0020 | .00044 | .00130 | .00070 | .00035 | .00028 |
| %RSD | 37.464 | 1.0600 | .06144 | 159.33 | 100.98 | 21.357 | 39.143 | 119.25 |
| #1 | -.00132 | 3594.9 | 3.1861 | .00078 | .00066 | .00322 | -.00056 | .00046 |
| #2 | -.00094 | 3545.9 | 3.1849 | .00007 | .00042 | .00263 | -.00127 | .00032 |
| #3 | -.00060 | 3520.8 | 3.1822 | -.00002 | .00278 | .00403 | -.00089 | -.00008 |

Sample Name: L101-06 Acquired: 12/17/2020 17:22:04 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009035 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **4507.5** | **61056.** | **96143.** |
| Stddev | 14.1 | 257. | 595. |
| %RSD | .31238 | .42115 | .61902 |
| #1 | 4516.2 | 61234. | 95524. |
| #2 | 4491.3 | 60761. | 96711. |
| #3 | 4515.0 | 61173. | 96194. |

Sample Name: L101-08 Acquired: 12/17/2020 17:26:57 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009036 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00966** | **.00318** | **.00939** | **.49827** | **-.00008** | **.56531** | **-.00013** | **32.949** | **.00074** | **-.00045** | **.00061** |
| Stddev | .00061 | .00192 | .00259 | .00265 | .00008 | .00143 | .00006 | .035 | .00020 | .00005 | .00022 |
| %RSD | 6.3006 | 60.488 | 27.563 | .53250 | 104.91 | .25306 | 47.718 | .10753 | 27.692 | 11.582 | 36.610 |
| #1 | .00965 | .00403 | .00679 | .49860 | -.00008 | .56598 | -.00018 | 32.927 | .00053 | -.00039 | .00046 |
| #2 | .01028 | .00452 | .00940 | .50074 | .00001 | .56367 | -.00013 | 32.931 | .00074 | -.00045 | .00051 |
| #3 | .00906 | .00098 | .01197 | .49547 | -.00015 | .56628 | -.00006 | 32.990 | .00094 | -.00050 | .00087 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.03902** | **-.00053** | **.07476** | **7.7205** | **.75370** | **.04526** | **.00073** | **5.3474** | **.00071** | **-.00019** | **231.26** |
| Stddev | .00498 | .00030 | .00091 | .0357 | .00132 | .00022 | .00041 | .0766 | .00151 | .00004 | .56 |
| %RSD | 12.767 | 56.099 | 1.2173 | .46259 | .17511 | .47562 | 56.068 | 1.4318 | 211.36 | 19.810 | .24132 |
| #1 | .03536 | -.00019 | .07480 | 7.6922 | .75308 | .04523 | .00034 | 5.4356 | .00237 | -.00020 | 231.13 |
| #2 | .03700 | -.00072 | .07382 | 7.7087 | .75280 | .04548 | .00069 | 5.3090 | -.00058 | -.00015 | 231.87 |
| #3 | .04469 | -.00067 | .07564 | 7.7606 | .75521 | .04505 | .00115 | 5.2976 | .00035 | -.00022 | 230.77 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.65313** | **.00146** | **.00105** | **-.00014** | **.00298** | **-.00021** |
| Stddev | .00096 | .00022 | .00045 | .00075 | .00044 | .00011 |
| %RSD | .14730 | 15.249 | 42.943 | 556.87 | 14.713 | 53.954 |
| #1 | .65422 | .00171 | .00061 | -.00093 | .00248 | -.00008 |
| #2 | .65241 | .00137 | .00102 | .00056 | .00314 | -.00030 |
| #3 | .65277 | .00129 | .00152 | -.00003 | .00331 | -.00023 |

Sample Name: L101-08 Acquired: 12/17/2020 17:26:57 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009036 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5547.2** | **64940.** | **119410.** |
| Stddev | 12.8 | 255. | 269. |
| %RSD | .23021 | .39289 | .22493 |
| #1 | 5532.7 | 64645. | 119100. |
| #2 | 5551.8 | 65090. | 119510. |
| #3 | 5557.0 | 65085. | 119610. |

Sample Name: L101-09 Acquired: 12/17/2020 17:31:40 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009037 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.01293** | **.00311** | **.01230** | **.04290** | **-.00007** | **1.6491** | **-.00022** | **62.896** | **.01024** | **-.00076** |
| Stddev | .00345 | .00226 | .00283 | .00029 | .00010 | .0034 | .00019 | .085 | .00018 | .00024 |
| %RSD | 26.655 | 72.811 | 22.970 | .68732 | 154.41 | .20333 | 88.998 | .13506 | 1.7266 | 31.467 |
| #1 | .01666 | .00572 | .01084 | .04313 | -.00018 | 1.6452 | -.00007 | 62.992 | .01021 | -.00049 |
| #2 | .00986 | .00173 | .01050 | .04301 | .00002 | 1.6514 | -.00015 | 62.832 | .01008 | -.00087 |
| #3 | .01228 | .00188 | .01556 | .04257 | -.00004 | 1.6506 | -.00043 | 62.864 | .01042 | -.00094 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00056** | **.01620** | **-.00056** | **.52976** | **1.3657** | .00296 | **.05556** | **.00248** | **22.665** | **.00069** |
| Stddev | .00017 | .00537 | .00097 | .00329 | .0114 | .00060 | .00027 | .00015 | .079 | .00248 |
| %RSD | 31.194 | 33.134 | 175.14 | .62061 | .83629 | 20.127 | .48327 | 6.1288 | .34761 | 361.63 |
| #1 | .00036 | .02230 | -.00066 | .52685 | 1.3618 | .00328 | .05576 | .00250 | 22.745 | -.00217 |
| #2 | .00063 | .01408 | .00047 | .53333 | 1.3567 | .00227 | .05525 | .00262 | 22.587 | .00224 |
| #3 | .00069 | .01221 | -.00147 | .52909 | 1.3785 | .00333 | .05566 | .00232 | 22.662 | .00199 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00001** | F **1387.6** | **1.5373** | **.00073** | **.00083** | **.00205** | **.00349** | **.00074** |
| Stddev | .00063 | 19.7 | .0025 | .00100 | .00053 | .00048 | .00019 | .00021 |
| %RSD | 6093.6 | 1.4206 | .15972 | 136.71 | 64.420 | 23.253 | 5.5546 | 28.189 |
| #1 | -.00050 | 1408.3 | 1.5397 | .00098 | .00023 | .00181 | .00329 | .00064 |
| #2 | -.00019 | 1369.0 | 1.5374 | .00158 | .00126 | .00174 | .00351 | .00098 |
| #3 | .00071 | 1385.6 | 1.5348 | -.00037 | .00099 | .00260 | .00368 | .00060 |

Sample Name: L101-09 Acquired: 12/17/2020 17:31:40 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009037 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **4935.9** | **62319.** | **106350.** |
| Stddev | 11.6 | 413. | 572. |
| %RSD | .23565 | .66211 | .53738 |
| #1 | 4935.1 | 61844. | 105790. |
| #2 | 4947.9 | 62589. | 106320. |
| #3 | 4924.7 | 62524. | 106940. |

Sample Name: L101-10 Acquired: 12/17/2020 17:36:33 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009038 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00682 | .00407 | .00522 | .04223 | -.00002 | 2.7802 | -.00041 | 412.22 | .00068 | -.00129 |
| Stddev | .00262 | .00072 | .00318 | .00041 | .00012 | .0066 | .00003 | 5.24 | .00045 | .00034 |
| %RSD | 38.407 | 17.688 | 60.888 | .97530 | 584.86 | .23937 | 8.4062 | 1.2719 | 66.935 | 26.217 |
| #1 | .00981 | .00331 | .00264 | .04234 | -.00015 | 2.7750 | -.00045 | 407.85 | .00017 | -.00161 |
| #2 | .00495 | .00474 | .00877 | .04178 | .00010 | 2.7778 | -.00039 | 418.03 | .00104 | -.00094 |
| #3 | .00570 | .00416 | .00425 | .04258 | -.00002 | 2.7877 | -.00039 | 410.77 | .00082 | -.00131 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00240 | 1.0586 | -.00166 | 1.2991 | 83.531 | .78153 | .04352 | .00078 | 55.325 | .00228 |
| Stddev | .00027 | .0195 | .00057 | .0021 | .164 | .00364 | .00021 | .00034 | .379 | .00211 |
| %RSD | 11.147 | 1.8445 | 34.040 | .16008 | .19585 | .46548 | .47961 | 43.425 | .68470 | 92.822 |
| #1 | .00270 | 1.0363 | -.00109 | 1.2974 | 83.347 | .77785 | .04336 | .00055 | 54.963 | -.00015 |
| #2 | .00219 | 1.0726 | -.00168 | 1.3014 | 83.589 | .78160 | .04375 | .00062 | 55.294 | .00331 |
| #3 | .00231 | 1.0669 | -.00222 | 1.2985 | 83.658 | .78513 | .04345 | .00117 | 55.719 | .00368 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | -.00022 | F 3755.2 | 10.644 | .00027 | -.00034 | .00604 | -.00140 | .00153 |
| Stddev | .00018 | 41.8 | .152 | .00207 | .00054 | .00098 | .00019 | .00032 |
| %RSD | 84.279 | 1.1129 | 1.4299 | 755.87 | 156.43 | 16.285 | 13.606 | 20.733 |
| #1 | -.00030 | 3734.8 | 10.469 | -.00206 | -.00096 | .00703 | -.00123 | .00120 |
| #2 | -.00035 | 3803.3 | 10.742 | .00191 | -.00008 | .00602 | -.00161 | .00184 |
| #3 | -.00001 | 3727.5 | 10.721 | .00097 | .00001 | .00507 | -.00137 | .00156 |

Sample Name: L101-10 Acquired: 12/17/2020 17:36:33 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009038 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 4297.0 | 59877. | 92811. |
| Stddev | 38.3 | 551. | 130. |
| %RSD | .89106 | .91978 | .14022 |
| #1 | 4253.5 | 60132. | 92875. |
| #2 | 4311.5 | 59245. | 92897. |
| #3 | 4325.8 | 60255. | 92662. |

Sample Name: L101-11 Acquired: 12/17/2020 17:41:41 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009039 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00894 | .00140 | .00082 | .05274 | .00002 | 1.8249 | -.00034 | 376.52 | .00031 | -.00134 |
| Stddev | .00103 | .00254 | .00162 | .00008 | .00002 | .0063 | .00005 | .56 | .00022 | .00028 |
| %RSD | 11.521 | 181.44 | 196.97 | .15194 | 95.683 | .34462 | 14.179 | .14999 | 73.517 | 20.711 |
| #1 | .00881 | .00327 | -.00034 | .05281 | .00004 | 1.8176 | -.00038 | 377.15 | .00056 | -.00166 |
| #2 | .00798 | -.00149 | .00014 | .05265 | .00000 | 1.8286 | -.00029 | 376.06 | .00023 | -.00125 |
| #3 | .01003 | .00242 | .00268 | .05275 | .00003 | 1.8285 | -.00036 | 376.35 | .00013 | -.00112 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .00134 | 2.9658 | -.00082 | .79367 | 98.502 | .64286 | .00978 | .00036 | 29.091 | .00036 |
| Stddev | .00018 | .0049 | .00145 | .00068 | .051 | .00243 | .00029 | .00032 | .030 | .00094 |
| %RSD | 13.054 | .16364 | 176.85 | .08530 | .05175 | .37766 | 2.9405 | 89.314 | .10145 | 263.92 |
| #1 | .00143 | 2.9616 | -.00212 | .79431 | 98.534 | .64564 | .01006 | .00033 | 29.059 | -.00072 |
| #2 | .00145 | 2.9711 | .00074 | .79375 | 98.443 | .64172 | .00978 | .00068 | 29.099 | .00102 |
| #3 | .00114 | 2.9647 | -.00108 | .79296 | 98.528 | .64121 | .00948 | .00005 | 29.116 | .00076 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | -.00038 | F 2472.5 | 8.4867 | .00119 | .00084 | .00560 | -.00098 | .00079 |
| Stddev | .00041 | 32.1 | .0487 | .00154 | .00085 | .00047 | .00042 | .00012 |
| %RSD | 106.89 | 1.2996 | .57372 | 129.11 | 101.51 | 8.3995 | 42.563 | 15.557 |
| #1 | -.00002 | 2497.6 | 8.5081 | -.00052 | .00134 | .00614 | -.00050 | .00093 |
| #2 | -.00082 | 2436.3 | 8.5210 | .00246 | .00132 | .00527 | -.00125 | .00072 |
| #3 | -.00030 | 2483.6 | 8.4309 | .00165 | -.00014 | .00539 | -.00120 | .00072 |

Sample Name: L101-11 Acquired: 12/17/2020 17:41:41 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009039 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 4441.2 | 63017. | 99285. |
| Stddev | 17.6 | 184. | 986. |
| %RSD | .39611 | .29244 | .99357 |
| #1 | 4436.0 | 62920. | 98170. |
| #2 | 4426.8 | 63229. | 99643. |
| #3 | 4460.8 | 62902. | 100040. |

Sample Name: L101-12 Acquired: 12/17/2020 17:46:50 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009040 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.01097** | **.00316** | **.00941** | **.07132** | **-.00007** | **1.9877** | **-.00025** | **143.97** | **.00125** | **-.00097** |
| Stddev | .00167 | .00135 | .00118 | .00043 | .00005 | .0020 | .00008 | .12 | .00017 | .00028 |
| %RSD | 15.183 | 42.688 | 12.541 | .59605 | 72.212 | .10087 | 33.090 | .07988 | 13.459 | 29.210 |
| #1 | .01079 | .00160 | .00807 | .07102 | -.00006 | 1.9866 | -.00015 | 143.85 | .00117 | -.00124 |
| #2 | .01272 | .00403 | .01029 | .07181 | -.00002 | 1.9900 | -.00031 | 143.96 | .00144 | -.00068 |
| #3 | .00940 | .00384 | .00986 | .07114 | -.00012 | 1.9864 | -.00027 | 144.08 | .00113 | -.00100 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00081** | **4.9168** | **-.00168** | **.42124** | **53.773** | **.75686** | **.03172** | **.00157** | **14.203** | **.00176** |
| Stddev | .00009 | .0085 | .00155 | .00124 | .030 | .00125 | .00018 | .00007 | .063 | .00114 |
| %RSD | 10.953 | .17256 | 91.935 | .29468 | .05549 | .16487 | .57744 | 4.5238 | .44627 | 64.769 |
| #1 | .00078 | 4.9071 | -.00207 | .42118 | 53.791 | .75607 | .03193 | .00149 | 14.208 | .00306 |
| #2 | .00091 | 4.9225 | .00002 | .42003 | 53.739 | .75620 | .03159 | .00160 | 14.137 | .00132 |
| #3 | .00075 | 4.9210 | -.00300 | .42251 | 53.789 | .75830 | .03165 | .00163 | 14.263 | .00091 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00021** | **F 1094.9** | **2.3448** | **.00046** | **.00090** | **.00399** | **-.00049** | **.00071** |
| Stddev | .00013 | 6.9 | .0031 | .00091 | .00087 | .00084 | .00035 | .00033 |
| %RSD | 63.661 | .63042 | .13245 | 195.72 | 96.677 | 21.113 | 71.471 | 46.541 |
| #1 | -.00036 | 1099.3 | 2.3413 | .00065 | .00039 | .00491 | -.00081 | .00079 |
| #2 | -.00010 | 1087.0 | 2.3469 | .00127 | .00040 | .00378 | -.00055 | .00099 |
| #3 | -.00017 | 1098.5 | 2.3463 | -.00052 | .00190 | .00327 | -.00011 | .00035 |

Sample Name: L101-12 Acquired: 12/17/2020 17:46:50 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009040 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **4777.5** | **61118.** | **105590.** |
| Stddev | 13.5 | 70. | 287. |
| %RSD | .28173 | .11421 | .27222 |
| #1 | 4767.7 | 61193. | 105300. |
| #2 | 4771.9 | 61055. | 105590. |
| #3 | 4792.8 | 61105. | 105870. |

Sample Name: L101-13 Acquired: 12/17/2020 17:51:40 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009041 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00974** | **.00398** | **-.00082** | **.05226** | **-.00009** | **1.8264** | **-.00040** | **375.38** | **.00083** | **-.00100** |
| Stddev | .00328 | .00079 | .00118 | .00085 | .00005 | .0043 | .00009 | 2.59 | .00012 | .00033 |
| %RSD | 33.613 | 19.810 | 144.04 | 1.6284 | 56.776 | .23452 | 21.922 | .69049 | 14.567 | 32.449 |
| #1 | .01156 | .00313 | -.00192 | .05324 | -.00007 | 1.8256 | -.00031 | 376.60 | .00084 | -.00101 |
| #2 | .00596 | .00468 | -.00096 | .05181 | -.00014 | 1.8310 | -.00049 | 372.40 | .00095 | -.00133 |
| #3 | .01171 | .00413 | .00042 | .05173 | -.00005 | 1.8225 | -.00040 | 377.14 | .00071 | -.00068 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00067** | **2.9527** | **-.00183** | **.78546** | **99.086** | **.63916** | **.00981** | **.00028** | **28.383** | **.00273** |
| Stddev | .00004 | .0155 | .00198 | .00144 | .216 | .00137 | .00009 | .00012 | .126 | .00349 |
| %RSD | 6.3226 | .52603 | 108.35 | .18276 | .21814 | .21488 | .86759 | 43.050 | .44396 | 127.58 |
| #1 | .00067 | 2.9411 | -.00408 | .78709 | 99.330 | .64073 | .00985 | .00024 | 28.268 | .00175 |
| #2 | .00063 | 2.9468 | -.00034 | .78438 | 98.918 | .63853 | .00971 | .00018 | 28.363 | .00660 |
| #3 | .00072 | 2.9704 | -.00107 | .78491 | 99.008 | .63821 | .00986 | .00041 | 28.518 | -.00015 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00047** | **F 2515.9** | **8.3972** | **.00042** | **.00113** | **.00521** | **-.00110** | **-.00007** |
| Stddev | .00022 | 19.6 | .0607 | .00140 | .00121 | .00108 | .00014 | .00038 |
| %RSD | 47.286 | .78016 | .72341 | 331.37 | 106.94 | 20.795 | 12.341 | 553.97 |
| #1 | -.00034 | 2514.9 | 8.4532 | .00110 | .00172 | .00511 | -.00122 | -.00050 |
| #2 | -.00073 | 2536.0 | 8.4057 | .00135 | .00193 | .00418 | -.00096 | .00012 |
| #3 | -.00034 | 2496.7 | 8.3326 | -.00119 | -.00026 | .00634 | -.00114 | .00018 |

Sample Name: L101-13 Acquired: 12/17/2020 17:51:40 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009041 Type: Anaylst: NTan
Comment:

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **4326.5** | **59131.** | **94933.** |
| Stddev | 36.7 | 236. | 281. |
| %RSD | .84938 | .39976 | .29652 |
| #1 | 4302.3 | 58900. | 95216. |
| #2 | 4308.5 | 59121. | 94929. |
| #3 | 4368.8 | 59373. | 94653. |

Sample Name: L101-04A Acquired: 12/17/2020 17:56:50 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009042 Type: Anaylst: NTan
Comment: REPREP

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 5.1556 | 2.7518 | .61823 | .54056 | .48591 | 2.4072 | .54289 | 195.06 | .52794 | .52876 |
| Stddev | .0111 | .0688 | .01517 | .00347 | .00155 | .0036 | .01002 | .18 | .00040 | .00205 |
| %RSD | .21525 | 2.5009 | 2.4532 | .64119 | .31818 | .14995 | 1.8451 | .09087 | .07601 | .38676 |
| #1 | 5.1482 | 2.7305 | .61197 | .53772 | .48562 | 2.4034 | .54027 | 195.15 | .52836 | .52743 |
| #2 | 5.1503 | 2.6962 | .60720 | .53953 | .48453 | 2.4105 | .53444 | 195.18 | .52791 | .52772 |
| #3 | 5.1684 | 2.8288 | .63553 | .54442 | .48758 | 2.4077 | .55395 | 194.86 | .52756 | .53111 |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .51279 | 5.2859 | .50944 | .83945 | 65.269 | .53122 | .59795 | .53931 | 90.884 | .59894 |
| Stddev | .00064 | .0175 | .00120 | .00391 | .058 | .00019 | .00185 | .00182 | .097 | .01422 |
| %RSD | .12501 | .33024 | .23642 | .46618 | .08874 | .03572 | .30945 | .33724 | .10673 | 2.3740 |
| #1 | .51217 | 5.2690 | .50846 | .83507 | 65.245 | .53102 | .59734 | .53734 | 90.808 | .58817 |
| #2 | .51345 | 5.3038 | .50907 | .84068 | 65.227 | .53123 | .59648 | .53966 | 90.850 | .59360 |
| #3 | .51274 | 5.2849 | .51078 | .84260 | 65.335 | .53140 | .60002 | .54093 | 90.993 | .61506 |

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .57521 | F 2317.2 | 3.4587 | .44077 | .57829 | .53825 | .54346 | .63438 |
| Stddev | .00125 | 22.2 | .0037 | .00852 | .00054 | .00168 | .00120 | .00177 |
| %RSD | .21727 | .95702 | .10814 | 1.9320 | .09301 | .31254 | .22027 | .27971 |
| #1 | .57380 | 2342.8 | 3.4630 | .43633 | .57788 | .53660 | .54311 | .63303 |
| #2 | .57619 | 2306.2 | 3.4563 | .43540 | .57890 | .53818 | .54480 | .63639 |
| #3 | .57562 | 2302.7 | 3.4568 | .45059 | .57810 | .53997 | .54248 | .63372 |

Sample Name: L101-04A Acquired: 12/17/2020 17:56:50 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009042 Type: Anaylst: NTan
Comment: REPREP

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 4444.0 | 58283. | 96306. |
| Stddev | 84.2 | 336. | 228. |
| %RSD | 1.8941 | .57633 | .23705 |
| #1 | 4424.5 | 58334. | 96141. |
| #2 | 4371.2 | 57924. | 96211. |
| #3 | 4536.2 | 58590. | 96567. |

Sample Name: CCV3 Acquired: 12/17/2020 18:01:33 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009043 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **106.64** | **1.4002** | **1.0219** | **1.9334** | **1.4334** | 2.5494 | 2.0241 | 79.408 | **2.5279** | **1.0087** |
| Stddev | .21 | .0011 | .0037 | .0047 | .0028 | .0026 | .0014 | .100 | .0026 | .0011 |
| %RSD | .19291 | .08138 | .36503 | .24546 | .19598 | .10092 | .06944 | .12653 | .10269 | .10858 |
| #1 | 106.87 | 1.4000 | 1.0180 | 1.9309 | 1.4355 | 2.5521 | 2.0257 | 79.455 | 2.5261 | 1.0096 |
| #2 | 106.48 | 1.3992 | 1.0254 | 1.9389 | 1.4344 | 2.5492 | 2.0234 | 79.477 | 2.5309 | 1.0090 |
| #3 | 106.56 | 1.4014 | 1.0224 | 1.9305 | 1.4302 | 2.5470 | 2.0232 | 79.293 | 2.5268 | 1.0075 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **2.4786** | **24.830** | 2.5287 | **.51388** | **59.414** | 2.2933 | 2.4892 | 2.5378 | **62.758** | **1.0461** |
| Stddev | .0037 | .037 | .0060 | .00261 | .091 | .0049 | .0044 | .0027 | .147 | .0028 |
| %RSD | .14944 | .15104 | .23559 | .50833 | .15243 | .21162 | .17515 | .10700 | .23405 | .26725 |
| #1 | 2.4829 | 24.789 | 2.5350 | .51195 | 59.479 | 2.2981 | 2.4935 | 2.5409 | 62.753 | 1.0489 |
| #2 | 2.4772 | 24.864 | 2.5282 | .51685 | 59.451 | 2.2933 | 2.4848 | 2.5364 | 62.907 | 1.0461 |
| #3 | 2.4759 | 24.836 | 2.5231 | .51283 | 59.310 | 2.2884 | 2.4892 | 2.5360 | 62.614 | 1.0433 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

Sample Name: CCV3 Acquired: 12/17/2020 18:01:33 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009043 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.49984** | **63.352** | **.48650** | **2.3659** | **.53869** | **.49817** | 1.5307 | F 2.7952 |
| Stddev | .00101 | .098 | .00109 | .0054 | .00266 | .00136 | .0014 | .0023 |
| %RSD | .20281 | .15508 | .22435 | .22811 | .49356 | .27207 | .09470 | .08256 |
| #1 | .50095 | 63.324 | .48682 | 2.3718 | .54084 | .49953 | 1.5294 | 2.7974 |
| #2 | .49895 | 63.461 | .48739 | 2.3646 | .53952 | .49682 | 1.5323 | 2.7955 |
| #3 | .49964 | 63.271 | .48528 | 2.3613 | .53572 | .49815 | 1.5305 | 2.7928 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail |
| Value | | | | | | | | 2.5000 |
| Range | | | | | | | | 10.000% |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5365.4** | **63138.** | **116430.** |
| Stddev | 5.6 | 311. | 8. |
| %RSD | .10496 | .49191 | .00698 |
| #1 | 5358.9 | 63001. | 116430. |
| #2 | 5368.1 | 62921. | 116440. |
| #3 | 5369.2 | 63494. | 116420. |

Sample Name: CCB3 Acquired: 12/17/2020 18:06:06 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009044 Type: Anaylst: NTan
Comment:

<MDL HI 12/22/20

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00463** | **.00589** | **.00047** | **-.00041** | **-.00001** | F **.01987** | **-.00011** | **-.01476** | **.00037** | **-.00038** |
| Stddev | .00154 | .00243 | .00267 | .00022 | .00006 | .00044 | .00009 | .00142 | .00006 | .00018 |
| %RSD | 33.296 | 41.307 | 565.42 | 53.743 | 881.06 | 2.2254 | 81.235 | 9.6196 | 16.760 | 48.799 |
| #1 | .00597 | .00867 | .00241 | -.00021 | .00002 | .02015 | -.00004 | -.01413 | .00038 | -.00058 |
| #2 | .00294 | .00483 | .00159 | -.00065 | -.00007 | .02010 | -.00021 | -.01376 | .00042 | -.00021 |
| #3 | .00498 | .00416 | -.00258 | -.00038 | .00003 | .01936 | -.00008 | -.01638 | .00030 | -.00034 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | .01000 | | | | |
| Low Limit | | | | | | -.01000 | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00014** | **.00021** | **-.00053** | **-.00058** | **.01475** | **-.00019** | **.00062** | **.00021** | F **.14146** | **.00127** |
| Stddev | .00014 | .00839 | .00050 | .00215 | .00569 | .00015 | .00013 | .00024 | .03096 | .00104 |
| %RSD | 100.30 | 4054.2 | 93.970 | 369.56 | 38.600 | 77.646 | 20.221 | 117.96 | 21.882 | 81.865 |
| #1 | .00029 | .00128 | -.00042 | -.00304 | .01153 | -.00035 | .00052 | -.00007 | .13561 | .00092 |
| #2 | .00001 | -.00866 | -.00108 | .00095 | .01140 | -.00006 | .00076 | .00032 | .17493 | .00243 |
| #3 | .00012 | .00801 | -.00010 | .00035 | .02133 | -.00016 | .00058 | .00038 | .11385 | .00045 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass |
| High Limit | | | | | | | | | .10000 | |
| Low Limit | | | | | | | | | -.10000 | |

Sample Name: CCB3 Acquired: 12/17/2020 18:06:06 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009044 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00054** | F **1.4975** | **-.00050** | **.00218** | **.00019** | **-.00085** | **-.00040** | **.00227** |
| Stddev | .00042 | .0367 | .00021 | .00089 | .00006 | .00082 | .00007 | .00025 |
| %RSD | 77.855 | 2.4488 | 42.539 | 40.753 | 32.973 | 95.817 | 18.135 | 11.065 |
| #1 | -.00014 | 1.4942 | -.00032 | .00271 | .00026 | .00006 | -.00035 | .00227 |
| #2 | -.00099 | 1.5357 | -.00073 | .00116 | .00017 | -.00110 | -.00036 | .00202 |
| #3 | -.00050 | 1.4626 | -.00045 | .00269 | .00014 | -.00153 | -.00048 | .00252 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .10000 | | | | | | |
| Low Limit | | -.10000 | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **6043.3** | **62211.** | **122630.** |
| Stddev | 21.2 | 164. | 86. |
| %RSD | .35043 | .26437 | .07020 |
| #1 | 6063.7 | 62399. | 122710. |
| #2 | 6044.8 | 62142. | 122540. |
| #3 | 6021.4 | 62093. | 122640. |

Sample Name: CCV7 Acquired: 12/17/2020 20:57:28 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009080 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 105.81 | 1.3779 | 1.0190 | 1.9768 | 1.4448 | 2.5117 | 2.0184 | 79.295 | 2.5325 | 1.0008 |
| Stddev | .28 | .0034 | .0056 | .0092 | .0053 | .0006 | .0055 | .105 | .0051 | .0019 |
| %RSD | .26386 | .24995 | .55167 | .46553 | .36733 | .02411 | .27466 | .13267 | .20050 | .19374 |
| #1 | 106.12 | 1.3750 | 1.0154 | 1.9838 | 1.4494 | 2.5124 | 2.0140 | 79.188 | 2.5281 | .99884 |
| #2 | 105.70 | 1.3769 | 1.0161 | 1.9664 | 1.4390 | 2.5114 | 2.0166 | 79.399 | 2.5381 | 1.0027 |
| #3 | 105.60 | 1.3817 | 1.0255 | 1.9802 | 1.4459 | 2.5112 | 2.0247 | 79.297 | 2.5313 | 1.0008 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 2.4507 | 24.875 | 2.5065 | .52572 | 59.612 | 2.2696 | 2.4765 | 2.5227 | 63.136 | 1.0297 |
| Stddev | .0036 | .048 | .0032 | .00347 | .171 | .0034 | .0048 | .0033 | .031 | .0035 |
| %RSD | .14855 | .19294 | .12890 | .66028 | .28746 | .15030 | .19452 | .13094 | .04969 | .33738 |
| #1 | 2.4530 | 24.840 | 2.5058 | .52316 | 59.791 | 2.2734 | 2.4715 | 2.5251 | 63.119 | 1.0283 |
| #2 | 2.4525 | 24.929 | 2.5100 | .52434 | 59.450 | 2.2668 | 2.4811 | 2.5241 | 63.116 | 1.0272 |
| #3 | 2.4465 | 24.854 | 2.5037 | .52967 | 59.594 | 2.2686 | 2.4768 | 2.5190 | 63.172 | 1.0337 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

Sample Name: CCV7 Acquired: 12/17/2020 20:57:28 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009080 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .54774 | 63.413 | .48811 | 2.3535 | .53656 | .50646 | 1.5329 | F 2.7973 |
| Stddev | .00158 | .129 | .00098 | .0070 | .00073 | .00388 | .0024 | .0050 |
| %RSD | .28890 | .20391 | .20124 | .29878 | .13625 | .76577 | .15598 | .17797 |
| #1 | .54947 | 63.506 | .48859 | 2.3484 | .53736 | .50725 | 1.5319 | 2.7978 |
| #2 | .54740 | 63.265 | .48876 | 2.3507 | .53638 | .50225 | 1.5357 | 2.8020 |
| #3 | .54636 | 63.468 | .48698 | 2.3616 | .53593 | .50989 | 1.5313 | 2.7921 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail |
| Value | | | | | | | | 2.5000 |
| Range | | | | | | | | 10.000% |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 5220.1 | 58974. | 112770. |
| Stddev | 12.8 | 284. | 193. |
| %RSD | .24594 | .48227 | .17089 |
| #1 | 5215.6 | 59211. | 112970. |
| #2 | 5210.2 | 59051. | 112750. |
| #3 | 5234.6 | 58658. | 112590. |

Sample Name: CCB7 Acquired: 12/17/2020 21:02:03 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009081 Type: Anaylst: NTan
Comment:

<MDL TH 12/22/20

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00914** | **.00117** | **.00132** | **.00025** | **-.00002** | F **.01215** | **-.00012** | **-.00115** | **.00061** | **-.00046** |
| Stddev | .00163 | .00191 | .00110 | .00031 | .00013 | .00040 | .00004 | .00456 | .00022 | .00011 |
| %RSD | 17.836 | 163.92 | 83.287 | 124.26 | 579.60 | 3.2976 | 32.995 | 395.34 | 36.554 | 23.056 |
| #1 | .00795 | .00320 | .00021 | .00060 | .00011 | .01255 | -.00012 | -.00595 | .00083 | -.00040 |
| #2 | .01099 | .00089 | .00241 | .00010 | -.00015 | .01214 | -.00008 | -.00062 | .00062 | -.00058 |
| #3 | .00846 | -.00059 | .00135 | .00004 | -.00002 | .01175 | -.00016 | .00312 | .00039 | -.00040 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | .01000 | | | | |
| Low Limit | | | | | | -.01000 | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00024** | **-.00529** | **-.00112** | **-.00011** | **-.01323** | **-.00051** | **.00051** | **.00009** | **-.08502** | **.00024** |
| Stddev | .00003 | .00579 | .00037 | .00166 | .01661 | .00037 | .00012 | .00011 | .01241 | .00238 |
| %RSD | 12.000 | 109.32 | 32.809 | 1552.9 | 125.55 | 72.448 | 23.575 | 123.47 | 14.595 | 1001.6 |
| #1 | .00023 | .00036 | -.00092 | -.00196 | -.00253 | -.00087 | .00046 | .00021 | -.07106 | .00235 |
| #2 | .00028 | -.00503 | -.00089 | .00038 | -.00479 | -.00053 | .00065 | .00002 | -.09480 | -.00234 |
| #3 | .00022 | -.01120 | -.00154 | .00126 | -.03237 | -.00013 | .00043 | .00003 | -.08922 | .00071 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | |
| Low Limit | | | | | | | | | | |

Sample Name: CCB7 Acquired: 12/17/2020 21:02:03 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009081 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | F **.03282** | F **.43190** | **-.00051** | **.00236** | **-.00012** | **.00004** | **-.00030** | **.00333** |
| Stddev | .00126 | .01415 | .00007 | .00167 | .00060 | .00067 | .00015 | .00008 |
| %RSD | 3.8503 | 3.2769 | 13.410 | 71.003 | 520.36 | 1912.7 | 49.436 | 2.4647 |
| #1 | .03413 | .44006 | -.00045 | .00047 | -.00064 | .00079 | -.00035 | .00337 |
| #2 | .03274 | .44009 | -.00058 | .00292 | .00055 | -.00050 | -.00041 | .00323 |
| #3 | .03161 | .41556 | -.00048 | .00367 | -.00026 | -.00019 | -.00013 | .00338 |
| Check ? | Chk Fail | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | .00300 | .10000 | | | | | | |
| Low Limit | -.00300 | -.10000 | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5806.2** | **57815.** | **117670.** |
| Stddev | 3.5 | 235. | 89. |
| %RSD | .06036 | .40646 | .07542 |
| #1 | 5803.3 | 57754. | 117770. |
| #2 | 5805.3 | 57616. | 117650. |
| #3 | 5810.1 | 58074. | 117600. |

Sample Name: L101-02I Acquired: 12/17/2020 21:06:49 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009082 Type: Anaylst: NTan
Comment: 5X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.01007** | **.00197** | **.00226** | **.00951** | **-.00009** | **.26422** | **-.00027** | **32.781** | **.00053** | **-.00068** | **.00106** |
| Stddev | .00091 | .00170 | .00373 | .00040 | .00006 | .00090 | .00008 | .013 | .00017 | .00049 | .00018 |
| %RSD | 9.0677 | 85.971 | 164.51 | 4.1570 | 65.882 | .34250 | 30.985 | .03893 | 31.816 | 72.326 | 17.210 |
| #1 | .00930 | .00006 | .00495 | .00978 | -.00002 | .26526 | -.00031 | 32.768 | .00038 | -.00012 | .00125 |
| #2 | .01107 | .00256 | -.00199 | .00968 | -.00013 | .26373 | -.00017 | 32.781 | .00049 | -.00105 | .00104 |
| #3 | .00983 | .00329 | .00384 | .00905 | -.00012 | .26366 | -.00032 | 32.793 | .00071 | -.00085 | .00088 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00228** | **-.00113** | **.07879** | **16.436** | **.13966** | **.00986** | **.00036** | **2.9260** | **.00343** | **.01694** | **374.32** |
| Stddev | .00232 | .00119 | .00342 | .065 | .00067 | .00014 | .00022 | .0334 | .00280 | .00055 | 1.87 |
| %RSD | 101.87 | 104.63 | 4.3462 | .39332 | .48040 | 1.3746 | 60.228 | 1.1416 | 81.462 | 3.2643 | .50078 |
| #1 | .00371 | -.00021 | .07484 | 16.362 | .13940 | .00976 | .00046 | 2.8918 | .00238 | .01751 | 372.16 |
| #2 | .00353 | -.00072 | .08072 | 16.464 | .13916 | .01001 | .00050 | 2.9585 | .00131 | .01692 | 375.50 |
| #3 | -.00040 | -.00247 | .08081 | 16.482 | .14042 | .00981 | .00011 | 2.9278 | .00660 | .01640 | 375.29 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.77568** | **.00161** | **.00010** | **.00055** | **-.00025** | **.00151** |
| Stddev | .00018 | .00028 | .00102 | .00040 | .00032 | .00005 |
| %RSD | .02347 | 17.530 | 1012.2 | 72.253 | 128.10 | 3.5385 |
| #1 | .77551 | .00162 | .00014 | .00071 | .00007 | .00149 |
| #2 | .77567 | .00133 | -.00094 | .00084 | -.00057 | .00147 |
| #3 | .77587 | .00189 | .00110 | .00010 | -.00024 | .00157 |

Sample Name: L101-02I Acquired: 12/17/2020 21:06:49 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009082 Type: Anaylst: NTan
Comment: 5X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5014.4** | **58159.** | **109890.** |
| Stddev | 38.0 | 251. | 617. |
| %RSD | .75749 | .43145 | .56154 |
| #1 | 5019.0 | 58137. | 109310. |
| #2 | 4974.3 | 57920. | 110540. |
| #3 | 5049.8 | 58421. | 109820. |

Sample Name: L101-04M Acquired: 12/17/2020 21:11:43 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009083 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.53262** | **.26107** | **.05586** | **.05404** | **.04839** | **.23769** | **.05249** | **20.043** | **.05230** | **.05107** | **.04981** |
| Stddev | .00305 | .00280 | .00411 | .00021 | .00008 | .00049 | .00004 | .047 | .00036 | .00058 | .00051 |
| %RSD | .57177 | 1.0740 | 7.3630 | .39484 | .17075 | .20687 | .07679 | .23442 | .68514 | 1.1285 | 1.0215 |
| #1 | .53597 | .25846 | .05969 | .05379 | .04844 | .23821 | .05252 | 20.005 | .05269 | .05109 | .05038 |
| #2 | .53184 | .26071 | .05151 | .05417 | .04829 | .23760 | .05245 | 20.096 | .05198 | .05049 | .04940 |
| #3 | .53003 | .26403 | .05636 | .05415 | .04843 | .23724 | .05251 | 20.029 | .05222 | .05164 | .04965 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.52884** | **.04993** | **.07856** | **6.6149** | **.05263** | **.05576** | **.05274** | **7.9803** | **.05684** | **.05821** | **273.89** |
| Stddev | .00123 | .00072 | .00101 | .0076 | .00020 | .00011 | .00026 | .0301 | .00239 | .00104 | .55 |
| %RSD | .23215 | 1.4409 | 1.2831 | .11513 | .37124 | .18999 | .49197 | .37700 | 4.2095 | 1.7852 | .19945 |
| #1 | .52992 | .04911 | .07762 | 6.6138 | .05245 | .05584 | .05244 | 7.9659 | .05846 | .05912 | 274.50 |
| #2 | .52750 | .05021 | .07844 | 6.6079 | .05284 | .05581 | .05286 | 8.0149 | .05798 | .05842 | 273.43 |
| #3 | .52909 | .05047 | .07962 | 6.6230 | .05261 | .05564 | .05292 | 7.9602 | .05410 | .05708 | 273.74 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.35151** | **.04701** | **.05539** | **.05182** | **.05209** | **.05924** |
| Stddev | .00103 | .00092 | .00021 | .00115 | .00042 | .00031 |
| %RSD | .29365 | 1.9508 | .37202 | 2.2281 | .80733 | .52634 |
| #1 | .35090 | .04693 | .05561 | .05138 | .05248 | .05957 |
| #2 | .35270 | .04614 | .05535 | .05313 | .05214 | .05894 |
| #3 | .35093 | .04797 | .05520 | .05096 | .05164 | .05921 |

Sample Name: L101-04M Acquired: 12/17/2020 21:11:43 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009083 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5290.3** | **59337.** | **113010.** |
| Stddev | 13.3 | 461. | 316. |
| %RSD | .25218 | .77621 | .27977 |
| #1 | 5279.5 | 58868. | 112720. |
| #2 | 5286.1 | 59355. | 112970. |
| #3 | 5305.2 | 59788. | 113350. |

Sample Name: L101-04S Acquired: 12/17/2020 21:16:34 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009084 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.52615** | **.26205** | **.05553** | **.05288** | **.04785** | **.23646** | **.05262** | **20.028** | **.05176** | **.05075** | **.04957** |
| Stddev | .00262 | .00163 | .00214 | .00007 | .00025 | .00058 | .00009 | .051 | .00009 | .00022 | .00012 |
| %RSD | .49858 | .62258 | 3.8477 | .14045 | .52453 | .24729 | .17646 | .25375 | .17957 | .43190 | .25024 |
| #1 | .52379 | .26023 | .05588 | .05289 | .04782 | .23624 | .05268 | 20.070 | .05165 | .05051 | .04943 |
| #2 | .52897 | .26337 | .05748 | .05280 | .04811 | .23712 | .05266 | 20.044 | .05181 | .05094 | .04967 |
| #3 | .52568 | .26256 | .05325 | .05294 | .04761 | .23602 | .05251 | 19.972 | .05181 | .05081 | .04961 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.52147** | **.04921** | **.07793** | **6.6054** | **.05214** | **.05630** | **.05232** | **7.9651** | **.05460** | **.05334** | **274.45** |
| Stddev | .00420 | .00081 | .00113 | .0403 | .00024 | .00036 | .00023 | .0552 | .00245 | .00043 | 1.89 |
| %RSD | .80492 | 1.6425 | 1.4492 | .60944 | .46219 | .64128 | .43380 | .69301 | 4.4819 | .81018 | .68850 |
| #1 | .52580 | .04980 | .07860 | 6.5808 | .05190 | .05644 | .05242 | 7.9918 | .05195 | .05337 | 272.62 |
| #2 | .52119 | .04829 | .07662 | 6.6519 | .05238 | .05588 | .05248 | 7.9016 | .05677 | .05375 | 276.40 |
| #3 | .51742 | .04954 | .07856 | 6.5837 | .05215 | .05656 | .05206 | 8.0018 | .05509 | .05289 | 274.32 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.35172** | **.04775** | **.05495** | **.05034** | **.05181** | .05808 |
| Stddev | .00072 | .00142 | .00100 | .00039 | .00024 | .00022 |
| %RSD | .20558 | 2.9837 | 1.8269 | .77550 | .46125 | .38586 |
| #1 | .35171 | .04646 | .05540 | .05057 | .05176 | .05830 |
| #2 | .35245 | .04753 | .05380 | .04989 | .05160 | .05786 |
| #3 | .35101 | .04928 | .05566 | .05056 | .05207 | .05808 |

Sample Name: L101-04S Acquired: 12/17/2020 21:16:34 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009084 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5413.1** | **60737.** | **115400.** |
| Stddev | 19.3 | 603. | 699. |
| %RSD | .35723 | .99247 | .60594 |
| #1 | 5390.8 | 60329. | 114850. |
| #2 | 5423.7 | 60452. | 115160. |
| #3 | 5424.8 | 61429. | 116190. |

Sample Name: L101-04A Acquired: 12/17/2020 21:21:23 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009085 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 5.3713 | 2.5442 | .55149 | .50022 | .48746 | .71863 | .52768 | 67.972 | .52518 | .52330 | .49707 |
| Stddev | .0139 | .0043 | .00143 | .00389 | .00213 | .00166 | .00059 | .064 | .00027 | .00180 | .00086 |
| %RSD | .25958 | .16740 | .25846 | .77679 | .43641 | .23068 | .11214 | .09410 | .05156 | .34389 | .17338 |
| #1 | 5.3552 | 2.5423 | .55095 | .50460 | .48955 | .71674 | .52702 | 67.925 | .52500 | .52151 | .49652 |
| #2 | 5.3786 | 2.5491 | .55311 | .49719 | .48530 | .71984 | .52785 | 68.045 | .52549 | .52327 | .49807 |
| #3 | 5.3800 | 2.5413 | .55042 | .49886 | .48752 | .71931 | .52817 | 67.946 | .52505 | .52511 | .49663 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | 5.2203 | .50927 | .07845 | 52.004 | .46890 | .53702 | .53163 | 58.101 | .54518 | .52968 | 318.41 |
| Stddev | .0071 | .00046 | .00175 | .132 | .00042 | .00122 | .00245 | .022 | .00248 | .00139 | .64 |
| %RSD | .13537 | .08955 | 2.2250 | .25398 | .08936 | .22771 | .46127 | .03711 | .45460 | .26259 | .20154 |
| #1 | 5.2219 | .50976 | .07926 | 51.865 | .46920 | .53661 | .52881 | 58.094 | .54756 | .52964 | 318.91 |
| #2 | 5.2264 | .50885 | .07645 | 52.127 | .46907 | .53605 | .53274 | 58.084 | .54537 | .53110 | 317.68 |
| #3 | 5.2126 | .50921 | .07964 | 52.019 | .46842 | .53839 | .53332 | 58.125 | .54261 | .52832 | 318.62 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | .81179 | .46892 | .56966 | .53422 | .52882 | .59514 |
| Stddev | .00039 | .00115 | .00152 | .00220 | .00068 | .00131 |
| %RSD | .04789 | .24569 | .26683 | .41233 | .12848 | .22069 |
| #1 | .81223 | .46866 | .56796 | .53676 | .52856 | .59376 |
| #2 | .81163 | .47018 | .57013 | .53286 | .52958 | .59527 |
| #3 | .81151 | .46792 | .57089 | .53303 | .52830 | .59638 |

Sample Name: L101-04A Acquired: 12/17/2020 21:21:23 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009085 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | 5120.6 | 59658. | 110910. |
| Stddev | 13.7 | 283. | 112. |
| %RSD | .26808 | .47388 | .10127 |
| #1 | 5135.1 | 59975. | 111030. |
| #2 | 5118.9 | 59567. | 110830. |
| #3 | 5107.8 | 59433. | 110860. |

Sample Name: L101-04I Acquired: 12/17/2020 21:26:07 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009086 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00316** | **.00494** | **.00205** | **.00434** | **-.00010** | **.18396** | **-.00019** | **14.592** | **.00050** | **-.00057** | .00032 |
| Stddev | .00117 | .00175 | .00155 | .00039 | .00002 | .00049 | .00010 | .003 | .00020 | .00004 | .00010 |
| %RSD | 37.142 | 35.524 | 75.749 | 9.0121 | 20.824 | .26793 | 53.424 | .01870 | 40.261 | 6.6344 | 32.438 |
| #1 | .00181 | .00514 | .00253 | .00404 | -.00010 | .18384 | -.00018 | 14.589 | .00050 | -.00060 | .00027 |
| #2 | .00395 | .00309 | .00031 | .00420 | -.00009 | .18450 | -.00029 | 14.594 | .00030 | -.00057 | .00025 |
| #3 | .00371 | .00658 | .00330 | .00478 | -.00013 | .18353 | -.00009 | 14.593 | .00070 | -.00052 | .00044 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00840** | **-.00033** | **.07605** | **1.5597** | **.00694** | **.00554** | **.00020** | **2.3740** | **-.00131** | **.00057** | **266.25** |
| Stddev | .01138 | .00052 | .00038 | .0221 | .00021 | .00022 | .00019 | .0195 | .00235 | .00081 | 3.03 |
| %RSD | 135.37 | 156.61 | .49776 | 1.4181 | 3.0708 | 3.9240 | 92.921 | .82282 | 179.90 | 142.16 | 1.1396 |
| #1 | -.00473 | -.00091 | .07621 | 1.5403 | .00710 | .00554 | .00007 | 2.3680 | -.00361 | .00138 | 269.24 |
| #2 | .01504 | -.00019 | .07633 | 1.5550 | .00670 | .00532 | .00042 | 2.3959 | -.00139 | .00058 | 266.33 |
| #3 | .01491 | .00010 | .07562 | 1.5838 | .00702 | .00575 | .00011 | 2.3582 | .00108 | -.00025 | 263.18 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.30008** | **.00063** | **.00090** | **-.00010** | **-.00043** | **-.00081** |
| Stddev | .00026 | .00047 | .00090 | .00039 | .00052 | .00014 |
| %RSD | .08551 | 74.336 | 100.42 | 396.78 | 120.30 | 17.677 |
| #1 | .29989 | .00011 | .00182 | .00025 | -.00053 | -.00084 |
| #2 | .29997 | .00101 | .00088 | -.00052 | .00013 | -.00093 |
| #3 | .30037 | .00078 | .00001 | -.00003 | -.00089 | -.00065 |

Sample Name: L101-04I Acquired: 12/17/2020 21:26:07 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009086 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5283.0** | **58684.** | **112520.** |
| Stddev | 5.7 | 137. | 649. |
| %RSD | .10805 | .23389 | .57682 |
| #1 | 5283.3 | 58770. | 111880. |
| #2 | 5288.5 | 58526. | 112490. |
| #3 | 5277.1 | 58757. | 113180. |

Sample Name: L101-04J Acquired: 12/17/2020 21:30:58 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009087 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00141** | **.00362** | **.00280** | **.00107** | **-.00006** | **.03864** | **-.00023** | **2.9477** | **.00035** | **-.00060** | **.00026** |
| Stddev | .00332 | .00107 | .00232 | .00023 | .00011 | .00012 | .00006 | .0108 | .00009 | .00038 | .00009 |
| %RSD | 235.78 | 29.436 | 82.775 | 21.794 | 186.38 | .30094 | 27.508 | .36773 | 25.745 | 62.910 | 36.043 |
| #1 | .00215 | .00482 | .00268 | .00084 | -.00008 | .03878 | -.00022 | 2.9574 | .00027 | -.00026 | .00027 |
| #2 | -.00442 | .00279 | .00517 | .00131 | .00006 | .03859 | -.00018 | 2.9360 | .00045 | -.00053 | .00016 |
| #3 | -.00194 | .00324 | .00054 | .00107 | -.00015 | .03856 | -.00030 | 2.9497 | .00035 | -.00100 | .00035 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00148** | **-.00062** | **.01402** | **.30534** | **.00143** | **.00102** | **.00012** | **.30789** | **-.00078** | **-.00051** | **55.440** |
| Stddev | .00445 | .00072 | .00214 | .02067 | .00017 | .00008 | .00017 | .00480 | .00119 | .00046 | .088 |
| %RSD | 301.05 | 115.85 | 15.273 | 6.7709 | 12.167 | 7.8380 | 139.48 | 1.5595 | 152.10 | 90.498 | .15933 |
| #1 | .00516 | .00020 | .01206 | .31683 | .00156 | .00094 | .00032 | .31317 | .00055 | -.00035 | 55.456 |
| #2 | .00275 | -.00111 | .01631 | .31771 | .00148 | .00104 | .00000 | .30675 | -.00117 | -.00015 | 55.345 |
| #3 | -.00347 | -.00094 | .01371 | .28147 | .00123 | .00109 | .00005 | .30377 | -.00173 | -.00104 | 55.520 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.05994** | **.00058** | **-.00013** | **-.00032** | **-.00068** | **-.00105** |
| Stddev | .00025 | .00138 | .00029 | .00075 | .00029 | .00011 |
| %RSD | .41037 | 237.08 | 229.34 | 238.06 | 42.625 | 10.611 |
| #1 | .05990 | -.00068 | -.00031 | -.00118 | -.00054 | -.00095 |
| #2 | .05972 | .00206 | -.00029 | -.00001 | -.00048 | -.00117 |
| #3 | .06021 | .00036 | .00021 | .00024 | -.00101 | -.00103 |

Sample Name: L101-04J Acquired: 12/17/2020 21:30:58 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009087 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5446.5** | **55935.** | **113240.** |
| Stddev | 21.6 | 146. | 187. |
| %RSD | .39667 | .26065 | .16475 |
| #1 | 5468.9 | 55875. | 113100. |
| #2 | 5425.8 | 56101. | 113180. |
| #3 | 5444.7 | 55829. | 113450. |

Sample Name: L101-06I Acquired: 12/17/2020 21:35:44 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009088 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00714** | **.00278** | **.00559** | **.00865** | **-.00009** | **.32153** | **-.00021** | **12.723** | **.00245** | **-.00066** | **.00023** |
| Stddev | .00077 | .00288 | .00216 | .00026 | .00015 | .00062 | .00007 | .017 | .00023 | .00015 | .00018 |
| %RSD | 10.791 | 103.42 | 38.578 | 3.0058 | 171.70 | .19200 | 33.708 | .13047 | 9.1757 | 22.000 | 77.546 |
| #1 | .00757 | -.00009 | .00578 | .00843 | .00009 | .32100 | -.00021 | 12.718 | .00266 | -.00062 | .00015 |
| #2 | .00625 | .00276 | .00765 | .00893 | -.00020 | .32139 | -.00014 | 12.741 | .00248 | -.00082 | .00043 |
| #3 | .00759 | .00567 | .00335 | .00859 | -.00015 | .32221 | -.00027 | 12.709 | .00222 | -.00054 | .00010 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00330** | **-.00194** | **.09886** | **.26881** | **.00074** | **.01079** | **.00027** | **3.8817** | **.00019** | **-.00006** | **298.14** |
| Stddev | .00419 | .00064 | .00113 | .01397 | .00020 | .00006 | .00014 | .0214 | .00343 | .00097 | 4.77 |
| %RSD | 127.15 | 33.279 | 1.1458 | 5.1968 | 27.357 | .53697 | 52.014 | .55226 | 1802.8 | 1520.3 | 1.6014 |
| #1 | .00812 | -.00150 | .09755 | .25270 | .00051 | .01073 | .00043 | 3.8815 | .00415 | -.00075 | 303.51 |
| #2 | .00063 | -.00268 | .09944 | .27610 | .00083 | .01080 | .00022 | 3.9032 | -.00192 | -.00049 | 296.50 |
| #3 | .00113 | -.00163 | .09958 | .27763 | .00089 | .01085 | .00016 | 3.8603 | -.00166 | .00104 | 294.40 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.30981** | **.00043** | **.00056** | **.00121** | **.00043** | **.00092** |
| Stddev | .00035 | .00109 | .00068 | .00170 | .00023 | .00009 |
| %RSD | .11410 | 250.62 | 120.39 | 140.67 | 53.928 | 9.9046 |
| #1 | .30978 | .00166 | -.00011 | .00265 | .00044 | .00096 |
| #2 | .31018 | -.00041 | .00124 | .00165 | .00020 | .00099 |
| #3 | .30948 | .00005 | .00055 | -.00067 | .00067 | .00082 |

Sample Name: L101-06I Acquired: 12/17/2020 21:35:44 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009088 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5073.0** | **56420.** | **109620.** |
| Stddev | 29.8 | 779. | 498. |
| %RSD | .58742 | 1.3803 | .45469 |
| #1 | 5099.4 | 55809. | 110170. |
| #2 | 5040.7 | 56156. | 109490. |
| #3 | 5078.9 | 57297. | 109210. |

Sample Name: L101-09I Acquired: 12/17/2020 21:40:38 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009089 Type: Anaylst: NTan
Comment: 5X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00504** | **.00138** | **.00313** | **.00428** | **-.00008** | **.28086** | **-.00029** | **12.880** | **.00058** | **-.00063** | **.00025** |
| Stddev | .00141 | .00150 | .00248 | .00045 | .00002 | .00061 | .00010 | .030 | .00022 | .00016 | .00005 |
| %RSD | 27.978 | 108.78 | 79.161 | 10.547 | 30.311 | .21637 | 35.719 | .23403 | 37.110 | 26.143 | 21.530 |
| #1 | .00623 | .00296 | .00394 | .00433 | -.00010 | .28026 | -.00017 | 12.883 | .00037 | -.00070 | .00030 |
| #2 | .00348 | -.00004 | .00035 | .00380 | -.00008 | .28086 | -.00033 | 12.909 | .00059 | -.00044 | .00026 |
| #3 | .00542 | .00123 | .00509 | .00470 | -.00005 | .28147 | -.00037 | 12.849 | .00080 | -.00074 | .00019 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.01406** | **-.00117** | **.10507** | **.49816** | **.03051** | **.01153** | **-.00007** | **3.7455** | **.00056** | **-.00038** | **423.22** |
| Stddev | .00855 | .00032 | .00189 | .00113 | .00014 | .00020 | .00025 | .0345 | .00177 | .00052 | 3.16 |
| %RSD | 60.797 | 27.217 | 1.8012 | .22679 | .47395 | 1.6915 | 343.67 | .92081 | 313.19 | 135.86 | .74627 |
| #1 | .01730 | -.00093 | .10376 | .49933 | .03067 | .01171 | .00020 | 3.7268 | -.00140 | -.00094 | 422.93 |
| #2 | .00437 | -.00106 | .10420 | .49707 | .03039 | .01132 | -.00027 | 3.7244 | .00202 | .00008 | 426.51 |
| #3 | .02053 | -.00154 | .10724 | .49808 | .03047 | .01157 | -.00015 | 3.7853 | .00108 | -.00029 | 420.21 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.31997** | **.00019** | **.00059** | **.00117** | **-.00049** | **-.00038** |
| Stddev | .00037 | .00026 | .00049 | .00045 | .00027 | .00021 |
| %RSD | .11569 | 132.58 | 82.257 | 38.720 | 54.859 | 55.790 |
| #1 | .31982 | .00030 | .00071 | .00065 | -.00079 | -.00060 |
| #2 | .32039 | -.00010 | .00101 | .00139 | -.00039 | -.00018 |
| #3 | .31970 | .00038 | .00006 | .00148 | -.00029 | -.00035 |

Sample Name: L101-09I Acquired: 12/17/2020 21:40:38 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009089 Type: Anaylst: NTan
Comment: 5X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5075.7** | **57678.** | **110180.** |
| Stddev | 27.3 | 1278. | 584. |
| %RSD | .53815 | 2.2157 | .52964 |
| #1 | 5053.2 | 57526. | 110740. |
| #2 | 5106.1 | 56482. | 110220. |
| #3 | 5067.6 | 59025. | 109570. |

Sample Name: L101-10I Acquired: 12/17/2020 21:45:32 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009090 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00630** | **.00380** | **.00154** | **.00409** | **-.00017** | **.26846** | **-.00027** | **43.000** | **.00074** | **-.00085** | **.00067** |
| Stddev | .00190 | .00024 | .00234 | .00031 | .00006 | .00070 | .00005 | .045 | .00018 | .00029 | .00017 |
| %RSD | 30.111 | 6.2550 | 152.03 | 7.5698 | 32.832 | .26050 | 19.282 | .10557 | 24.531 | 34.035 | 25.212 |
| #1 | .00411 | .00356 | -.00109 | .00374 | -.00019 | .26768 | -.00021 | 42.956 | .00087 | -.00073 | .00065 |
| #2 | .00751 | .00381 | .00340 | .00422 | -.00011 | .26902 | -.00031 | 43.046 | .00053 | -.00117 | .00051 |
| #3 | .00728 | .00403 | .00232 | .00432 | -.00022 | .26868 | -.00030 | 42.997 | .00081 | -.00063 | .00084 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.11014** | **-.00133** | **.11552** | **8.5590** | **.07785** | **.00388** | **.00012** | **4.4421** | **.00084** | **-.00004** | **465.49** |
| Stddev | .01257 | .00092 | .00028 | .0364 | .00020 | .00017 | .00011 | .0223 | .00096 | .00025 | 4.13 |
| %RSD | 11.414 | 69.224 | .24603 | .42497 | .25465 | 4.2745 | 95.416 | .50104 | 113.30 | 597.64 | .88687 |
| #1 | .10028 | -.00219 | .11539 | 8.5506 | .07806 | .00398 | .00024 | 4.4497 | .00042 | -.00011 | 464.14 |
| #2 | .12430 | -.00144 | .11532 | 8.5988 | .07767 | .00369 | .00002 | 4.4595 | .00017 | -.00025 | 470.12 |
| #3 | .10584 | -.00036 | .11585 | 8.5275 | .07783 | .00398 | .00010 | 4.4170 | .00194 | .00024 | 462.21 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **1.0731** | **.00077** | **.00011** | **.00050** | **-.00057** | **-.00018** |
| Stddev | .0019 | .00141 | .00103 | .00102 | .00018 | .00016 |
| %RSD | .18070 | 183.26 | 928.67 | 202.52 | 32.322 | 86.329 |
| #1 | 1.0716 | .00016 | .00125 | .00124 | -.00059 | -.00014 |
| #2 | 1.0753 | .00239 | -.00016 | .00094 | -.00074 | -.00035 |
| #3 | 1.0725 | -.00023 | -.00076 | -.00066 | -.00038 | -.00005 |

Sample Name: L101-10I Acquired: 12/17/2020 21:45:32 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009090 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5174.8** | **59128.** | **111510.** |
| Stddev | 35.3 | 684. | 741. |
| %RSD | .68134 | 1.1571 | .66453 |
| #1 | 5160.2 | 58576. | 110650. |
| #2 | 5149.2 | 58913. | 111960. |
| #3 | 5215.0 | 59893. | 111910. |

Sample Name: L101-11I Acquired: 12/17/2020 21:50:26 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009091 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00509** | **.00339** | **.00270** | **.00535** | **-.00009** | **.17461** | **-.00017** | **39.145** | **.00079** | **-.00090** | **.00056** |
| Stddev | .00210 | .00222 | .00286 | .00013 | .00005 | .00111 | .00001 | .036 | .00013 | .00017 | .00017 |
| %RSD | 41.246 | 65.452 | 105.99 | 2.5148 | 55.304 | .63363 | 8.5847 | .09077 | 16.416 | 18.469 | 29.766 |
| #1 | .00328 | .00455 | -.00013 | .00519 | -.00005 | .17446 | -.00017 | 39.104 | .00090 | -.00071 | .00074 |
| #2 | .00459 | .00477 | .00263 | .00542 | -.00007 | .17578 | -.00016 | 39.167 | .00081 | -.00102 | .00051 |
| #3 | .00738 | .00083 | .00560 | .00543 | -.00014 | .17359 | -.00019 | 39.165 | .00065 | -.00097 | .00042 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.30131** | **-.00127** | **.07037** | **10.109** | **.06390** | **.00065** | **-.00019** | **2.2055** | **.00271** | **-.00043** | **292.20** |
| Stddev | .00550 | .00084 | .00117 | .074 | .00053 | .00013 | .00013 | .0575 | .00212 | .00045 | .84 |
| %RSD | 1.8263 | 65.652 | 1.6594 | .73436 | .82719 | 19.622 | 68.164 | 2.6047 | 78.204 | 105.60 | .28915 |
| #1 | .29562 | -.00143 | .07172 | 10.032 | .06330 | .00070 | -.00034 | 2.2094 | .00153 | .00003 | 292.43 |
| #2 | .30660 | -.00037 | .06959 | 10.114 | .06430 | .00050 | -.00013 | 2.2609 | .00516 | -.00044 | 291.26 |
| #3 | .30172 | -.00202 | .06982 | 10.180 | .06410 | .00073 | -.00010 | 2.1462 | .00144 | -.00087 | 292.90 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.85636** | **.00140** | **.00045** | **.00110** | **-.00105** | **-.00004** |
| Stddev | .00022 | .00043 | .00059 | .00165 | .00007 | .00027 |
| %RSD | .02610 | 30.420 | 131.98 | 149.39 | 7.0184 | 641.25 |
| #1 | .85629 | .00139 | .00016 | .00275 | -.00097 | -.00009 |
| #2 | .85661 | .00184 | .00113 | .00110 | -.00111 | -.00029 |
| #3 | .85618 | .00099 | .00006 | -.00054 | -.00106 | .00025 |

Sample Name: L101-11I Acquired: 12/17/2020 21:50:26 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009091 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5160.4** | **57819.** | **110310.** |
| Stddev | 8.8 | 266. | 340. |
| %RSD | .17043 | .45920 | .30817 |
| #1 | 5167.6 | 58053. | 110550. |
| #2 | 5150.6 | 57874. | 109920. |
| #3 | 5163.1 | 57531. | 110460. |

Sample Name: CCV8 Acquired: 12/17/2020 21:55:19 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009092 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **105.25** | **1.3640** | **1.0222** | **1.9862** | **1.4480** | **2.4992** | **2.0147** | **79.469** | **2.5354** | **.99584** |
| Stddev | .18 | .0118 | .0038 | .0077 | .0059 | .0022 | .0093 | .022 | .0031 | .00242 |
| %RSD | .16757 | .86698 | .36891 | .38613 | .40589 | .08688 | .46357 | .02757 | .12137 | .24276 |
| #1 | 105.40 | 1.3512 | 1.0183 | 1.9801 | 1.4446 | 2.4979 | 2.0048 | 79.445 | 2.5326 | .99440 |
| #2 | 105.30 | 1.3746 | 1.0258 | 1.9836 | 1.4446 | 2.5017 | 2.0234 | 79.488 | 2.5387 | .99450 |
| #3 | 105.06 | 1.3662 | 1.0226 | 1.9948 | 1.4548 | 2.4980 | 2.0159 | 79.473 | 2.5350 | .99863 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **2.4297** | **24.885** | **2.4871** | **.52709** | **59.729** | **2.2731** | **2.4726** | **2.5149** | **63.559** | **1.0226** |
| Stddev | .0007 | .045 | .0066 | .00060 | .149 | .0075 | .0028 | .0031 | .128 | .0056 |
| %RSD | .03064 | .17905 | .26330 | .11302 | .24876 | .33020 | .11284 | .12156 | .20157 | .54498 |
| #1 | 2.4302 | 24.852 | 2.4868 | .52657 | 59.578 | 2.2696 | 2.4736 | 2.5184 | 63.476 | 1.0167 |
| #2 | 2.4300 | 24.935 | 2.4808 | .52697 | 59.734 | 2.2680 | 2.4695 | 2.5130 | 63.494 | 1.0278 |
| #3 | 2.4289 | 24.867 | 2.4939 | .52774 | 59.875 | 2.2817 | 2.4748 | 2.5133 | 63.707 | 1.0232 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

Sample Name: CCV8 Acquired: 12/17/2020 21:55:19 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009092 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.49075** | **63.941** | **.48895** | **2.3483** | **.53596** | **.50852** | **1.5327** | F **2.8004** |
| Stddev | .00058 | .101 | .00045 | .0127 | .00195 | .00484 | .0039 | .0029 |
| %RSD | .11753 | .15728 | .09195 | .54265 | .36323 | .95256 | .25428 | .10462 |
| #1 | .49015 | 63.887 | .48848 | 2.3342 | .53586 | .50306 | 1.5298 | 2.7978 |
| #2 | .49081 | 63.880 | .48937 | 2.3590 | .53407 | .51017 | 1.5372 | 2.7997 |
| #3 | .49130 | 64.057 | .48901 | 2.3517 | .53796 | .51232 | 1.5312 | 2.8036 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail |
| Value | | | | | | | | 2.5000 |
| Range | | | | | | | | 10.000% |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5140.6** | **57306.** | **110890.** |
| Stddev | 8.0 | 209. | 417. |
| %RSD | .15626 | .36463 | .37596 |
| #1 | 5131.6 | 57484. | 111220. |
| #2 | 5146.9 | 57356. | 110420. |
| #3 | 5143.4 | 57076. | 111020. |

Sample Name: CCB8 Acquired: 12/17/2020 21:59:54 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009093 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00861** | **.00208** | **.00017** | **.00026** | **-.00002** | F **.01182** | **-.00004** | **-.00845** | **.00044** | **-.00045** |
| Stddev | .00154 | .00191 | .00156 | .00036 | .00006 | .00082 | .00007 | .00129 | .00004 | .00017 |
| %RSD | 17.853 | 91.939 | 929.54 | 139.36 | 322.80 | 6.9471 | 158.54 | 15.326 | 10.060 | 36.547 |
| #1 | .00988 | .00417 | .00192 | -.00015 | .00004 | .01257 | .00002 | -.00994 | .00049 | -.00055 |
| #2 | .00904 | .00162 | -.00034 | .00054 | -.00007 | .01195 | -.00004 | -.00758 | .00041 | -.00055 |
| #3 | .00690 | .00044 | -.00108 | .00039 | -.00003 | .01095 | -.00011 | -.00783 | .00042 | -.00026 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | .01000 | | | | |
| Low Limit | | | | | | -.01000 | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00020** | **.00494** | **-.00058** | **-.00081** | **-.01763** | **-.00025** | **.00053** | **.00007** | **-.09272** | **.00187** |
| Stddev | .00016 | .00713 | .00061 | .00120 | .02015 | .00027 | .00005 | .00021 | .03551 | .00045 |
| %RSD | 79.349 | 144.21 | 105.98 | 146.85 | 114.28 | 107.29 | 9.7475 | 296.77 | 38.302 | 23.755 |
| #1 | .00032 | .00506 | -.00104 | -.00212 | -.02763 | -.00029 | .00058 | .00028 | -.10760 | .00203 |
| #2 | .00027 | -.00224 | .00012 | .00023 | -.03083 | -.00049 | .00049 | .00006 | -.11836 | .00137 |
| #3 | .00002 | .01201 | -.00081 | -.00055 | .00556 | .00004 | .00050 | -.00013 | -.05218 | .00222 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | |
| Low Limit | | | | | | | | | | |

Sample Name: CCB8 Acquired: 12/17/2020 21:59:54 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009093 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00037** | F **.52163** | **-.00048** | **.00164** | **.00017** | **.00058** | **-.00059** | **.00308** |
| Stddev | .00026 | .02709 | .00008 | .00061 | .00046 | .00126 | .00024 | .00013 |
| %RSD | 71.548 | 5.1941 | 17.140 | 37.383 | 275.81 | 216.47 | 40.756 | 4.2910 |
| #1 | -.00020 | .51367 | -.00057 | .00235 | .00042 | -.00075 | -.00075 | .00305 |
| #2 | -.00023 | .55182 | -.00042 | .00133 | -.00036 | .00075 | -.00031 | .00323 |
| #3 | -.00068 | .49941 | -.00045 | .00124 | .00045 | .00174 | -.00071 | .00297 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .10000 | | | | | | |
| Low Limit | | -.10000 | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5820.5** | **56967.** | **118070.** |
| Stddev | 29.4 | 67. | 123. |
| %RSD | .50435 | .11702 | .10417 |
| #1 | 5789.3 | 56989. | 117930. |
| #2 | 5824.8 | 56892. | 118120. |
| #3 | 5847.5 | 57020. | 118160. |

Sample Name: L101-12I Acquired: 12/17/2020 22:04:42 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009094 Type: Anaylst: NTan
Comment: 5X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00596** | **.00194** | **.00003** | **.01434** | **-.00007** | **.38925** | **-.00019** | **29.191** | **.00055** | -.00071 | **.00014** |
| Stddev | .00158 | .00113 | .00317 | .00022 | .00009 | .00038 | .00009 | .038 | .00012 | .00003 | .00049 |
| %RSD | 26.572 | 58.088 | 12594. | 1.5489 | 122.63 | .09845 | 47.053 | .13112 | 21.000 | 4.0996 | 352.51 |
| #1 | .00740 | .00297 | .00025 | .01410 | -.00004 | .38907 | -.00020 | 29.155 | .00068 | -.00068 | .00065 |
| #2 | .00623 | .00073 | -.00326 | .01439 | .00000 | .38900 | -.00027 | 29.186 | .00046 | -.00072 | .00010 |
| #3 | .00426 | .00212 | .00308 | .01454 | -.00017 | .38969 | -.00010 | 29.231 | .00051 | -.00074 | -.00033 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.97802** | **-.00038** | **.07766** | **10.866** | **.15108** | **.00606** | **.00025** | 2.2571 | **-.00048** | **-.00047** | **239.54** |
| Stddev | .00537 | .00059 | .00121 | .058 | .00050 | .00015 | .00020 | .0480 | .00113 | .00025 | .45 |
| %RSD | .54907 | 155.96 | 1.5574 | .53162 | .33213 | 2.5165 | 78.985 | 2.1269 | 236.75 | 52.611 | .18631 |
| #1 | .98420 | -.00097 | .07865 | 10.807 | .15058 | .00598 | .00048 | 2.3125 | -.00098 | -.00044 | 239.07 |
| #2 | .97531 | -.00036 | .07631 | 10.923 | .15109 | .00623 | .00008 | 2.2275 | -.00127 | -.00024 | 239.96 |
| #3 | .97453 | .00020 | .07800 | 10.868 | .15158 | .00596 | .00020 | 2.2313 | .00082 | -.00073 | 239.60 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.47540** | **.00067** | **-.00024** | **.00111** | **-.00057** | **-.00047** |
| Stddev | .00070 | .00043 | .00044 | .00199 | .00037 | .00015 |
| %RSD | .14631 | 64.463 | 182.50 | 178.79 | 64.246 | 31.299 |
| #1 | .47484 | .00086 | -.00056 | .00019 | -.00097 | -.00043 |
| #2 | .47518 | .00097 | .00026 | -.00025 | -.00024 | -.00036 |
| #3 | .47618 | .00018 | -.00042 | .00340 | -.00051 | -.00064 |

Sample Name: L101-12I Acquired: 12/17/2020 22:04:42 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009094 Type: Anaylst: NTan
Comment: 5X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5215.9** | **58783.** | **112350.** |
| Stddev | 13.0 | 407. | 566. |
| %RSD | .24975 | .69243 | .50352 |
| #1 | 5205.5 | 59251. | 112420. |
| #2 | 5230.5 | 58505. | 112880. |
| #3 | 5211.7 | 58595. | 111760. |

Sample Name: L101-13I Acquired: 12/17/2020 22:09:26 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009095 Type: Anaylst: NTan
Comment: 10X

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00801** | **.00205** | **.00168** | **.00546** | **-.00002** | **.17717** | **-.00020** | **39.220** | **.00095** | **-.00060** | **.00078** |
| Stddev | .00045 | .00155 | .00041 | .00016 | .00008 | .00053 | .00009 | .053 | .00014 | .00019 | .00007 |
| %RSD | 5.6284 | 75.874 | 24.289 | 3.0003 | 394.45 | .29972 | 45.246 | .13524 | 14.207 | 32.148 | 9.2939 |
| #1 | .00749 | .00316 | .00126 | .00551 | .00008 | .17768 | -.00016 | 39.159 | .00111 | -.00081 | .00078 |
| #2 | .00832 | .00270 | .00208 | .00560 | -.00006 | .17720 | -.00030 | 39.257 | .00088 | -.00043 | .00085 |
| #3 | .00821 | .00027 | .00170 | .00528 | -.00008 | .17662 | -.00013 | 39.243 | .00087 | -.00056 | .00071 |

| Elem | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se | Ag | Na |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.30456** | **-.00013** | **.06931** | **10.150** | **.06400** | **.00079** | **-.00019** | **2.1449** | **.00081** | **-.00058** | **292.75** |
| Stddev | .00183 | .00076 | .00145 | .016 | .00054 | .00019 | .00042 | .0329 | .00256 | .00015 | 1.31 |
| %RSD | .60052 | 562.30 | 2.0864 | .16134 | .84338 | 23.751 | 217.90 | 1.5327 | 317.10 | 26.424 | .44733 |
| #1 | .30320 | .00001 | .07082 | 10.152 | .06341 | .00062 | -.00043 | 2.1329 | .00328 | -.00054 | 292.58 |
| #2 | .30384 | .00054 | .06794 | 10.132 | .06411 | .00075 | .00030 | 2.1821 | .00098 | -.00045 | 294.13 |
| #3 | .30664 | -.00095 | .06917 | 10.165 | .06447 | .00099 | -.00045 | 2.1197 | -.00183 | -.00075 | 291.52 |

| Elem | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.85655** | **.00066** | **.00132** | **.00110** | **-.00050** | **-.00009** |
| Stddev | .00052 | .00059 | .00109 | .00023 | .00011 | .00021 |
| %RSD | .06074 | 89.837 | 82.889 | 20.804 | 22.538 | 221.13 |
| #1 | .85600 | .00035 | .00131 | .00084 | -.00063 | -.00033 |
| #2 | .85703 | .00029 | .00023 | .00123 | -.00044 | .00006 |
| #3 | .85662 | .00135 | .00241 | .00125 | -.00043 | -.00001 |

Sample Name: L101-13I Acquired: 12/17/2020 22:09:26 Type: Unk
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009095 Type: Anaylst: NTan
Comment: 10X

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5137.3** | **56981.** | **109830.** |
| Stddev | 26.4 | 95. | 440. |
| %RSD | .51394 | .16632 | .40081 |
| #1 | 5122.7 | 57090. | 110140. |
| #2 | 5121.4 | 56936. | 110030. |
| #3 | 5167.8 | 56917. | 109330. |

Sample Name: CCV9 Acquired: 12/17/2020 22:14:19 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009096 Type: Anaylst: NTan
Comment:

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **104.89** | **1.3743** | **1.0278** | **1.9747** | **1.4470** | **2.4858** | 2.0339 | 79.623 | 2.5344 | .98992 |
| Stddev | .29 | .0031 | .0011 | .0096 | .0077 | .0027 | .0046 | .024 | .0044 | .00388 |
| %RSD | .28079 | .22433 | .10376 | .48715 | .53043 | .10691 | .22627 | .03058 | .17506 | .39154 |
| #1 | 105.15 | 1.3778 | 1.0290 | 1.9791 | 1.4497 | 2.4882 | 2.0389 | 79.650 | 2.5363 | .98729 |
| #2 | 104.94 | 1.3731 | 1.0269 | 1.9637 | 1.4384 | 2.4862 | 2.0329 | 79.616 | 2.5376 | .98811 |
| #3 | 104.57 | 1.3720 | 1.0276 | 1.9813 | 1.4531 | 2.4830 | 2.0298 | 79.603 | 2.5293 | .99437 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **2.4123** | **24.755** | **2.4698** | **.52580** | **59.890** | **2.2764** | 2.4691 | 2.5120 | 63.685 | 1.0323 |
| Stddev | .0083 | .052 | .0110 | .00435 | .181 | .0023 | .0072 | .0066 | .112 | .0046 |
| %RSD | .34365 | .20938 | .44425 | .82707 | .30298 | .10070 | .28985 | .26328 | .17512 | .44661 |
| #1 | 2.4213 | 24.815 | 2.4648 | .52237 | 59.904 | 2.2781 | 2.4640 | 2.5113 | 63.785 | 1.0318 |
| #2 | 2.4105 | 24.726 | 2.4622 | .52433 | 59.702 | 2.2738 | 2.4659 | 2.5058 | 63.564 | 1.0280 |
| #3 | 2.4050 | 24.723 | 2.4823 | .53069 | 60.064 | 2.2772 | 2.4773 | 2.5190 | 63.705 | 1.0372 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| Value | | | | | | | | | | |
| Range | | | | | | | | | | |

Sample Name: CCV9 Acquired: 12/17/2020 22:14:19 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009096 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.48529** | **64.031** | **.48917** | **2.3777** | **.53369** | **.50587** | **1.5279** | F **2.7951** |
| Stddev | .00116 | .158 | .00060 | .0007 | .00254 | .00225 | .0029 | .0056 |
| %RSD | .23956 | .24703 | .12181 | .03063 | .47561 | .44476 | .18644 | .20117 |
| #1 | .48657 | 64.180 | .48964 | 2.3770 | .53077 | .50820 | 1.5300 | 2.7937 |
| #2 | .48499 | 63.865 | .48938 | 2.3784 | .53491 | .50371 | 1.5290 | 2.7903 |
| #3 | .48431 | 64.048 | .48850 | 2.3778 | .53539 | .50568 | 1.5247 | 2.8013 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail |
| Value | | | | | | | | 2.5000 |
| Range | | | | | | | | 10.000% |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5076.1** | **55096.** | **108050.** |
| Stddev | 7.6 | 152. | 350. |
| %RSD | .14972 | .27522 | .32438 |
| #1 | 5084.3 | 55078. | 107950. |
| #2 | 5074.7 | 55256. | 107760. |
| #3 | 5069.3 | 54955. | 108440. |

Sample Name: CCB9 Acquired: 12/17/2020 22:18:53 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009097 Type: Anaylst: NTan
Comment:

<LMDL H12/22/20

| Elem | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00940** | **.00219** | **.00126** | **.00014** | **-.00006** | F **.01319** | **-.00011** | **-.00808** | **.00048** | **-.00050** |
| Stddev | .00142 | .00119 | .00309 | .00011 | .00006 | .00046 | .00003 | .00511 | .00007 | .00007 |
| %RSD | 15.084 | 54.398 | 246.15 | 78.691 | 108.53 | 3.5115 | 25.968 | 63.258 | 14.448 | 14.494 |
| #1 | .01085 | .00129 | -.00138 | .00003 | -.00003 | .01372 | -.00008 | -.00221 | .00046 | -.00048 |
| #2 | .00935 | .00174 | .00048 | .00014 | -.00013 | .01296 | -.00012 | -.01154 | .00043 | -.00058 |
| #3 | .00801 | .00355 | .00466 | .00025 | -.00002 | .01289 | -.00014 | -.01050 | .00056 | -.00044 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | .01000 | | | | |
| Low Limit | | | | | | -.01000 | | | | |

| Elem | Cu | Fe | Pb | Li | Mg | Mn | Mo | Ni | K | Se |
|---|---|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **.00012** | **-.00442** | **-.00043** | **-.00010** | **-.01537** | **-.00006** | **.00048** | **-.00012** | **-.09995** | **.00106** |
| Stddev | .00020 | .00256 | .00062 | .00128 | .00250 | .00051 | .00029 | .00013 | .04611 | .00280 |
| %RSD | 164.98 | 57.952 | 144.07 | 1297.2 | 16.272 | 890.68 | 59.320 | 112.56 | 46.130 | 264.47 |
| #1 | -.00009 | -.00566 | -.00070 | -.00113 | -.01775 | -.00064 | .00076 | -.00013 | -.10533 | -.00189 |
| #2 | .00016 | -.00613 | -.00088 | -.00049 | -.01276 | .00030 | .00019 | .00002 | -.14314 | .00367 |
| #3 | .00030 | -.00148 | .00028 | .00133 | -.01560 | .00017 | .00050 | -.00025 | -.05139 | .00139 |
| Check ? | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | | | | | | | | | |
| Low Limit | | | | | | | | | | |

Sample Name: CCB9 Acquired: 12/17/2020 22:18:53 Type: QC
Method: 20L6010(v13) Mode: CONC Corr. Factor: 1.000000
User: admin Date File: ID8L009097 Type: Anaylst: NTan
Comment:

| Elem | Ag | Na | Sr | Tl | Sn | Ti | V | Zn |
|---|---|---|---|---|---|---|---|---|
| Units | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| Avg | **-.00058** | F **.47855** | **-.00063** | **.00153** | **-.00093** | **-.00090** | **-.00053** | **.00302** |
| Stddev | .00041 | .02333 | .00008 | .00130 | .00077 | .00040 | .00038 | .00025 |
| %RSD | 70.086 | 4.8743 | 12.670 | 85.056 | 82.549 | 44.148 | 72.374 | 8.4073 |
| #1 | -.00067 | .50391 | -.00054 | .00300 | -.00005 | -.00056 | -.00078 | .00295 |
| #2 | -.00014 | .45801 | -.00069 | .00057 | -.00148 | -.00080 | -.00009 | .00331 |
| #3 | -.00094 | .47372 | -.00067 | .00100 | -.00125 | -.00133 | -.00072 | .00281 |
| Check ? | Chk Pass | Chk Fail | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass | Chk Pass |
| High Limit | | .10000 | | | | | | |
| Low Limit | | -.10000 | | | | | | |

| Int. Std. | Sc2273_A | Sc3613_R | Sc3645_A |
|---|---|---|---|
| Units | Cts/S | Cts/S | Cts/S |
| Avg | **5679.8** | **54883.** | **114740.** |
| Stddev | 17.1 | 285. | 502. |
| %RSD | .30163 | .51901 | .43739 |
| #1 | 5660.6 | 55092. | 114230. |
| #2 | 5685.5 | 54559. | 114750. |
| #3 | 5693.4 | 54999. | 115230. |

EMAX LABORATORIES, INC.

# DIGESTION LOG
*for*
# ICP-METALS

**Note:** For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

**Comments:**

Digestion Vessel Lot # SMSA-04-05-06

Filter Lot # N/A

ALL SAMPLES PH<2

Book #: EIP-147

Batch: IPL013W

Matrix: WATER

Digestor ID: E

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-3010 | 7 |
| ☐ EMAX-3050 | 7 |
| ☐ EMAX-200.7 | 5 |
| ☐ EMAX- | |

| Start | Temp | End | Temp |
|---|---|---|---|
| | 92.1 °C | | 91.4 °C |

| Standards | ID | Amount Added (ml/g) |
|---|---|---|
| LCS-1 | SM1A-018-1210 | .25 |
| LCS-2 | -1301 | .25 |
| LCS-3 | -1302 | .50 |
| MS | SAME SPIKE SOLN VOL AS LCS 1,2,3 | |
| Blank Soil (Bead) | N/A | N/A |
| **Reagent** | **Lot# / ID** | **Amount Added (ml)** |
| $HNO_3$ | SW1A-009-09-01 | 1.5+1.5 |
| HCl | -09-06 | 2.5+2.5 |
| $H_2O_2$ | N/A | N/A |
| $HNO_3$(1:1) | | |
| pH Strip (0-14) | HC857466 | |

| | |
|---|---|
| Digestate Location | METALS |
| Extract Location | N/A |
| ☑ Reagent Water ID: | SW1A-009-10-04 |
| ☑ Thermometer ID: | 200450144/E32 |
| ☑ Pipette ID: | 742766331 |
| ☑ Pipette ID: | 842780799 |
| ☐ Pipette ID: | |
| ☐ $HNO_3$ dispenser checked @ 5.0 ml with Class A volumetric flask | |
| ☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask | |

Prepared By: CK

Standard Added By: CK Witnessed By: MC

Extract Rcvd By: MC Checked By: CK

EMAX LABORATORIES

DIGESTION LOG FOR METALS

| PrepBatchID | LabSampleID | Aliquot | Unit | DateTime | Vd(ml) | ExpAmt | ExpVd(ml) | PrepFctr | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 20IPL013W01 | IPL013WB | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | |
| 20IPL013W02 | IPL013WL | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | |
| 20IPL013W03 | IPL013WC | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | |
| 20IPL013W04 | L101-02 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W05 | L101-04 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W06 | L101-04M | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W07 | L101-04S | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W08 | L101-06 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W09 | L101-08 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W10 | L101-09 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W11 | L101-10 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W12 | L101-11 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W13 | L101-12 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IPL013W14 | L101-13 | 50 | ml | 12/15/20 10:22 | 50 | 50 | 50 | 1 | DISSOLVED |

CK 12-15-20

Vd=digestate volume PrepFctr=)ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 12/15/20 11:23

☑ Digestion Ended @ 12/15/20 15:54

Prepared By: CKaing

Checked By: CK

Comments:

Date 12-15-20

SOP EMAX-3010 Rev. 7

CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD SW6020A
DISSOLVED METALS BY ICP-MS

A total of three(3) water samples were received on 12/10/20 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IML011WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IML011WL/IML011WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed and the following were noted: L101-02M/L101-02S - Percent recoveries for Magnesium(27X), Molybdenum and Selenium were not within MS/MSD QC limits. Percent recovery for Manganese(24X) was not within MS QC limit. The enclosed value(#X) is the ratio of parent sample result and spike amount. Presence of matrix interference was suspected. The rest of the analytes were in control. Analytical spike and serial dilution were analyzed and evaluated as appropriate. Results were within expected values. Refer to Matrix QC summary form for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met with the exception of those that were discussed within the associated QC parameter.

Samples were reported from dilution due to suspected matrix interference. An attempt to analyze at 1X DF resulted in internal-standard deficiency most likely caused by high Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ARCADIS
Project : PG&E TOPOCK-GMP

SDG NO. : 20L101
Instrument ID : H6

WATER

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|---|---|---|---|---|---|---|---|---|---|
| MBLK1W | IML011WB | 1.00 | NA | 12/29/2015:04 | 12/15/2011:22 | F6L16021 | F6L16016 | IML011W | Method Blank |
| LCS1W | IML011WL | 1.00 | NA | 12/29/2015:08 | 12/15/2011:22 | F6L16022 | F6L16016 | IML011W | Lab Control Sample (LCS) |
| LCD1W | IML011WC | 1.00 | NA | 12/29/2015:13 | 12/15/2011:22 | F6L16023 | F6L16016 | IML011W | LCS Duplicate |
| MW-54-085-Q420MS | L101-02M | 10 | NA | 12/22/2013:49 | 12/15/2011:22 | H6L09020 | H6L09015 | IML011W | Matrix Spike Sample (MS) |
| MW-54-085-Q420MSD | L101-02S | 10 | NA | 12/22/2013:52 | 12/15/2011:22 | H6L09021 | H6L09015 | IML011W | MS Duplicate (MSD) |
| MW-54-085-Q420 | L101-02A | 10 | NA | 12/22/2013:55 | 12/15/2011:22 | H6L09022 | H6L09015 | IML011W | Analytical Spike Sample |
| MW-54-085-Q420 | L101-02I | 10 | NA | 12/22/2013:57 | 12/15/2011:22 | H6L09023 | H6L09015 | IML011W | Diluted Sample |
| MW-54-085-Q420 | L101-02J | 50 | NA | 12/22/2014:00 | 12/15/2011:22 | H6L09024 | H6L09015 | IML011W | Diluted Sample |
| MW-54-140-Q420 | L101-04I | 10 | NA | 12/22/2014:02 | 12/15/2011:22 | H6L09025 | H6L09015 | IML011W | Diluted Sample |
| MW-54-195-Q420 | L101-06I | 10 | NA | 12/22/2014:05 | 12/15/2011:22 | H6L09026 | H6L09015 | IML011W | Diluted Sample |

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 09:06 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-54-085-Q420 | Date Analyzed: | 12/22/20 13:57 |
| Lab Samp ID: | L101-02I | Dilution Factor: | 10 |
| Lab File ID: | H6L09023 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09015 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Arsenic | ND | 10.0 | 2.50 |
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 80200 | 1000 | 200 |
| Manganese | 733 | 100 | 5.00 |
| Molybdenum | ND | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 08:22 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-54-140-Q420 | Date Analyzed: | 12/22/20 14:02 |
| Lab Samp ID: | L101-04I | Dilution Factor: | 10 |
| Lab File ID: | H6L09025 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09015 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Arsenic | ND | 10.0 | 2.50 |
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 15300 | 1000 | 200 |
| Manganese | ND | 100 | 5.00 |
| Molybdenum | ND | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 07:36 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-54-195-Q420 | Date Analyzed: | 12/22/20 14:05 |
| Lab Samp ID: | L101-06I | Dilution Factor: | 10 |
| Lab File ID: | H6L09026 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09015 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Arsenic | ND | 10.0 | 2.50 |
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 4770 | 1000 | 200 |
| Manganese | 331 | 100 | 5.00 |
| Molybdenum | 107 | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | NA |
| Project | : PG&E TOPOCK-GMP | Date Received: | NA |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MBLK1W | Date Analyzed: | 12/29/20 15:04 |
| Lab Samp ID: | IML011WB | Dilution Factor: | 1 |
| Lab File ID: | F6L16021 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | F6L16016 | Instrument ID: | F6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Arsenic | ND | 1.00 | 0.250 |
| Chromium | ND | 1.00 | 0.250 |
| Magnesium | ND | 100 | 20.0 |
| Manganese | ND | 10.0 | 0.500 |
| Molybdenum | ND | 10.0 | 0.500 |
| Selenium | ND | 10.0 | 0.300 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | THuang |

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW6020A

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1.00 1.00 1.00
SAMPLE ID : MBLK1W LCS1W LCD1W
LAB SAMPLE ID : IML011WB IML011WL IML011WC
LAB FILE ID : F6L16021 F6L16022 F6L16023
DATE PREPARED : 12/15/20 11:22 12/15/20 11:22 12/15/20 11:22
DATE ANALYZED : 12/29/20 15:04 12/29/20 15:08 12/29/20 15:13
PREP BATCH : IML011W IML011W IML011W
CALIBRATION REF: F6L16016 F6L16016 F6L16016

ACCESSION:

| PARAMETERS | MBResult (ug/L) | SpikeAmt (ug/L) | LCSResult (ug/L) | LCSRec (%) | SpikeAmt (ug/L) | LCDResult (ug/L) | LCDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 30 | 29.7 | 99 | 30 | 29.9 | 100 | 1 | 85-115 | 20 |
| Chromium | ND | 30 | 31.1 | 104 | 30 | 31.0 | 103 | 0 | 85-115 | 20 |
| Magnesium | ND | 3000 | 3320 | 111 | 3000 | 3190 | 106 | 4 | 85-115 | 20 |
| Manganese | ND | 30 | 30.2 | 101 | 30 | 30.4 | 101 | 1 | 85-115 | 20 |
| Molybdenum | ND | 30 | 29.0 | 97 | 30 | 28.9 | 96 | 0 | 85-115 | 20 |
| Selenium | ND | 30 | 31.1 | 104 | 30 | 31.4 | 105 | 1 | 85-115 | 20 |

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW6020A

| | | | |
|---|---|---|---|
| MATRIX | : WATER | | % MOISTURE: NA |
| DILUTION FACTOR | : 10 | 10 | 10 |
| SAMPLE ID | : MW-54-085-Q420 | MW-54-085-Q420MS | MW-54-085-Q420MSD |
| LAB SAMPLE ID | : L101-02I | L101-02M | L101-02S |
| LAB FILE ID | : H6L09023 | H6L09020 | H6L09021 |
| DATE PREPARED | : 12/15/20 11:22 | 12/15/20 11:22 | 12/15/20 11:22 |
| DATE ANALYZED | : 12/22/20 13:57 | 12/22/20 13:49 | 12/22/20 13:52 |
| PREP BATCH | : IML011W | IML011W | IML011W |
| CALIBRATION REF | : H6L09015 | H6L09015 | H6L09015 |

ACCESSION:

| PARAMETERS | PSResult (ug/L) | SpikeAmt (ug/L) | MSResult (ug/L) | MSRec (%) | SpikeAmt (ug/L) | MSDResult (ug/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 30 | 34.3 | 114 | 30 | 35.8 | 119 | 4 | 75-125 | 20 |
| Chromium | ND | 30 | 30.0 | 100 | 30 | 31.0 | 103 | 3 | 75-125 | 20 |
| Magnesium | 80200 | 3000 | 78700 | -50* | 3000 | 81100 | 30* | 3 | 75-125 | 20 |
| Manganese | 733 | 30 | 744 | 37* | 30 | 758 | 83 | 2 | 75-125 | 20 |
| Molybdenum | ND | 30 | ND | 0.00* | 30 | ND | 0.00* | 0 | 75-125 | 20 |
| Selenium | ND | 30 | ND | 0.00* | 30 | ND | 0.00* | 0 | 75-125 | 20 |

PSResult - Parent Sample Result
* Out of QC limit

EMAX QUALITY CONTROL DATA
ANALYTICAL SPIKE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW6020A

MATRIX : WATER % MOISTURE: NA
DILUTION FACTOR: 10 10
SAMPLE ID : MW-54-085-Q420 MW-54-085-Q420
LAB SAMPLE ID : L101-02I L101-02A
LAB FILE ID : H6L09023 H6L09022
DATE PREPARED : 12/15/20 11:22 12/15/20 11:22
DATE ANALYZED : 12/22/20 13:57 12/22/20 13:55
PREP BATCH : IML011W IML011W
CALIBRATION REF: H6L09015 H6L09015

ACCESSION:

| PARAMETERS | Sample Result (ug/L) | Spike Amt (ug/L) | AS Result (ug/L) | AS Rec (%) | QC Limit (%) |
|---|---|---|---|---|---|
| Arsenic | ND | 300 | 326 | 109 | 80-120 |
| Chromium | ND | 300 | 306 | 102 | 80-120 |
| Magnesium | 80200 | 30000 | 105000 | 83 | 80-120 |
| Manganese | 733 | 300 | 992 | 86 | 80-120 |
| Molybdenum | ND | 300 | 322 | 107 | 80-120 |
| Selenium | ND | 300 | 303 | 101 | 80-120 |

AS - Analytical Spike

EMAX QUALITY CONTROL DATA
SERIAL DILUTION ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW6020A

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 10 | 50 |
| SAMPLE ID | : MW-54-085-Q420 | MW-54-085-Q420 |
| LAB SAMPLE ID | : L101-02I | L101-02J |
| LAB FILE ID | : H6L09023 | H6L09024 |
| DATE PREPARED | : 12/15/20 11:22 | 12/15/20 11:22 |
| DATE ANALYZED | : 12/22/20 13:57 | 12/22/20 14:00 |
| PREP BATCH | : IML011W | IML011W |
| CALIBRATION REF | : H6L09015 | H6L09015 |

ACCESSION:

| PARAMETERS | Sample Result (ug/L) | SD Result (ug/L) | %Difference (%) | Max %D (%) |
|---|---|---|---|---|
| Arsenic | ND | ND | 0 | 10 |
| Chromium | ND | ND | 0 | 10 |
| Magnesium | 80200 | 81200 | 1 | 10 |
| Manganese | 733 | 731 | 0 | 10 |
| Molybdenum | ND | ND | 0 | 10 |
| Selenium | ND | ND | 0 | 10 |

SD - Serial Dilution

# ICP-MS QC CHECK TABLE

| QC | HIGH STD | ICV | CCV | ICSAB | ICSA |
|---|---|---|---|---|---|
| Limit% | | 90-110 | 90-110 | 80-120 | 80-120 |
| Comp | ug/L | ug/L | ug/L | ug/L | ug/L |
| Al | 50000 | 30000 | 25000 | 100000 | 100000 |
| Sb | 100 | 60 | 50 | 20 | 0 |
| As | 500 | 300 | 250 | 20 | 0 |
| Ba | 1000 | 300 | 500 | 20 | 0 |
| Be | 50 | 30 | 25 | 20 | 0 |
| B | 100 | 30 | 50 | 20 | 0 |
| Cd | 500 | 300 | 250 | 20 | 0 |
| Ca | 50000 | 30000 | 25000 | 100000 | 100000 |
| Cr | 500 | 300 | 250 | 20 | 0 |
| Co | 500 | 300 | 250 | 20 | 0 |
| Cu | 500 | 300 | 250 | 20 | 0 |
| Fe | 50000 | 30000 | 25000 | 100000 | 100000 |
| Li | 50 | 30 | 25 | 20 | 0 |
| Pb | 500 | 300 | 250 | 20 | 0 |
| Mg | 50000 | 30000 | 25000 | 100000 | 100000 |
| Mn | 3000 | 2000 | 1500 | 20 | 0 |
| Mo | 500 | 300 | 250 | 2000 | 2000 |
| Ni | 500 | 300 | 250 | 20 | 0 |
| P | 500 | 300 | 250 | 100000 | 100000 |
| K | 50000 | 30000 | 25000 | 100000 | 100000 |
| Se | 500 | 300 | 250 | 20 | 0 |
| Si | 5000 | 3000 | 2500 | 200 | 0 |
| Ag | 50 | 30 | 25 | 20 | 0 |
| Na | 50000 | 30000 | 25000 | 100000 | 100000 |
| Sr | 500 | 300 | 250 | 20 | 0 |
| Tl | 500 | 300 | 250 | 20 | 0 |
| Sn | 500 | 300 | 250 | 20 | 0 |
| Ti | 500 | 300 | 250 | 2000 | 2000 |
| W | 50 | 30 | 25 | 20 | 0 |
| V | 500 | 300 | 250 | 20 | 0 |
| U | 500 | 300 | 250 | 20 | 0 |
| Zn | 500 | 300 | 250 | 20 | 0 |
| Zr | 50 | 30 | 25 | 20 | 0 |

**Note:** For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

**Start Date:** 12|22|20 12:58

**End Date:** 12|22|20 15:45

**Comments:**

All soil/solid samples are diluted at 10x dilution prior to analysis.

Filter Lot #: NA

L401, L425, L430
10X: 0.5mL sample vol to 5mL

CCV 4 Ag fail
CCV 5 ↓
CCV 6 ↓

| | |
|---|---|
| **Book #:** | AH6-006 |
| **Instrument No.:** | H6 |
| **Analytical Batch:** | IH6L09 |
| **Analytical Sequence:** | H6L09 |
| **Method File:** | E60201163 |
| **Micropipette ID:** | ☐ 142781004 |
| **Micropipette ID:** | ☑ ICP-06 |
| **Micropipette ID:** | ☑ 339362028 |
| **Micropipette ID:** | ☑ GFAA-07 |
| **Micropipette ID:** | ☐ 339342032 |
| **Micropipette ID:** | ☑ 542780515 |
| **Micropipette ID:** | ☐ 542761827 |
| **Micropipette ID:** | ☐ |

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-200.8 | 6 |
| ☑ EMAX-6020 | 13 |
| ☐ EMAX-6020CA | 2 |
| ☐ EMAX- | |
| ☐ EMAX- | |

| STANDARDS ID | | STANDARDS ID | |
|---|---|---|---|
| S0 | SM6B-20-65-01 | MRL1(1) | SM6B-20-39-01 |
| S1 | 65-02 | MRL2(0.4) | 71-02 |
| S2 | 66-01 | MRL3(CAL) | 72-01 |
| S3 | 66-02 | MRL4 | NA |
| S4 | 67-01 | MRL5 | ↓ |
| S5 | NA | MRL6 | ↓ |
| S6 | ↓ | Internal Standard | SM6B-20-53-02 |
| S7 | ↓ | Post-Spike 1 | SM6A-007-06-29 |
| ICV | SM6B-20-37-01 | Post-Spike 2 | ↓ 06-30 |
| CCV | 67-02 | Post-Spike 3 | NA |
| ICSA | 64-01 | Post-Spike 4 | ↓ |
| ICSAB | 64-02 | | |
| 6020 TUNE SOLN. | NA | | |
| 200.8 TUNE SOLN. | SM6B-20-53-01 | | |

Analyzed By: LY

Date: 12|22|20

INITIAL CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW6020A
Sequence : IH6L09
InstrumentID: H6

| | | ICV | | | ICSA | | | ICSAB | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Lab Samp ID : | | ICV | | | ICSA | | | ICSAB | | |
| QC Limit : | | %R:90-110/RSD:<5 | | | %R:80-120/<LOD | | | %R:80-120 | | |
| Lab File ID : | | H6L09008 | | | H6L09012 | | | H6L09013 | | |
| DateAnalyed : | | 12/22/2013:15 | | | 12/22/2013:26 | | | 12/22/2013:28 | | |
| Parameter | | Result | ICV EV | RSD | %Recovery | Result | ICSA EV | %Rec/LOD | Result | ICSAB EV | %Recovery |
| Lithium | | 28.97 | 30 | 4.7 | 97 | 0.43379 | 0 | >0 | 18.078 | 20 | 90 |
| Beryllium | | 29.26 | 30 | 2.9 | 98 | 0.0025401 | 0 | <0.1 | 18.081 | 20 | 90 |
| Boron | | 30.01 | 30 | 2.3 | 100 | 0.61990 | 0 | <5.0 | 18.196 | 20 | 91 |
| Sodium | | 28910 | 30000 | 4.9 | 96 | 104890 | 100000 | 105 | 93443 | 100000 | 93 |
| Magnesium | T | 28870 | 30000 | 1.5 | 96 | 102470 | 100000 | 102 | 93036 | 100000 | 93 |
| Aluminum | | 28820 | 30000 | 3.7 | 96 | 102690 | 100000 | 103 | 95314 | 100000 | 95 |
| Silicon | | 3133 | 3000 | 2.3 | 104 | 5.6254 | 0 | <20 | 173.47 | 200 | 87 |
| Phosphorus | | 280.0 | 300 | 2.2 | 93 | 103480 | 100000 | 103 | 95236 | 100000 | 95 |
| Potassium | | 30050 | 30000 | 7.4 | 100 | 100110 | 100000 | 100 | 100690 | 100000 | 101 |
| Calcium | | 28460 | 30000 | 1.5 | 95 | 104030 | 100000 | 104 | 94612 | 100000 | 95 |
| Titanium | | 267.6 | 300 | 1.2 | 89* | 2123.5 | 2000 | 106 | 1973.3 | 2000 | 99 |
| Vanadium | | 297.5 | 300 | 7.6 | 99 | 0.028170 | 0 | <0.5 | 19.246 | 20 | 96 |
| Chromium | T | 306.2 | 300 | 5.4 | 102 | 0.84695 | 0 | >0.25 | 20.546 | 20 | 103 |
| Manganese | T | 1911 | 2000 | 2.5 | 96 | 0.092464 | 0 | <0.5 | 18.468 | 20 | 92 |
| Iron | | 28150 | 30000 | 1.1 | 94 | 104810 | 100000 | 105 | 94836 | 100000 | 95 |
| Cobalt | | 294.9 | 300 | 0.7 | 98 | 0.24384 | 0 | >0.2 | 17.881 | 20 | 89 |
| Nickel | | 307.3 | 300 | 6.1 | 102 | 0.21208 | 0 | >0.2 | 19.152 | 20 | 96 |
| Copper | | 305.1 | 300 | 4.0 | 102 | 0.32703 | 0 | <0.5 | 19.481 | 20 | 97 |
| Zinc | | 307.5 | 300 | 5.0 | 102 | 1.3694 | 0 | <10 | 19.443 | 20 | 97 |
| Arsenic | T | 293.7 | 300 | 6.0 | 98 | 0.10412 | 0 | <0.25 | 19.948 | 20 | 100 |
| Selenium | T | 295.9 | 300 | 3.5 | 99 | 0.19663 | 0 | <0.3 | 17.580 | 20 | 88 |
| Strontium | | 300.5 | 300 | 5.2 | 100 | 0.89194 | 0 | <1.0 | 20.076 | 20 | 100 |
| Zirconium | | 30.41 | 30 | 7.9 | 101 | 0.13094 | 0 | <2.0 | 6.2218 | 20 | 31* |
| Molybdenum | T | 301.9 | 300 | 3.3 | 101 | 2056.0 | 2000 | 103 | 1955.5 | 2000 | 98 |
| Silver | | 27.59 | 30 | 3.4 | 92 | 0.016817 | 0 | <0.2 | 16.697 | 20 | 83 |
| Cadmium | | 305.7 | 300 | 1.8 | 102 | 0.093807 | 0 | <0.2 | 17.623 | 20 | 88 |
| Tin | | 297.9 | 300 | 2.0 | 99 | 0.18070 | 0 | <0.2 | 17.575 | 20 | 88 |
| Antimony | | 54.70 | 60 | 2.6 | 91 | 0.032246 | 0 | <0.5 | 17.711 | 20 | 89 |
| Barium | | 308.1 | 300 | 0.9 | 103 | 0.055927 | 0 | <0.5 | 17.750 | 20 | 89 |
| Tungsten | | 30.08 | 30 | 2.6 | 100 | 0.17207 | 0 | <1.0 | 17.886 | 20 | 89 |
| Mercury | | 2.939 | 3 | 1.6 | 98 | 0.00075199 | 0 | <0.1 | 1.8765 | 2 | 94 |
| Thallium | | 305.8 | 300 | 2.1 | 102 | 0.0046937 | 0 | <0.2 | 17.581 | 20 | 88 |
| Lead | | 302.0 | 300 | 2.1 | 101 | 0.037478 | 0 | <0.1 | 17.591 | 20 | 88 |
| Uranium | | 299.2 | 300 | 1.3 | 100 | 0.0053806 | 0 | <0.1 | 18.373 | 20 | 92 |

Unit: ug/L
T: Target analyte
EV: Expected Value
Comment: * Out of QC limit

CONTINUING CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW6020A
Sequence : IH6L09
Instrument ID: H6

| CCV SampleID | | | CCV1 | | | CCV2 | | |
|---|---|---|---|---|---|---|---|---|
| CCV DataFileID | | | H6L09015 | | | H6L09027 | | |
| CCV DateTime | | | 12/22/20 13:36 | | | 12/22/20 14:08 | | |
| PARAMETER | | CCV EV | RESULT | %REC | RSD | RESULT | %REC | RSD |
| Lithium | | 25 | 24.2 | 97 | 5.1 | 24.1 | 96 | 2.7 |
| Beryllium | | 25 | 24.2 | 97 | 6.6 | 24.1 | 96 | 1.8 |
| Boron | | 50 | 48.3 | 97 | 5.2 | 50.5 | 101 | 2.1 |
| Sodium | | 25000 | 23200 | 93 | 2.4 | 24700 | 99 | 5.2 |
| Magnesium | T | 25000 | 24900 | 100 | 4.0 | 24900 | 100 | 3.0 |
| Aluminum | | 25000 | 24200 | 97 | 5.2 | 24700 | 99 | 2.4 |
| Silicon | | 2500 | 2360 | 94 | 0.5 | 2460 | 98 | 7.0 |
| Phosphorus | | 250 | 247 | 99 | 4.4 | 244 | 98 | 5.0 |
| Potassium | | 25000 | 24500 | 98 | 3.3 | 25300 | 101 | 0.9 |
| Calcium | | 25000 | 23500 | 94 | 2.1 | 24500 | 98 | 4.3 |
| Titanium | | 250 | 234 | 94 | 3.1 | 227 | 91 | 3.7 |
| Vanadium | | 250 | 247 | 99 | 2.4 | 250 | 100 | 2.7 |
| Chromium | T | 250 | 246 | 98 | 2.2 | 250 | 100 | 1.2 |
| Manganese | T | 1500 | 1520 | 101 | 4.5 | 1470 | 98 | 2.5 |
| Iron | | 25000 | 23900 | 96 | 1.1 | 24300 | 97 | 4.6 |
| Cobalt | | 250 | 253 | 101 | 4.0 | 248 | 99 | 3.1 |
| Nickel | | 250 | 243 | 97 | 3.4 | 247 | 99 | 2.3 |
| Copper | | 250 | 253 | 101 | 2.2 | 255 | 102 | 0.5 |
| Zinc | | 250 | 251 | 100 | 3.9 | 249 | 100 | 1.7 |
| Arsenic | T | 250 | 247 | 99 | 5.0 | 250 | 100 | 3.5 |
| Selenium | T | 250 | 236 | 94 | 0.7 | 237 | 95 | 10.5 |
| Strontium | | 250 | 249 | 100 | 3.6 | 245 | 98 | 2.2 |
| Zirconium | | 25 | 23.2 | 93 | 6.5 | 23.2 | 93 | 4.7 |
| Molybdenum | T | 250 | 239 | 96 | 4.4 | 238 | 95 | 2.0 |
| Silver | | 25 | 23.0 | 92 | 4.6 | 22.7 | 91 | 2.4 |
| Cadmium | | 250 | 245 | 98 | 3.4 | 244 | 98 | 2.1 |
| Tin | | 250 | 242 | 97 | 4.2 | 239 | 96 | 2.3 |
| Antimony | | 50 | 46.2 | 92 | 3.5 | 45.6 | 91 | 2.5 |
| Barium | | 500 | 485 | 97 | 3.1 | 486 | 97 | 2.2 |
| Tungsten | | 25 | 24.8 | 99 | 5.4 | 24.1 | 96 | 4.8 |
| Mercury | | 2.5 | 2.44 | 98 | 8.3 | 2.46 | 98 | 2.8 |
| Thallium | | 250 | 251 | 101 | 6.3 | 248 | 99 | 2.3 |
| Lead | | 250 | 251 | 100 | 5.6 | 248 | 99 | 3.3 |
| Uranium | | 250 | 247 | 99 | 5.5 | 245 | 98 | 3.7 |

Unit: ug/L
T: Target analyte
%Rec QC Limit: 90-110
RSD QC Limit: <5
CCV EV: CCV Expected Value ug/L
Comment: * Out of QC limit

CONTINUING CALIBRATION BLANK SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : SW6020A
Sequence : IH6L09
Instrument ID: H6

| CB SampleID | | : ICB | CCB1 | CCB2 |
|---|---|---|---|---|
| CB DataFileID | | : H6L09009 | H6L09016 | H6L09028 |
| CB DateTime | | : 12/22/2013:18 | 12/22/2013:39 | 12/22/2014:10 |

| PARAMETER | | LOD | RESULT | < LOD > | RESULT | < LOD > | RESULT | < LOD > |
|---|---|---|---|---|---|---|---|---|
| Lithium | | 0 | 0.3 | >0 | 0.06 | >0 | 0.02 | >0 |
| Beryllium | | 0.1 | 0.02 | <0.1 | 0.02 | <0.1 | 0.02 | <0.1 |
| Boron | | 5.0 | 0.5 | <5.0 | 0.7 | <5.0 | 2 | <5.0 |
| Sodium | | 50 | 0.5 | <50 | 8 | <50 | 50 | <50 |
| Magnesium | T | 20 | 9 | <20 | 8 | <20 | 10 | <20 |
| Aluminum | | 20 | 9 | <20 | 8 | <20 | 10 | <20 |
| Silicon | | 20 | 3 | <20 | 2 | <20 | 1 | <20 |
| Phosphorus | | 25 | 0.5 | <25 | 0.9 | <25 | 0.9 | <25 |
| Potassium | | 20 | 0.1 | <20 | 2 | <20 | 10 | <20 |
| Calcium | | 25 | 3 | <25 | 2 | <25 | 6 | <25 |
| Titanium | | 0.5 | 0.10 | <0.5 | 0.08 | <0.5 | 0.1 | <0.5 |
| Vanadium | | 0.5 | 0.03 | <0.5 | 0.02 | <0.5 | 0.03 | <0.5 |
| Chromium | T | 0.25 | 0.004 | <0.25 | 0.01 | <0.25 | 0.03 | <0.25 |
| Manganese | T | 0.5 | 0.7 | >0.5 | 0.5 | >0.5 | 0.7 | >0.5 |
| Iron | | 10 | 3 | <10 | 3 | <10 | 6 | <10 |
| Cobalt | | 0.2 | 0.09 | <0.2 | 0.08 | <0.2 | 0.1 | <0.2 |
| Nickel | | 0.2 | 0.03 | <0.2 | 0.03 | <0.2 | 0.05 | <0.2 |
| Copper | | 0.5 | 0.07 | <0.5 | 0.1 | <0.5 | 0.2 | <0.5 |
| Zinc | | 10 | 0.2 | <10 | 0.07 | <10 | 0.1 | <10 |
| Arsenic | T | 0.25 | 0.05 | <0.25 | 0.07 | <0.25 | 0.07 | <0.25 |
| Selenium | T | 0.3 | 0.08 | <0.3 | 0.04 | <0.3 | 0.05 | <0.3 |
| Strontium | | 1.0 | 0.09 | <1.0 | 0.08 | <1.0 | 0.1 | <1.0 |
| Zirconium | | 2.0 | 0.009 | <2.0 | 0.007 | <2.0 | 0.009 | <2.0 |
| Molybdenum | T | 0.5 | 0.1 | <0.5 | 0.10 | <0.5 | 0.1 | <0.5 |
| Silver | | 0.2 | 0.01 | <0.2 | 0.01 | <0.2 | 0.01 | <0.2 |
| Cadmium | | 0.2 | 0.1 | <0.2 | 0.10 | <0.2 | 0.1 | <0.2 |
| Tin | | 0.2 | 0.3 | >0.2 | 0.2 | <0.2 | 0.10 | <0.2 |
| Antimony | | 0.5 | 0.02 | <0.5 | 0.02 | <0.5 | 0.02 | <0.5 |
| Barium | | 0.5 | 0.09 | <0.5 | 0.1 | <0.5 | 0.2 | <0.5 |
| Tungsten | | 1.0 | 0.03 | <1.0 | 0.02 | <1.0 | 0.02 | <1.0 |
| Mercury | | 0.1 | 0.01 | <0.1 | 0.01 | <0.1 | 0.0002 | <0.1 |
| Thallium | | 0.2 | 0.2 | <0.2 | 0.1 | <0.2 | 0.2 | <0.2 |
| Lead | | 0.1 | 0.2 | >0.1 | 0.2 | >0.1 | 0.1 | >0.1 |
| Uranium | | 0.1 | 0.09 | <0.1 | 0.08 | <0.1 | 0.1 | >0.1 |

Unit: ug/L
CB: Calibration Blank
T: Target analyte
Acceptance Criteria: CCB Result <LOD
Comment:

# Sample List

**Acq/Data Batch** D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b

## Block List

### Acquisition Order

| Sequence Order | Block Name |
|---|---|
| 1 | Calibration Standards |
| 2 | Unknown Samples |

## Blocks

### Calibration Standards

| # | Skip | Sample Type | Sample Name | Comment | Vial# | File Name | Replicates | Level | Total Dil. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | CalBlk | BLANK | | 1101 | H6L09001.d | | 1 | |
| 2 | | CalBlk | BLANK | | 1101 | H6L09002.d | | 1 | |
| 3 | | CalStd | S0 | | 1102 | H6L09003.d | | 1 | |
| 4 | | CalStd | S1 | | 1104 | H6L09004.d | | 2 | |
| 5 | | CalStd | S2 | | 1105 | H6L09005.d | | 3 | |
| 6 | | CalStd | S3 | | 1106 | H6L09006.d | | 4 | |
| 7 | | CalStd | S4 | | 1107 | H6L09007.d | | 5 | |
| 8 | | ICV | ICV | | 1204 | H6L09008.d | | | 1 |
| 9 | | ICB | ICB | | 1102 | H6L09009.d | | | 1 |
| 10 | | LLCCV | MRLL2201 ✓ | 1/100/10 ppb | 1306 | H6L09010.d | | | 1 |
| 11 | | LLCCV2 | MRLL2202 | 0.4/40/4 ppb | 1307 | H6L09011.d | | | 1 |
| 12 | | ICS-A | ICSA | | 1304 | H6L09012.d | | | 1 |
| 13 | | ICSB | ICSAB | | 1305 | H6L09013.d | | | 1 |
| 14 | | Sample | MRLL2203 | 500 ppb CAT | 1207 | H6L09014.d | | | 1 |
| 15 | | CCV | CCV1 | | 1206 | H6L09015.d | | | 1 |
| 16 | | CCB | CCB1 | | 1102 | H6L09016.d | | | 1 |

### Unknown Samples

| # | Skip | Sample Type | Sample Name | Comment | Vial# | File Name | Replicates | Level | Total Dil. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Blank | IML011WB | | 2101 | H6L09017.d | | | 1 |
| 2 | | LCSW | IML011WL | Cr 116% | 2102 | H6L09018.d | | | 1 |
| 3 | | LCSW | IML011WC | | 2103 | H6L09019.d | | | 1 |
| 4 | | Sample | L101-02M | | 2104 | H6L09020.d | | | 10 |
| 5 | | Sample | L101-02S | | 2105 | H6L09021.d | | | 10 |
| 6 | | Sample | L101-02A ✓ | | 2106 | H6L09022.d | | | 10 |
| 7 | | Sample | L101-02I | | 2107 | H6L09023.d | | | 10 |
| 8 | | Sample | L101-02J | | 2108 | H6L09024.d | | | 50 |
| 9 | | Sample | L101-04I | | 2109 | H6L09025.d | | | 10 |
| 10 | | Sample | L101-06I | | 2110 | H6L09026.d | | | 10 |
| 11 | | CCV | CCV2 | | 1206 | H6L09027.d | | | 1 |
| 12 | | CCB | CCB2 | | 1102 | H6L09028.d | | | 1 |
| 13 | | Sample | L101-08I | | 2111 | H6L09029.d | | | 10 |
| 14 | | Sample | L101-09I | | 2112 | H6L09030.d | | | 10 |
| 15 | | Sample | L101-10I | | 2201 | H6L09031.d | | | 10 |
| 16 | | Sample | L101-11I | 157120-1 — reprep | 2202 | H6L09032.d | | | 10 |
| 17 | | Sample | L101-12I | | 2203 | H6L09033.d | | | 10 |
| 18 | | Sample | L101-13I | | 2204 | H6L09034.d | | | 10 |
| 19 | | Sample | L101-11I | | 2202 | H6L09035.d | | | 10 |
| 20 | | CCV | CCV3 | | 1206 | H6L09036.d | | | 1 |

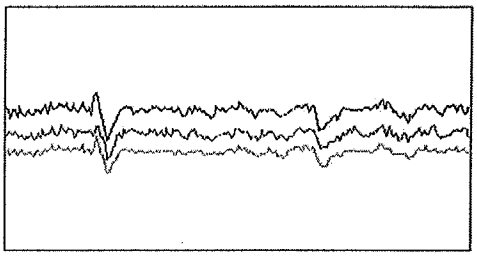
# Sample List

| # | Skip | Sample Type | Sample Name | Comment | Vial# | File Name | Replicates | Level | Total Dil. |
|---|---|---|---|---|---|---|---|---|---|
| 21 | | CCB | CCB3 | | 1102 | H6L09037.d | | | 1 |
| 22 | | ICS-A | ICSA2 | | 1304 | H6L09038.d | | | 1 |
| 23 | | ICSB | ICSAB2 | | 1305 | H6L09039.d | | | 1 |
| 24 | | Blank | IML015WB X reprep | | 2205 | H6L09040.d | | | 1 |
| 25 | | LCSW | IML015WL | | 2206 | H6L09041.d | | | 1 |
| 26 | | LCSW | IML015WC | | 2207 | H6L09042.d | | | 1 |
| 27 | | Blank | IML015WB | | 2205 | H6L09043.d | | | 1 |
| 28 | | Sample | L425-01I | | 2208 | H6L09044.d | | | 10 |
| 29 | | Sample | L430-01I | | 2209 | H6L09045.d | | | 10 |
| 30 | | Sample | L123-01 IS fail | | 2210 | H6L09046.d | | | 1 |
| 31 | | CCV | CCV4 Ag fail | | 1206 | H6L09047.d | | | 1 |
| 32 | | CCB | CCB4 | | 1102 | H6L09048.d | | | 1 |
| 33 | | Sample | L123-02 | | 2211 | H6L09049.d | | | 1 |
| 34 | | Sample | L123-03 Cr Cd f | | 2212 | H6L09050.d | | | 1 |
| 35 | | Sample | L123-04 | | 2301 | H6L09051.d | | | 1 |
| 36 | | Sample | L123-05 | | 2302 | H6L09052.d | | | 1 |
| 37 | | Sample | L123-06 | | 2303 | H6L09053.d | | | 1 |
| 38 | | Sample | L123-07 | | 2304 | H6L09054.d | | | 1 |
| 39 | | Sample | L123-08 Ni f | | 2305 | H6L09055.d | | | 1 |
| 40 | | Sample | L123-09 | | 2306 | H6L09056.d | | | 1 |
| 41 | | Sample | L123-10 Zn f | | 2307 | H6L09057.d | | | 1 |
| 42 | | Sample | L123-11 | | 2308 | H6L09058.d | | | 1 |
| 43 | | CCV | CCV5 Ag fail | | 1206 | H6L09059.d | | | 1 |
| 44 | | CCB | CCB5 | | 1102 | H6L09060.d | | | 1 |
| 45 | | Sample | L123-01N | | 2210 | H6L09061.d | | | 1 |
| 46 | | CCV | CCV6 Ag fail | | 1206 | H6L09062.d | | | 1 |
| 47 | | CCB | CCB6 | | 1102 | H6L09063.d | | | 1 |

# Performance Report

| | |
|---|---|
| **Operator Name** | LYaman |
| **Acq. Date-Time** | 2020-12-22 10:24:52 |
| **Instrument Name** | G8421A SG19253823 |
| **Sample Introduction** | ISIS |
| **Nebulizer Type** | MicroMist |
| **Ion Lens Model** | x-Lens |
| **Tune Parameters** | Standard Tune |

**Sensitivity**



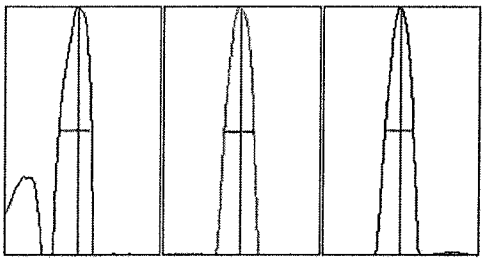
| Mass | Range | Count | RSD% | Background |
|---|---|---|---|---|
| 7 | 10000 | 4778 | 4.386 | 0.500 |
| 89 | 50000 | 20215 | 4.605 | 1.200 |
| 205 | 20000 | 11498 | 4.368 | 3.450 |

Sampling Period [sec] 0.311
Integration Time [sec] 0.1

**Oxide/Doubly Charged Ratio**

Oxide 156 / 140 1.118 %
Doubly Charged 70 / 140 1.643 %

**Resolution/Axis**



| Mass | Peak Height | Axis | W-50% | W-10% |
|---|---|---|---|---|
| 7 | 2092.82 | 6.95 | 0.62 | 0.77 |
| 89 | 8785.44 | 89.00 | 0.58 | 0.75 |
| 205 | 4963.22 | 205.00 | 0.56 | 0.75 |

Integration Time [sec] 0.1
Acquisition Time [sec] 22.74

**Tune Parameters**

**Plasma Parameters**

| | | | | | |
|---|---|---|---|---|---|
| RF Power | 1550 W | Option Gas | --- | Makeup Gas | 0.00 L/min |
| RF Matching | 1.20 V | Nebulizer Pump | 0.10 rps | Auxiliary Gas | 0.90 L/min |
| Sample Depth | 8.0 mm | S/C Temp | 2 °C | Plasma Gas | 15.0 L/min |
| Nebulizer Gas | 1.08 L/min | | | | |

**Lens Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Extract 1 | 0.0 V | Omega Lens | 9.2 V | Deflect | 14.6 V |
| Extract 2 | -195.0 V | Cell Entrance | -30 V | Plate Bias | -35 V |
| Omega Bias | -80 V | Cell Exit | -50 V | | |

# Performance Report

**Cell Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Use Gas | No | 3rd Gas Flow | --- | Energy Discrimination | 5.0 V |
| He Flow | 0.0 mL/min | OctP Bias | -8.0 V | | |
| H2 Flow | 0.0 mL/min | OctP RF | 200 V | | |

**QP Parameters**

| | |
|---|---|
| QP Bias | -3.0 V |

**Hardware Settings**

**Torch**

| | | | | | |
|---|---|---|---|---|---|
| Torch H | 0.6 mm | Torch H (Hot) | --- | Torch H (Cool) | --- |
| Torch V | -0.1 mm | Torch V (Hot) | --- | Torch V (Cool) | --- |

**Plasma Correction**

| | | | | | |
|---|---|---|---|---|---|
| Nebulizer Gas Offset | 0.03 L/min | Makeup Gas (Hot) | --- | Makeup Gas (Cool) | --- |
| | | Sample Depth (Hot) | --- | | |

**Resolution/Axis**

| | | | | | |
|---|---|---|---|---|---|
| Mass Gain | 122 | Axis Gain | 0.9995 | | |
| Mass Offset | 124 | Axis Offset | -0.07 | | |

**EM**

| | | | | | |
|---|---|---|---|---|---|
| Discriminator | 4.1 mV | Analog HV | 2167 V | Pulse HV | 965 V |

# Performance Report

**Meter**

| Name | Value | Unit |
|---|---|---|
| Nebulizer Gas | 1.08 | L/min |
| MU./Dil. Gas | 0.00 | L/min |
| Plasma Gas | 15.01 | L/min |
| Aux Gas | 0.90 | L/min |
| Ar Gas Tank Press | 7.55E+2 | kPa |
| +5V (Press Gage) | 5.0 | V |
| Ar AMFC Temp | 32.8 | °C |
| Nebulizer Gas(DP) | 3.81E+0 | kPa |
| MU./Dil. Gas(DP) | -1.85E-1 | kPa |
| Aux Gas(DP) | 1.23E+1 | kPa |
| Plasma Gas(DP) | 1.11E+1 | kPa |
| Nebulizer Gas(BP) | 5.89E+2 | kPa |
| MU./Dil. Gas(BP) | -2.16E+0 | kPa |
| Aux Gas(BP) | 5.93E+1 | kPa |
| Plasma Gas(BP) | 4.03E+1 | kPa |
| S/C Temp (H) | 16.1 | °C |
| S/C Temp (L) | 2.0 | °C |
| Peltier Voltage | 2.6 | V |
| IF/BK Press | 2.35E+2 | Pa |
| Analyzer Press | 7.40E-5 | Pa |
| IG HV | 178 | V |
| IG Emission | 4.98 | µA |
| TMP Revolution | 100.0 | % |
| TMP Rev (RAW) | 100.3 | % |
| TMP Current | 2.71 | A |
| PWR AMP Drain I | 0.2 | A |
| PWR AMP Bias | 4.16 | V |
| OctP RF (Avg) | 203.9 | V |
| OctP RF Set | 4.0 | V |
| OctP FET Bias Set | 3.96 | V |
| OctP RF(+) | 176.2 | V |
| OctP RF(-) | 231.5 | V |
| OctP Bias | -8.0 | V |
| Cell Temp. | 65.0 | °C |
| Cell Heater Volt. | 3.7 | V |
| +U Voltage | 6.8 | V |

| Name | Value | Unit |
|---|---|---|
| -U Voltage | -13.8 | V |
| V Voltage | 35.1 | V |
| QPRF Fader | 0.0 | V |
| Pickup Temp | 55.0 | °C |
| PWR Amp Temp | 0.1 | V |
| +600V | 608.2 | V |
| -120V | -133.8 | V |
| -720V | -738.1 | V |
| Prefilter Bias | -5.09 | V |
| Pickup Heater I | 0.06 | A |
| QP PS +48V | 47.5 | V |
| QP PS +48V I | 0.00 | A |
| Analog HV | -2171 | V |
| Pulse HV | 974 | V |
| EM Gate | -42.6 | V |
| Pulse Gate | 206.3 | V |
| EM Entrance | 0.2 | V |
| EM HV Gain | -804.2 | V |
| Inner Pole | -300.3 | V |
| Outer Pole | 20.1 | V |
| Analog -5V | -5.1 | V |
| Analog +15V | 14.5 | V |
| Analog -15V | -14.4 | V |
| Analog +5V | 5.2 | V |
| Shunt C Pos | 1.2 | V |
| Drain Volt.(max) | 63.3 | V |
| RF PS +48V | 47.7 | V |
| Forward Power | 1548 | W |
| Reflected Power | 2 | W |
| Plasma Freq. | 26.75 | MHz |
| Drain I 1 | 11.49 | A |
| Drain I 2 | 10.99 | A |
| Drain I 3 | 10.91 | A |
| Drain I 4 | 10.24 | A |
| Temp Sensor | 2.8 | V |
| Driver I | 5.59 | A |

| Name | Value | Unit |
|---|---|---|
| Igniter | 0.0 | V |
| Driver Voltage Set | 6.5 | V |
| Unbalance Current | 0.44 | A |
| PWM Threshold Set | 0.2 | V |
| Driver Voltage | 5.1 | V |
| PWM Threshold | 0.2 | V |
| Phase Detector | 0.0 | mV |
| H2 Gas | 0.00 | mL/min |
| He Gas | 0.00 | mL/min |
| H2 Gas Press | 1.70E+2 | kPa |
| He Gas Press | 1.06E+0 | kPa |
| ORS AMFC Temp | 32.8 | °C |
| Atmospheric Press | 1.02E+2 | kPa |
| Extract 1 | -0.1 | V |
| Extract 2 | -195.3 | V |
| Omega Bias | -80.0 | V |
| Omega Lens | 9.1 | V |
| Cell Entrance | -30.0 | V |
| Cell Exit | -50.2 | V |
| Deflect | 14.5 | V |
| Plate Bias | -35.0 | V |
| HV+530V | 524 | V |
| HV+240V | 237 | V |
| HV-360V | -357 | V |
| Inlet Temp | 29.7 | °C |
| Internal Temp | 35.9 | °C |
| +24V | 23.6 | V |
| Water Temp | 18.7 | °C |
| Water RF/WC/IF | 1.46 | L/min |
| ISIS 3 Pump Speed | 0.0 | % |
| Valve Position | | |
| Tune/ISTD Valve | | |

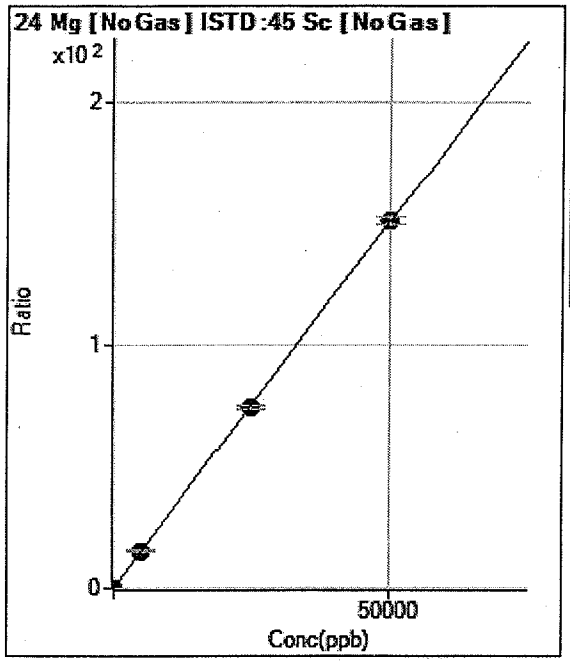
**Performance Report History**

**Sensitivity**

Calibration for H6L09063.d

| | |
|---|---|
| Batch Folder: | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b\ |
| Analysis File: | IH6L09.batch.bin |
| DA Date-Time: | 2020-12-22 15:47:27 |
| Calibration Title: | |
| Calibration Method: | External Calibration |
| VIS Interpolation Fit: | |

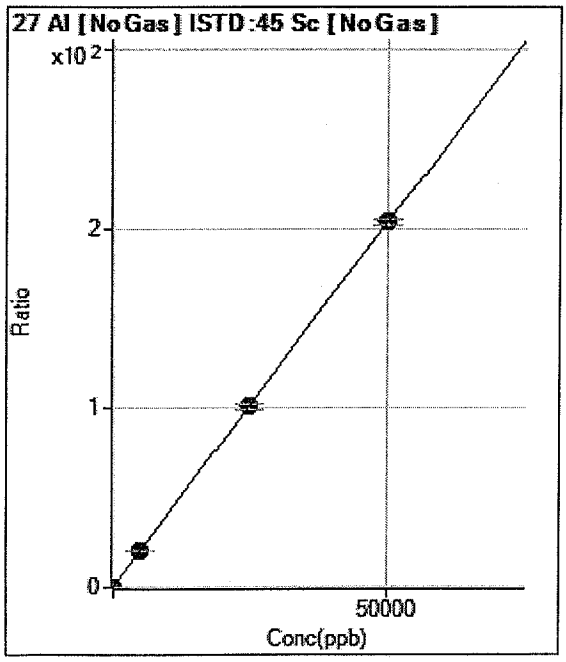
| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | H6L09003.d | S0 | 2020-12-22 13:01:29 |
| 2 | H6L09004.d | S1 | 2020-12-22 13:04:20 |
| 3 | H6L09005.d | S2 | 2020-12-22 13:07:11 |
| 4 | H6L09006.d | S3 | 2020-12-22 13:10:19 |
| 5 | H6L09007.d | S4 | 2020-12-22 13:13:07 |




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 31658.53 | 0.0070 | P | 4.2 |
| 2 | ☐ | 50.000 | 47.982 | 689377.92 | 0.1513 | P | 1.0 |
| 3 | ☐ | 5000.000 | 5153.237 | 69950176.00 | 15.5076 | A | 2.6 |
| 4 | ☐ | 25000.000 | 24723.229 | 356608512.00 | 74.3732 | A | 2.5 |
| 5 | ☐ | 50000.000 | 50123.064 | 741563690.67 | 150.7746 | A | 2.0 |

y = 0.0030 * x + 0.0070
R = 1.0000
DL = 0.2883
BEC = 2.316

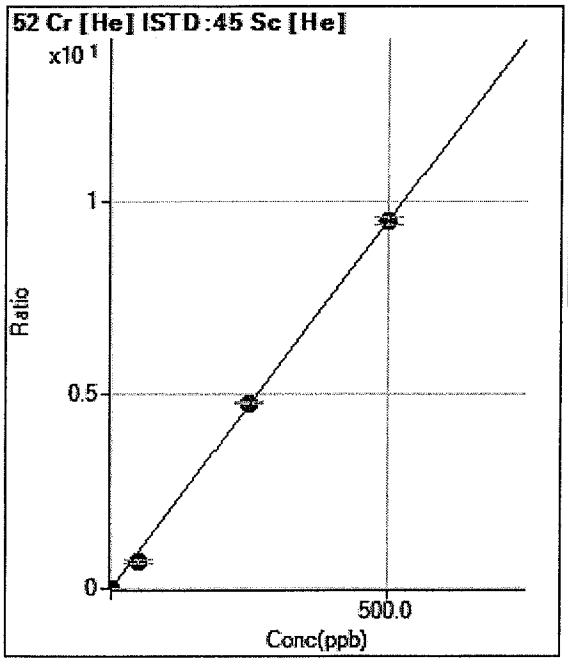
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 29932.36 | 0.0066 | P | 5.0 |
| 2 | ☐ | 50.000 | 51.046 | 977207.72 | 0.2145 | A | 2.4 |
| 3 | ☐ | 5000.000 | 5056.087 | 92886681.95 | 20.5957 | A | 3.8 |
| 4 | ☐ | 25000.000 | 24826.302 | 484799659.44 | 101.1027 | A | 2.2 |
| 5 | ☐ | 50000.000 | 50081.239 | 1003196465.05 | 203.9443 | A | 1.7 |

y = 0.0041 * x + 0.0066
R = 1.0000
DL = 0.2445
BEC = 1.617

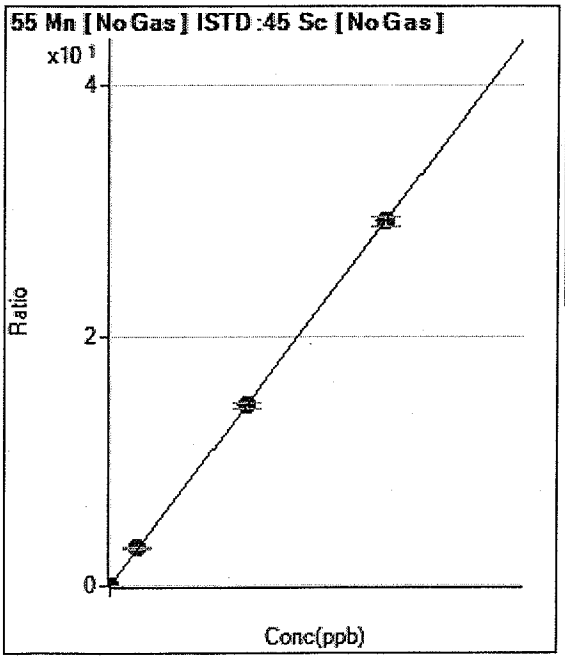
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3024.33 | 0.0056 | P | 1.1 |
| 2 | ☐ | 0.500 | 0.493 | 8019.02 | 0.0149 | P | 6.3 |
| 3 | ☐ | 50.000 | 37.488 | 397593.30 | 0.7151 | P | 11.5 |
| 4 | ☐ | 250.000 | 252.554 | 2734932.75 | 4.7855 | A | 1.5 |
| 5 | ☐ | 500.000 | 499.974 | 5434731.67 | 9.4683 | A | 2.2 |

y = 0.0189 * x + 0.0056
R = 0.9997
DL = 0.009279
BEC = 0.2942

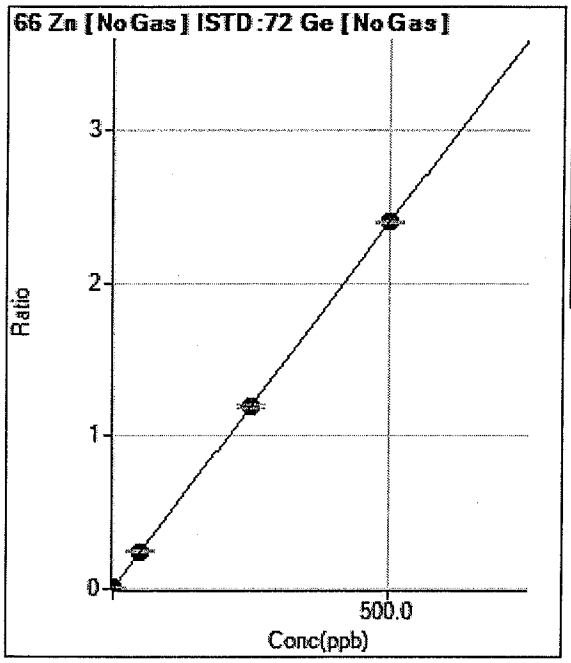
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 12426.98 | 0.0027 | P | 3.6 |
| 2 | ☐ | 0.500 | 0.477 | 33555.09 | 0.0074 | P | 1.2 |
| 3 | ☐ | 300.000 | 311.438 | 13658992.00 | 3.0284 | A | 3.3 |
| 4 | ☐ | 1500.000 | 1491.226 | 69466461.33 | 14.4903 | A | 3.4 |
| 5 | ☐ | 3000.000 | 3003.243 | 143502522.67 | 29.1799 | A | 2.6 |

y = 0.0097 * x + 0.0027
R = 1.0000
DL = 0.03078
BEC = 0.2814

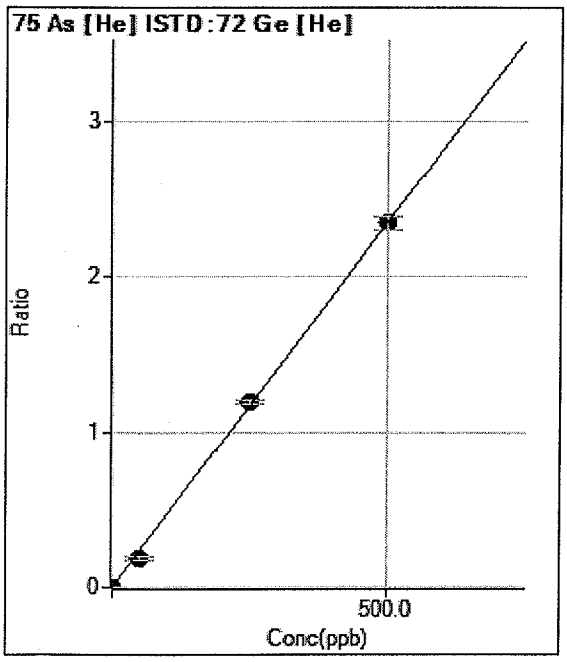
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1637.44 | 0.0013 | P | 8.7 |
| 2 | ☐ | 1.000 | 1.171 | 9475.97 | 0.0069 | P | 1.4 |
| 3 | ☐ | 50.000 | 51.160 | 334738.51 | 0.2464 | P | 2.1 |
| 4 | ☐ | 250.000 | 248.645 | 1692473.71 | 1.1924 | A | 2.3 |
| 5 | ☐ | 500.000 | 500.561 | 3382187.50 | 2.3992 | A | 0.9 |

y = 0.0048 * x + 0.0013
R = 1.0000
DL = 0.07047
BEC = 0.2687

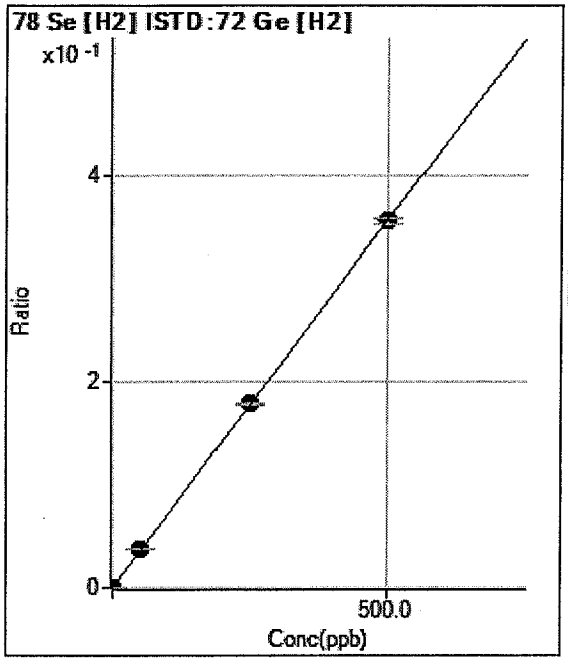
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 181.67 | 0.0005 | P | 9.0 |
| 2 | ☐ | 0.500 | 0.468 | 982.70 | 0.0027 | P | 4.4 |
| 3 | ☐ | 50.000 | 39.734 | 67474.83 | 0.1873 | P | 9.1 |
| 4 | ☐ | 250.000 | 252.936 | 437252.02 | 1.1892 | P | 2.1 |
| 5 | ☐ | 500.000 | 499.559 | 855949.23 | 2.3481 | P | 3.6 |

y = 0.0047 * x + 5.3491E-004
R = 0.9998
DL = 0.03059
BEC = 0.1138

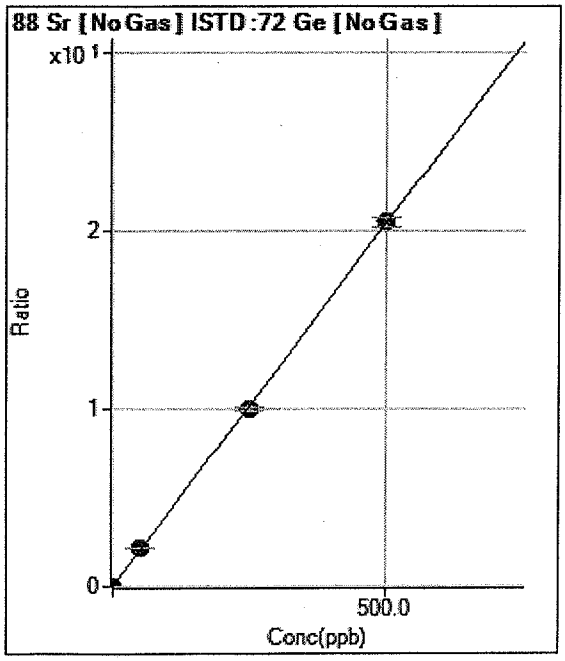
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 77.00 | 0.0001 | P | 5.9 |
| 2 | ☐ | 0.500 | 0.473 | 428.68 | 0.0004 | P | 4.0 |
| 3 | ☐ | 50.000 | 52.441 | 36335.53 | 0.0375 | P | 1.7 |
| 4 | ☐ | 250.000 | 250.421 | 175297.58 | 0.1787 | P | 0.8 |
| 5 | ☐ | 500.000 | 499.545 | 345675.68 | 0.3564 | P | 1.6 |

y = 7.1336E-004 * x + 8.3651E-005
R = 1.0000
DL = 0.0206
BEC = 0.1173

Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1947.92 | 0.0015 | P | 4.5 |
| 2 | ☐ | 0.500 | 0.507 | 30536.98 | 0.0222 | P | 1.4 |
| 3 | ☐ | 50.000 | 52.467 | 2913999.26 | 2.1444 | A | 1.3 |
| 4 | ☐ | 250.000 | 244.853 | 14196267.77 | 10.0022 | A | 3.0 |
| 5 | ☐ | 500.000 | 502.327 | 28921756.63 | 20.5183 | A | 2.5 |

y = 0.0408 * x + 0.0015
R = 0.9999
DL = 0.005035
BEC = 0.03746

Weight: <None>
Min Conc: 0

# US EPA Tune Check Report

| | |
|---|---|
| **Operator Name** | LYaman |
| **Acq/Data Batch** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq. Date-Time** | 2020-12-22 10:59:41 |
| **Report Comment** | --- |
| **Instrument Name** | G8421A SG19253823 |

**[No Gas]**

**Sensitivity**

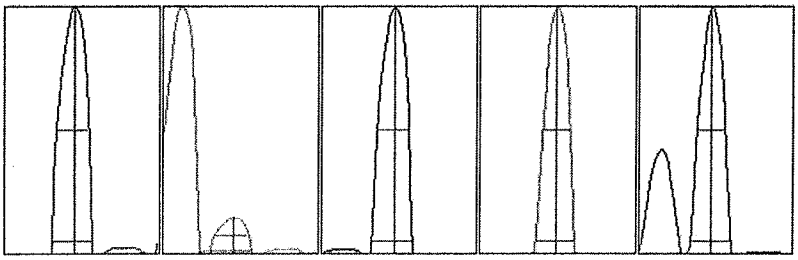
| Mass | Conc. [ug/l] | Count | CPS | Resp (Required) [cps/ug/l] | Resp (Flag) | RSD% | RSD% (Required) |
|---|---|---|---|---|---|---|---|
| 9 | 10.00 | 1623 | 16232.70 | | | 2.136 | 5.000 |
| 24 | 10.00 | 7211 | 72114.08 | | | 1.441 | 5.000 |
| 59 | 10.00 | 18566 | 185661.89 | | | 2.149 | 5.000 |
| 115 | 10.00 | 23688 | 236879.55 | | | 2.383 | 5.000 |
| 208 | 10.00 | 9275 | 92752.66 | | | 2.367 | 5.000 |

| Mass | RSD% (Flag) |
|---|---|
| 9 | |
| 24 | |
| 59 | |
| 115 | |
| 208 | |

| Mass | Rep#1 Count | Rep#2 Count | Rep#3 Count | Rep#4 Count | Rep#5 Count |
|---|---|---|---|---|---|
| 9 | 1666 | 1636 | 1573 | 1609 | 1632 |
| 24 | 7388 | 7210 | 7117 | 7172 | 7171 |
| 59 | 18754 | 18966 | 17904 | 18601 | 18606 |
| 115 | 23672 | 24201 | 22744 | 24011 | 23812 |
| 208 | 9541 | 9343 | 8945 | 9340 | 9207 |

Integration Time [sec] 0.1

**Resolution/Axis**



| Mass | Peak Height | Axis | Axis (Required) | Axis (Flag) |
|---|---|---|---|---|
| 9 | 2900.25 | 8.90 | 8.90 - 9.10 | |
| 24 | 12409.54 | 23.90 | 23.90 - 24.10 | |
| 59 | 32641.73 | 58.95 | 58.90 - 59.10 | |
| 115 | 46747.49 | 115.00 | 114.90 - 115.10 | |
| 208 | 17757.20 | 207.95 | 207.90 - 208.10 | |

# US EPA Tune Check Report

| Mass | W-50% | W-5% | W-5% (Required) | W-5% (Flag) |
|---|---|---|---|---|
| 9 | 0.61 | 0.783 | 0.900 | |
| 24 | 0.63 | 0.786 | 0.900 | |
| 59 | 0.61 | 0.782 | 0.900 | |
| 115 | 0.53 | 0.729 | 0.900 | |
| 208 | 0.55 | 0.781 | 0.900 | |

| | |
|---|---|
| Integration Time [sec] | 0.1 |
| Acquisition Time [sec] | 153.699999999999 |
| Y Axis | Linear |

**Tune Parameters**

**Plasma Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Plasma Mode | HMI | Nebulizer Gas | 0.62 L/min | Dilution Gas | 0.36 L/min |
| RF Power | 1600 W | Option Gas | --- | Auxiliary Gas | 0.90 L/min |
| RF Matching | 1.10 V | Nebulizer Pump | 0.10 rps | Plasma Gas | 15.0 L/min |
| Sample Depth | 10.0 mm | S/C Temp | 2 °C | | |

**Lens Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Extract 1 | 0.0 V | Omega Lens | 8.9 V | Deflect | 14.0 V |
| Extract 2 | -200.0 V | Cell Entrance | -30 V | Plate Bias | -35 V |
| Omega Bias | -80 V | Cell Exit | -50 V | | |

**Cell Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Use Gas | No | 3rd Gas Flow | --- | Energy Discrimination | 5.0 V |
| He Flow | 0.0 mL/min | OctP Bias | -8.0 V | | |
| H2 Flow | 0.0 mL/min | OctP RF | 200 V | | |

**QP Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Mass Gain | 122 | Axis Gain | 0.9995 | QP Bias | -3.0 V |
| Mass Offset | 124 | Axis Offset | -0.07 | | |

**Hardware Settings**

**Torch**

| | | | | | |
|---|---|---|---|---|---|
| Torch H | 0.6 mm | Torch V | -0.1 mm | | |

**EM**

| | | | | | |
|---|---|---|---|---|---|
| Discriminator | 4.1 mV | Analog HV | 2167 V | Pulse HV | 965 V |

# Calibration Blank Report

| | |
|---|---|
| **Sample Name** | BLANK |
| **File Name** | H6L09002.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 12:58:05 |
| **Sample Type** | CalBlk |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 66956.24 | 0.8 |
| Be | 9 | 6 | No Gas | 31.11 | 6.2 |
| B | 11 | 6 | No Gas | 3150.36 | 2.9 |
| Na | 23 | 45 | H2 | 743805.10 | 0.7 |
| Mg | 24 | 45 | No Gas | 26334.93 | 3.0 |
| Al | 27 | 45 | No Gas | 21810.73 | 5.5 |
| Si | 28 | 45 | H2 | 6155.36 | 2.5 |
| P | 31 | 45 | No Gas | 34471.38 | 0.4 |
| K | 39 | 45 | He | 126592.70 | 2.5 |
| Ca | 40 | 45 | H2 | 88028.18 | 1.3 |
| Ti | 47 | 45 | No Gas | 219.33 | 7.1 |
| V | 51 | 45 | He | 2490.23 | 4.4 |
| Cr | 52 | 45 | He | 2854.30 | 3.5 |
| Mn | 55 | 45 | No Gas | 12015.28 | 1.0 |
| Fe | 56 | 45 | H2 | 35536.78 | 2.3 |
| Co | 59 | 45 | No Gas | 467.34 | 11.6 |
| Ni | 60 | 45 | He | 177.33 | 13.2 |
| Cu | 63 | 45 | He | 1865.46 | 4.1 |
| Zn | 66 | 72 | No Gas | 1646.10 | 6.7 |
| As | 75 | 72 | He | 189.67 | 17.9 |
| Se | 78 | 72 | H2 | 79.33 | 5.7 |
| Sr | 88 | 72 | No Gas | 1687.89 | 1.0 |
| Zr | 90 | 72 | No Gas | 206.67 | 22.3 |
| Mo | 95 | 115 | No Gas | 251.11 | 3.8 |
| Mo | 98 | 115 | No Gas | 435.56 | 8.4 |
| [Cd] | 106 | 115 | No Gas | 25.67 | 8.1 |
| Ag | 107 | 115 | No Gas | 204.45 | 22.8 |
| [Cd] | 108 | 115 | No Gas | 18.33 | 20.7 |
| Cd | 111 | 115 | No Gas | 249.61 | 1.2 |
| Sn | 118 | 115 | No Gas | 4812.00 | 3.3 |
| Sn | 118 | 115 | H2 | 4075.08 | 3.7 |
| Sb | 123 | 115 | No Gas | 1224.50 | 4.8 |
| Ba | 137 | 115 | No Gas | 176.67 | 6.8 |
| W | 182 | 159 | No Gas | 376.68 | 18.1 |
| Hg | 201 | 159 | No Gas | 43.50 | 13.3 |

# Calibration Blank Report

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Hg | 201 | 159 | He | 26.33 | 8.6 |
| Tl | 205 | 159 | No Gas | 1021.16 | 9.3 |
| Pb | 206 | 159 | No Gas | 1533.44 | 12.1 |
| Pb | 207 | 159 | No Gas | 1296.74 | 8.5 |
| Pb | 208 | 159 | No Gas | 6115.06 | 3.6 |
| Th | 232 | 159 | No Gas | 45.56 | 11.2 |
| U | 238 | 159 | No Gas | 431.12 | 20.9 |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD |
|---|---|---|---|---|
| Li | 6 | No Gas | 1141329.81 | 0.7 |
| Sc | 45 | No Gas | 4615577.50 | 1.9 |
| Sc | 45 | H2 | 3170333.75 | 0.2 |
| Sc | 45 | He | 539902.19 | 0.2 |
| Ge | 72 | No Gas | 1308491.96 | 1.7 |
| Ge | 72 | H2 | 930488.13 | 0.8 |
| Ge | 72 | He | 336689.17 | 1.4 |
| In | 115 | No Gas | 8658209.05 | 1.7 |
| Tb | 159 | No Gas | 10130338.49 | 1.9 |
| Tb | 159 | He | 5158319.33 | 0.7 |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S0 |
| **File Name** | H6L09003.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:01:29 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 66413.84 | 1.7 |
| Be | 9 | 6 | No Gas | 18.89 | 20.4 |
| B | 11 | 6 | No Gas | 2971.43 | 4.2 |
| Na | 23 | 45 | H2 | 743973.92 | 0.6 |
| Mg | 24 | 45 | No Gas | 31658.53 | 2.6 |
| Al | 27 | 45 | No Gas | 29932.36 | 3.7 |
| Si | 28 | 45 | H2 | 5193.64 | 1.9 |
| P | 31 | 45 | No Gas | 34116.51 | 0.7 |
| K | 39 | 45 | He | 125136.14 | 2.2 |
| Ca | 40 | 45 | H2 | 91956.16 | 0.8 |
| Tl | 47 | 45 | No Gas | 238.00 | 5.0 |
| V | 51 | 45 | He | 2566.91 | 3.3 |
| Cr | 52 | 45 | He | 3024.33 | 2.2 |
| Mn | 55 | 45 | No Gas | 12426.98 | 2.0 |
| Fe | 56 | 45 | H2 | 45273.47 | 1.3 |
| Co | 59 | 45 | No Gas | 667.35 | 2.1 |
| Ni | 60 | 45 | He | 166.67 | 13.2 |
| Cu | 63 | 45 | He | 1857.46 | 4.4 |
| Zn | 66 | 72 | No Gas | 1637.44 | 6.1 |
| As | 75 | 72 | He | 181.67 | 8.5 |
| Se | 78 | 72 | H2 | 77.00 | 6.0 |
| Sr | 88 | 72 | No Gas | 1947.92 | 1.3 |
| Zr | 90 | 72 | No Gas | 256.67 | 14.8 |
| Mo | 95 | 115 | No Gas | 210.00 | 12.4 |
| Ag | 107 | 115 | No Gas | 213.34 | 12.4 |
| Cd | 111 | 115 | No Gas | 168.67 | 3.2 |
| Sn | 118 | 115 | No Gas | 4051.74 | 5.3 |
| Sb | 123 | 115 | No Gas | 1188.94 | 7.6 |
| Ba | 137 | 115 | No Gas | 268.89 | 6.2 |
| W | 182 | 159 | No Gas | 293.34 | 16.1 |
| Hg | 201 | 159 | He | 25.83 | 11.3 |
| Tl | 205 | 159 | No Gas | 804.47 | 8.8 |
| Pb | 208 | 159 | No Gas | 4958.18 | 3.2 |
| U | 238 | 159 | No Gas | 544.46 | 3.1 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1129983.08 | 1.7 | 1141329.81 | 99.01 | 60 | 120 | |
| Sc | 45 | No Gas | 4547335.50 | 1.7 | 4615577.5 | 98.52 | 60 | 120 | |
| Sc | 45 | H2 | 3144596.25 | 0.2 | 3170333.75 | 99.19 | 60 | 120 | |
| Sc | 45 | He | 543225.81 | 2.0 | 539902.19 | 100.62 | 60 | 120 | |
| Ge | 72 | No Gas | 1274188.88 | 3.1 | 1308491.96 | 97.38 | 60 | 120 | |
| Ge | 72 | H2 | 920473.83 | 0.6 | 930488.13 | 98.92 | 60 | 120 | |
| Ge | 72 | He | 339706.84 | 1.0 | 336689.17 | 100.9 | 60 | 120 | |
| In | 115 | No Gas | 8670986.22 | 2.2 | 8658209.05 | 100.15 | 60 | 120 | |
| Tb | 159 | No Gas | 10090237.65 | 1.7 | 10130338.49 | 99.6 | 60 | 120 | |
| Tb | 159 | He | 5225660.33 | 1.0 | 5158319.33 | 101.31 | 60 | 120 | |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S1 |
| **File Name** | H6L09004.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\LI\H6L09.b |
| **Acq Time** | 2020-12-22 13:04:20 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| LI | 7 | 6 | No Gas | 71417.03 | 0.8 |
| Be | 9 | 6 | No Gas | 1640.10 | 1.5 |
| B | 11 | 6 | No Gas | 3840.53 | 2.8 |
| Na | 23 | 45 | H2 | 1108777.17 | 1.1 |
| Mg | 24 | 45 | No Gas | 689377.92 | 0.4 |
| Al | 27 | 45 | No Gas | 977207.72 | 2.4 |
| Si | 28 | 45 | H2 | 182270.34 | 1.9 |
| P | 31 | 45 | No Gas | 59122.12 | 1.1 |
| K | 39 | 45 | He | 175205.50 | 2.7 |
| Ca | 40 | 45 | H2 | 825802.02 | 4.8 |
| Ti | 47 | 45 | No Gas | 1508.08 | 1.8 |
| V | 51 | 45 | He | 6861.72 | 4.9 |
| Cr | 52 | 45 | He | 8019.02 | 7.2 |
| Mn | 55 | 45 | No Gas | 33555.09 | 1.3 |
| Fe | 56 | 45 | H2 | 1250172.96 | 2.8 |
| Co | 59 | 45 | No Gas | 21414.79 | 1.2 |
| Ni | 60 | 45 | He | 2248.85 | 9.1 |
| Cu | 63 | 45 | He | 6969.79 | 5.8 |
| Zn | 66 | 72 | No Gas | 9475.97 | 0.9 |
| As | 75 | 72 | He | 982.70 | 5.2 |
| Se | 78 | 72 | H2 | 428.68 | 3.6 |
| Sr | 88 | 72 | No Gas | 30536.98 | 2.0 |
| Zr | 90 | 72 | No Gas | 133608.20 | 1.1 |
| Mo | 95 | 115 | No Gas | 5495.58 | 1.7 |
| Ag | 107 | 115 | No Gas | 16534.78 | 2.7 |
| Cd | 111 | 115 | No Gas | 3026.28 | 0.7 |
| Sn | 118 | 115 | No Gas | 12559.34 | 1.8 |
| Sb | 123 | 115 | No Gas | 10693.25 | 1.7 |
| Ba | 137 | 115 | No Gas | 4195.13 | 4.5 |
| W | 182 | 159 | No Gas | 4167.37 | 5.4 |
| Hg | 201 | 159 | He | 78.17 | 3.2 |
| Tl | 205 | 159 | No Gas | 19653.24 | 0.6 |
| Pb | 208 | 159 | No Gas | 29799.58 | 0.1 |
| U | 238 | 159 | No Gas | 22931.43 | 1.3 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1157450.14 | 1.2 | 1141329.81 | 101.41 | 60 | 120 | |
| Sc | 45 | No Gas | 4556982.33 | 1.4 | 4615577.5 | 98.73 | 60 | 120 | |
| Sc | 45 | H2 | 3345319.42 | 2.6 | 3170333.75 | 105.52 | 60 | 120 | |
| Sc | 45 | He | 538347.77 | 2.1 | 539902.19 | 99.71 | 60 | 120 | |
| Ge | 72 | No Gas | 1373836.88 | 0.6 | 1308491.96 | 104.99 | 60 | 120 | |
| Ge | 72 | H2 | 1018860.98 | 0.9 | 930488.13 | 109.5 | 60 | 120 | |
| Ge | 72 | He | 359075.76 | 1.0 | 336689.17 | 106.65 | 60 | 120 | |
| In | 115 | No Gas | 8830427.31 | 0.4 | 8658209.05 | 101.99 | 60 | 120 | |
| Tb | 159 | No Gas | 10204239.59 | 1.7 | 10130338.49 | 100.73 | 60 | 120 | |
| Tb | 159 | He | 5198845.33 | 1.4 | 5158319.33 | 100.79 | 60 | 120 | |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S2 |
| **File Name** | H6L09005.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:07:11 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 109950.01 | 1.8 |
| Be | 9 | 6 | No Gas | 16654.30 | 2.2 |
| B | 11 | 6 | No Gas | 21948.23 | 1.4 |
| Na | 23 | 45 | H2 | 33529238.00 | 0.9 |
| Mg | 24 | 45 | No Gas | 69950176.00 | 1.0 |
| Al | 27 | 45 | No Gas | 92886681.95 | 2.0 |
| Si | 28 | 45 | H2 | 996135.79 | 0.7 |
| P | 31 | 45 | No Gas | 88786.82 | 1.4 |
| K | 39 | 45 | He | 4591572.50 | 8.2 |
| Ca | 40 | 45 | H2 | 74462426.67 | 0.9 |
| Ti | 47 | 45 | No Gas | 125580.49 | 0.9 |
| V | 51 | 45 | He | 335595.46 | 9.5 |
| Cr | 52 | 45 | He | 397593.30 | 10.6 |
| Mn | 55 | 45 | No Gas | 13658992.00 | 1.3 |
| Fe | 56 | 45 | H2 | 122334050.67 | 0.4 |
| Co | 59 | 45 | No Gas | 2100582.16 | 1.2 |
| Ni | 60 | 45 | He | 153684.51 | 10.5 |
| Cu | 63 | 45 | He | 417196.43 | 9.5 |
| Zn | 66 | 72 | No Gas | 334738.51 | 1.0 |
| As | 75 | 72 | He | 67474.83 | 8.4 |
| Se | 78 | 72 | H2 | 36335.53 | 1.2 |
| Sr | 88 | 72 | No Gas | 2913999.26 | 1.2 |
| Zr | 90 | 72 | No Gas | 321267.03 | 1.9 |
| Mo | 95 | 115 | No Gas | 547216.07 | 0.7 |
| Ag | 107 | 115 | No Gas | 149897.47 | 1.9 |
| Cd | 111 | 115 | No Gas | 297012.98 | 1.0 |
| Sn | 118 | 115 | No Gas | 833345.19 | 1.2 |
| Sb | 123 | 115 | No Gas | 188203.71 | 0.2 |
| Ba | 137 | 115 | No Gas | 785009.17 | 0.3 |
| W | 182 | 159 | No Gas | 89552.76 | 2.3 |
| Hg | 201 | 159 | He | 557.18 | 5.5 |
| Tl | 205 | 159 | No Gas | 1986111.17 | 0.9 |
| Pb | 208 | 159 | No Gas | 2623207.78 | 0.7 |
| U | 238 | 159 | No Gas | 2329312.34 | 0.8 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1121291.19 | 1.5 | 1141329.81 | 98.24 | 60 | 120 | |
| Sc | 45 | No Gas | 4512149.50 | 1.9 | 4615577.5 | 97.76 | 60 | 120 | |
| Sc | 45 | H2 | 3216976.00 | 0.6 | 3170333.75 | 101.47 | 60 | 120 | |
| Sc | 45 | He | 556435.52 | 1.6 | 539902.19 | 103.06 | 60 | 120 | |
| Ge | 72 | No Gas | 1358935.04 | 1.1 | 1308491.96 | 103.86 | 60 | 120 | |
| Ge | 72 | H2 | 969194.71 | 0.5 | 930488.13 | 104.16 | 60 | 120 | |
| Ge | 72 | He | 360499.92 | 1.2 | 336689.17 | 107.07 | 60 | 120 | |
| In | 115 | No Gas | 8461991.97 | 1.1 | 8658209.05 | 97.73 | 60 | 120 | |
| Tb | 159 | No Gas | 10003963.77 | 1.3 | 10130338.49 | 98.75 | 60 | 120 | |
| Tb | 159 | He | 5221603.83 | 2.5 | 5158319.33 | 101.23 | 60 | 120 | |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S3 |
| **File Name** | H6L09006.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:10:19 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Flal** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 289473.03 | 1.0 |
| Be | 9 | 6 | No Gas | 85597.94 | 0.8 |
| B | 11 | 6 | No Gas | 101386.99 | 1.2 |
| Na | 23 | 45 | H2 | 166029093.33 | 0.2 |
| Mg | 24 | 45 | No Gas | 356608512.00 | 0.4 |
| Al | 27 | 45 | No Gas | 484799659.44 | 0.9 |
| Si | 28 | 45 | H2 | 5127850.33 | 1.0 |
| P | 31 | 45 | No Gas | 315598.89 | 0.7 |
| K | 39 | 45 | He | 27039527.33 | 1.3 |
| Ca | 40 | 45 | H2 | 375630165.33 | 0.9 |
| Ti | 47 | 45 | No Gas | 647677.14 | 1.0 |
| V | 51 | 45 | He | 2315699.42 | 0.9 |
| Cr | 52 | 45 | He | 2734932.75 | 0.7 |
| Mn | 55 | 45 | No Gas | 69466461.33 | 0.6 |
| Fe | 56 | 45 | H2 | 599376128.00 | 0.4 |
| Co | 59 | 45 | No Gas | 10462985.33 | 0.5 |
| Ni | 60 | 45 | He | 983598.81 | 2.4 |
| Cu | 63 | 45 | He | 2622194.67 | 1.7 |
| Zn | 66 | 72 | No Gas | 1692473.71 | 0.5 |
| As | 75 | 72 | He | 437252.02 | 0.8 |
| Se | 78 | 72 | H2 | 175297.58 | 0.7 |
| Sr | 88 | 72 | No Gas | 14196267.77 | 1.6 |
| Zr | 90 | 72 | No Gas | 863259.96 | 0.3 |
| Mo | 95 | 115 | No Gas | 2827162.67 | 2.5 |
| Ag | 107 | 115 | No Gas | 709406.27 | 1.5 |
| Cd | 111 | 115 | No Gas | 1495512.75 | 0.3 |
| Sn | 118 | 115 | No Gas | 4375629.69 | 1.1 |
| Sb | 123 | 115 | No Gas | 922654.89 | 1.4 |
| Ba | 137 | 115 | No Gas | 4166525.94 | 0.1 |
| W | 182 | 159 | No Gas | 427850.67 | 1.0 |
| Hg | 201 | 159 | He | 3317.44 | 0.8 |
| Tl | 205 | 159 | No Gas | 9609732.68 | 0.4 |
| Pb | 208 | 159 | No Gas | 12899697.84 | 0.7 |
| U | 238 | 159 | No Gas | 11289753.16 | 1.0 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1177315.93 | 3.4 | 1141329.81 | 103.15 | 60 | 120 | |
| Sc | 45 | No Gas | 4797086.17 | 2.8 | 4615577.5 | 103.93 | 60 | 120 | |
| Sc | 45 | H2 | 3334411.67 | 0.6 | 3170333.75 | 105.18 | 60 | 120 | |
| Sc | 45 | He | 571597.19 | 1.8 | 539902.19 | 105.87 | 60 | 120 | |
| Ge | 72 | No Gas | 1419821.21 | 2.0 | 1308491.96 | 108.51 | 60 | 120 | |
| Ge | 72 | H2 | 980838.04 | 0.4 | 930488.13 | 105.41 | 60 | 120 | |
| Ge | 72 | He | 367777.11 | 1.7 | 336689.17 | 109.23 | 60 | 120 | |
| In | 115 | No Gas | 8495071.81 | 2.2 | 8658209.05 | 98.12 | 60 | 120 | |
| Tb | 159 | No Gas | 10103755.71 | 2.1 | 10130338.49 | 99.74 | 60 | 120 | |
| Tb | 159 | He | 5334198.17 | 2.5 | 5158319.33 | 103.41 | 60 | 120 | |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S4 |
| **File Name** | H6L09007.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:13:07 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 520147.32 | 1.7 |
| Be | 9 | 6 | No Gas | 171893.36 | 1.0 |
| B | 11 | 6 | No Gas | 207012.11 | 2.4 |
| Na | 23 | 45 | H2 | 335438602.67 | 0.6 |
| Mg | 24 | 45 | No Gas | 741563690.67 | 0.8 |
| Al | 27 | 45 | No Gas | 1003196465.05 | 1.8 |
| Si | 28 | 45 | H2 | 10125560.33 | 0.5 |
| P | 31 | 45 | No Gas | 607460.77 | 0.4 |
| K | 39 | 45 | He | 53972680.00 | 2.6 |
| Ca | 40 | 45 | H2 | 760854506.67 | 1.4 |
| Ti | 47 | 45 | No Gas | 1436317.50 | 1.5 |
| V | 51 | 45 | He | 4658450.33 | 3.1 |
| Cr | 52 | 45 | He | 5434731.67 | 2.1 |
| Mn | 55 | 45 | No Gas | 143502522.67 | 0.7 |
| Fe | 56 | 45 | H2 | 1209011200.00 | 0.9 |
| Co | 59 | 45 | No Gas | 21057944.67 | 0.8 |
| Ni | 60 | 45 | He | 2010717.42 | 2.2 |
| Cu | 63 | 45 | He | 5107326.33 | 1.4 |
| Zn | 66 | 72 | No Gas | 3382187.50 | 0.8 |
| As | 75 | 72 | He | 855949.23 | 3.0 |
| Se | 78 | 72 | H2 | 345675.68 | 0.6 |
| Sr | 88 | 72 | No Gas | 28921756.63 | 1.6 |
| Zr | 90 | 72 | No Gas | 1938279.82 | 2.2 |
| Mo | 95 | 115 | No Gas | 5659083.25 | 0.5 |
| Ag | 107 | 115 | No Gas | 1511227.16 | 1.0 |
| Cd | 111 | 115 | No Gas | 2980728.01 | 1.3 |
| Sn | 118 | 115 | No Gas | 8824713.54 | 0.7 |
| Sb | 123 | 115 | No Gas | 1964241.80 | 1.3 |
| Ba | 137 | 115 | No Gas | 8339043.56 | 1.0 |
| W | 182 | 159 | No Gas | 870397.20 | 2.9 |
| Hg | 201 | 159 | He | 6670.11 | 1.6 |
| Tl | 205 | 159 | No Gas | 18967089.80 | 1.1 |
| Pb | 208 | 159 | No Gas | 25723696.15 | 0.4 |
| U | 238 | 159 | No Gas | 22797240.21 | 0.2 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1200236.87 | 2.8 | 1141329.81 | 105.16 | 60 | 120 | |
| Sc | 45 | No Gas | 4919904.33 | 2.4 | 4615577.5 | 106.59 | 60 | 120 | |
| Sc | 45 | H2 | 3344147.67 | 2.0 | 3170333.75 | 105.48 | 60 | 120 | |
| Sc | 45 | He | 574012.81 | 0.7 | 539902.19 | 106.32 | 60 | 120 | |
| Ge | 72 | No Gas | 1409786.00 | 1.0 | 1308491.96 | 107.74 | 60 | 120 | |
| Ge | 72 | H2 | 969921.73 | 1.2 | 930488.13 | 104.24 | 60 | 120 | |
| Ge | 72 | He | 364589.71 | 1.3 | 336689.17 | 108.29 | 60 | 120 | |
| In | 115 | No Gas | 8329341.19 | 1.1 | 8658209.05 | 96.2 | 60 | 120 | |
| Tb | 159 | No Gas | 10089229.32 | 1.2 | 10130338.49 | 99.59 | 60 | 120 | |
| Tb | 159 | He | 5261894.17 | 0.6 | 5158319.33 | 102.01 | 60 | 120 | |

# Initial Calibration Verification (ICV) Report

| | |
|---|---|
| **Sample Name** | ICV |
| **File Name** | H6L09008.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:15:51 |
| **Sample Type** | ICV |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | % Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 28.966 | ppb | 4.7 | 332696.25 | 30 | 96.55 | 90 | 110 | |
| Be | 9 | 6 | No Gas | 29.262 | ppb | 2.9 | 101470.30 | 30 | 97.54 | 90 | 110 | |
| B | 11 | 6 | No Gas | 30.011 | ppb | 2.3 | 64451.00 | 30 | 100.04 | 90 | 110 | |
| Na | 23 | 45 | H2 | 28915.324 | ppb | 4.9 | 199465450.67 | 30000 | 96.38 | 90 | 110 | |
| Mg | 24 | 45 | No Gas | 28865.786 | ppb | 1.5 | 432076341.33 | 30000 | 96.22 | 90 | 110 | |
| Al | 27 | 45 | No Gas | 28822.915 | ppb | 3.7 | 583889284.63 | 30000 | 96.08 | 90 | 110 | |
| Si | 28 | 45 | H2 | 3132.492 | ppb | 2.3 | 6547752.17 | 3000 | 104.42 | 90 | 110 | |
| P | 31 | 45 | No Gas | 280.037 | ppb | 2.2 | 361026.57 | 300 | 93.35 | 90 | 110 | |
| K | 39 | 45 | He | 30048.929 | ppb | 7.4 | 32492248.00 | 30000 | 100.16 | 90 | 110 | |
| Ca | 40 | 45 | H2 | 28463.685 | ppb | 1.5 | 444814549.33 | 30000 | 94.88 | 90 | 110 | |
| Ti | 47 | 45 | No Gas | 267.638 | ppb | 1.2 | 766307.69 | 300 | 89.21 | 90 | 110 | > +/- 10% |
| V | 51 | 45 | He | 297.523 | ppb | 7.6 | 2767275.83 | 300 | 99.17 | 90 | 110 | |
| Cr | 52 | 45 | He | 306.207 | ppb | 5.4 | 3333103.67 | 300 | 102.07 | 90 | 110 | |
| Mn | 55 | 45 | No Gas | 1910.913 | ppb | 2.5 | 92387290.67 | 2000 | 95.55 | 90 | 110 | |
| Fe | 56 | 45 | H2 | 28147.684 | ppb | 1.1 | 699775808.00 | 30000 | 93.83 | 90 | 110 | |
| Co | 59 | 45 | No Gas | 294.939 | ppb | 0.7 | 12625378.67 | 300 | 98.31 | 90 | 110 | |
| Ni | 60 | 45 | He | 307.332 | ppb | 6.1 | 1230694.00 | 300 | 102.44 | 90 | 110 | |
| Cu | 63 | 45 | He | 305.140 | ppb | 4.0 | 3137351.58 | 300 | 101.71 | 90 | 110 | |
| Zn | 66 | 72 | No Gas | 307.456 | ppb | 5.0 | 2074933.21 | 300 | 102.49 | 90 | 110 | |
| As | 75 | 72 | He | 293.750 | ppb | 6.0 | 516646.01 | 300 | 97.92 | 90 | 110 | |
| Se | 78 | 72 | H2 | 295.861 | ppb | 3.5 | 207826.92 | 300 | 98.62 | 90 | 110 | |
| Sr | 88 | 72 | No Gas | 300.497 | ppb | 5.2 | 17281397.09 | 300 | 100.17 | 90 | 110 | |
| Zr | 90 | 72 | No Gas | 30.414 | ppb | 7.9 | 1142714.75 | 30 | 101.38 | 90 | 110 | |
| Mo | 95 | 115 | No Gas | 301.857 | ppb | 3.3 | 3460848.61 | 300 | 100.62 | 90 | 110 | |
| Ag | 107 | 115 | No Gas | 27.586 | ppb | 3.4 | 834779.55 | 30 | 91.95 | 90 | 110 | |
| Cd | 111 | 115 | No Gas | 305.664 | ppb | 1.8 | 1848090.37 | 300 | 101.89 | 90 | 110 | |
| Sn | 118 | 115 | No Gas | 297.887 | ppb | 2.0 | 5318266.18 | 300 | 99.3 | 90 | 110 | |
| Sb | 123 | 115 | No Gas | 54.703 | ppb | 2.6 | 1076078.74 | 60 | 91.17 | 90 | 110 | |
| Ba | 137 | 115 | No Gas | 308.097 | ppb | 0.9 | 2602866.56 | 300 | 102.7 | 90 | 110 | |
| W | 182 | 159 | No Gas | 30.077 | ppb | 2.6 | 533335.45 | 30 | 100.26 | 90 | 110 | |
| Hg | 201 | 159 | He | 2.981 | ppb | 5.8 | 4066.83 | 3 | 99.37 | 90 | 110 | |
| Tl | 205 | 159 | No Gas | 305.777 | ppb | 2.1 | 11885324.53 | 300 | 101.93 | 90 | 110 | |
| Pb | 208 | 159 | No Gas | 301.984 | ppb | 2.1 | 15884469.59 | 300 | 100.66 | 90 | 110 | |
| U | 238 | 159 | No Gas | 299.184 | ppb | 1.3 | 13998568.61 | 300 | 99.73 | 90 | 110 | |

# Initial Calibration Verification (ICV) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1206178.00 | 3.2 | 1141329.81 | 105.68 | 60 | 120 | |
| Sc | 45 | No Gas | 4976474.17 | 1.9 | 4615577.5 | 107.82 | 60 | 120 | |
| Sc | 45 | H2 | 3440465.83 | 2.6 | 3170333.75 | 108.52 | 60 | 120 | |
| Sc | 45 | He | 575522.19 | 4.6 | 539902.19 | 106.6 | 60 | 120 | |
| Ge | 72 | No Gas | 1409542.54 | 4.2 | 1308491.96 | 107.72 | 60 | 120 | |
| Ge | 72 | H2 | 984859.25 | 2.6 | 930488.13 | 105.84 | 60 | 120 | |
| Ge | 72 | He | 374701.92 | 3.9 | 336689.17 | 111.29 | 60 | 120 | |
| In | 115 | No Gas | 8476161.57 | 1.9 | 8658209.05 | 97.9 | 60 | 120 | |
| Tb | 159 | No Gas | 10308599.87 | 0.9 | 10130338.49 | 101.76 | 60 | 120 | |
| Tb | 159 | He | 5406618.00 | 3.9 | 5158319.33 | 104.81 | 60 | 120 | |

# Continuing Calibration Blank (CCB) Report

| | |
|---|---|
| **Sample Name** | ICB |
| **File Name** | H6L09009.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:18:28 |
| **Sample Type** | ICB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | <0.000 | ppb | N/A | 69722.47 | 0.4 | |
| Be | 9 | 6 | No Gas | 0.015 | ppb | 32.2 | 74.45 | 0.08 | |
| B | 11 | 6 | No Gas | 0.533 | ppb | 41.0 | 4340.68 | 4 | |
| Na | 23 | 45 | H2 | <0.000 | ppb | N/A | 813401.33 | 40 | |
| Mg | 24 | 45 | No Gas | 8.928 | ppb | 58.4 | 161276.85 | 10 | |
| Al | 27 | 45 | No Gas | 8.764 | ppb | 55.9 | 201549.35 | 15 | |
| Si | 28 | 45 | H2 | 3.397 | ppb | 8.2 | 12827.92 | 8 | |
| P | 31 | 45 | No Gas | <0.000 | ppb | N/A | 35648.39 | 10 | |
| K | 39 | 45 | He | 0.112 | ppb | 2357.5 | 129345.30 | 20 | |
| Ca | 40 | 45 | H2 | 3.269 | ppb | 7.3 | 152270.62 | 25 | |
| Ti | 47 | 45 | No Gas | 0.098 | ppb | 48.4 | 520.68 | 0.5 | |
| V | 51 | 45 | He | <0.000 | ppb | N/A | 2394.21 | 0.5 | |
| Cr | 52 | 45 | He | <0.000 | ppb | N/A | 3075.68 | 0.2 | |
| Mn | 55 | 45 | No Gas | 0.654 | ppb | 58.9 | 43391.45 | 0.2 | >LOD |
| Fe | 56 | 45 | H2 | 2.952 | ppb | 8.4 | 123396.03 | 10 | |
| Co | 59 | 45 | No Gas | 0.092 | ppb | 63.4 | 4466.22 | 0.15 | |
| Ni | 60 | 45 | He | 0.028 | ppb | 27.3 | 282.67 | 0.2 | |
| Cu | 63 | 45 | He | 0.065 | ppb | 16.0 | 2570.24 | 0.4 | |
| Zn | 66 | 72 | No Gas | 0.206 | ppb | 35.9 | 3039.68 | 2 | |
| As | 75 | 72 | He | 0.046 | ppb | 10.0 | 265.00 | 0.2 | |
| Se | 78 | 72 | H2 | 0.080 | ppb | 34.6 | 135.33 | 0.2 | |
| Sr | 88 | 72 | No Gas | 0.095 | ppb | 60.4 | 7153.28 | 0.2 | |
| Zr | 90 | 72 | No Gas | 0.009 | ppb | 45.0 | 580.01 | 2 | |
| Mo | 95 | 115 | No Gas | 0.106 | ppb | 46.1 | 1487.88 | 0.2 | |
| Ag | 107 | 115 | No Gas | 0.012 | ppb | 41.9 | 607.79 | 0.08 | |
| Cd | 111 | 115 | No Gas | 0.150 | ppb | 44.2 | 1123.46 | 0.2 | |
| Sn | 118 | 115 | No Gas | 0.271 | ppb | 23.6 | 9267.74 | 0.2 | >LOD |
| Sb | 123 | 115 | No Gas | 0.023 | ppb | 39.6 | 1714.56 | 0.4 | |
| Ba | 137 | 115 | No Gas | 0.089 | ppb | 58.7 | 1068.94 | 0.2 | |
| W | 182 | 159 | No Gas | 0.027 | ppb | 39.0 | 776.69 | 0.3 | |
| Hg | 201 | 159 | He | 0.005 | ppb | 39.1 | 34.83 | 0.1 | |
| Tl | 205 | 159 | No Gas | 0.178 | ppb | 39.1 | 7788.26 | 0.1 | >LOD |
| Pb | 208 | 159 | No Gas | 0.224 | ppb | 25.5 | 17031.38 | 0.1 | >LOD |
| U | 238 | 159 | No Gas | 0.092 | ppb | 47.0 | 4861.11 | 0.05 | >LOD |

LY 12/22/20

# Continuing Calibration Blank (CCB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1229239.53 | 1.2 | 1141329.81 | 107.7 | 60 | 120 | |
| Sc | 45 | No Gas | 4830543.67 | 4.2 | 4615577.5 | 104.66 | 60 | 120 | |
| Sc | 45 | H2 | 3453355.25 | 1.0 | 3170333.75 | 108.93 | 60 | 120 | |
| Sc | 45 | He | 560691.96 | 1.3 | 539902.19 | 103.85 | 60 | 120 | |
| Ge | 72 | No Gas | 1342572.75 | 4.1 | 1308491.96 | 102.6 | 60 | 120 | |
| Ge | 72 | H2 | 963450.06 | 1.6 | 930488.13 | 103.54 | 60 | 120 | |
| Ge | 72 | He | 353422.95 | 2.1 | 336689.17 | 104.97 | 60 | 120 | |
| In | 115 | No Gas | 8960363.31 | 2.7 | 8658209.05 | 103.49 | 60 | 120 | |
| Tb | 159 | No Gas | 10453144.03 | 3.5 | 10130338.49 | 103.19 | 60 | 120 | |
| Tb | 159 | He | 5521254.00 | 1.4 | 5158319.33 | 107.04 | 60 | 120 | |

# Low Level Continuing Calibration Verification (LLCCV) Report

| | |
|---|---|
| **Sample Name** | MRLL2201 |
| **File Name** | H6L09010.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\LL\H6L09.b |
| **Acq Time** | 2020-12-22 13:21:03 |
| **Sample Type** | LLCCV |
| **Total Dilution** | 1.0000 |
| **Comment** | 1/100/10 ppb |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.840 | ppb | 9.1 | 79387.37 | 1 | 84 | 80 | 120 | |
| Be | 9 | 6 | No Gas | 0.949 | ppb | 7.3 | 3347.07 | 1 | 94.9 | 80 | 120 | |
| B | 11 | 6 | No Gas | 9.557 | ppb | 0.3 | 22952.10 | 10 | 95.57 | 80 | 120 | |
| Na | 23 | 45 | H2 | 109.968 | ppb | 2.3 | 1465413.25 | 100 | 109.97 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 106.093 | ppb | 0.9 | 1523913.87 | 100 | 106.09 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 102.385 | ppb | 0.6 | 1979172.10 | 100 | 102.39 | 80 | 120 | |
| Si | 28 | 45 | H2 | 97.423 | ppb | 1.7 | 195277.18 | 100 | 97.42 | 80 | 120 | |
| P | 31 | 45 | No Gas | 49.538 | ppb | 1.9 | 88844.43 | 50 | 99.08 | 80 | 120 | |
| K | 39 | 45 | He | 103.061 | ppb | 9.7 | 232901.57 | 100 | 103.06 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 113.069 | ppb | 1.8 | 1743119.96 | 100 | 113.07 | 80 | 120 | |
| Tl | 47 | 45 | No Gas | 0.993 | ppb | 2.8 | 2914.98 | 1 | 99.3 | 80 | 120 | |
| V | 51 | 45 | He | 0.992 | ppb | 4.7 | 11425.43 | 1 | 99.2 | 80 | 120 | |
| Cr | 52 | 45 | He | 1.083 | ppb | 2.9 | 14323.48 | 1 | 108.3 | 80 | 120 | |
| Mn | 55 | 45 | No Gas | 1.201 | ppb | 1.5 | 67310.54 | 1 | 120.1 | 80 | 120 | > +/- 20% |
| Fe | 56 | 45 | H2 | 110.406 | ppb | 1.7 | 2608286.42 | 100 | 110.41 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 1.048 | ppb | 1.2 | 42822.42 | 1 | 104.8 | 80 | 120 | |
| Ni | 60 | 45 | He | 1.132 | ppb | 3.4 | 4505.41 | 1 | 113.2 | 80 | 120 | |
| Cu | 63 | 45 | He | 1.177 | ppb | 3.0 | 13441.31 | 1 | 117.7 | 80 | 120 | |
| Zn | 66 | 72 | No Gas | 10.646 | ppb | 1.3 | 72665.11 | 10 | 106.46 | 80 | 120 | |
| As | 75 | 72 | He | 1.012 | ppb | 9.2 | 1929.14 | 1 | 101.2 | 80 | 120 | |
| Se | 78 | 72 | H2 | 1.029 | ppb | 6.0 | 789.36 | 1 | 102.9 | 80 | 120 | |
| Sr | 88 | 72 | No Gas | 2.098 | ppb | 1.5 | 121186.44 | 2 | 104.9 | 80 | 120 | |
| Zr | 90 | 72 | No Gas | 3.637 | ppb | 2.3 | 135258.02 | 5 | 72.74 | 80 | 120 | > +/- 20% |
| Mo | 95 | 115 | No Gas | 0.927 | ppb | 1.9 | 11249.20 | 1 | 92.7 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 0.950 | ppb | 0.8 | 30075.31 | 1 | 95 | 80 | 120 | |
| Cd | 111 | 115 | No Gas | 1.004 | ppb | 2.9 | 6477.44 | 1 | 100.4 | 80 | 120 | |
| Sn | 118 | 115 | No Gas | 0.958 | ppb | 4.1 | 21858.16 | 1 | 95.8 | 80 | 120 | |
| Sb | 123 | 115 | No Gas | 0.930 | ppb | 2.8 | 20191.10 | 1 | 93 | 80 | 120 | |
| Ba | 137 | 115 | No Gas | 0.949 | ppb | 1.6 | 8600.63 | 1 | 94.9 | 80 | 120 | |
| W | 182 | 159 | No Gas | 1.946 | ppb | 5.0 | 34761.36 | 2 | 97.3 | 80 | 120 | |
| Hg | 201 | 159 | He | 0.102 | ppb | 11.4 | 164.17 | 0.1 | 102 | 80 | 120 | |
| Tl | 205 | 159 | No Gas | 1.026 | ppb | 0.1 | 40697.29 | 1 | 102.6 | 80 | 120 | |
| Pb | 208 | 159 | No Gas | 1.061 | ppb | 1.2 | 60846.72 | 1 | 106.1 | 80 | 120 | |
| U | 238 | 159 | No Gas | 0.975 | ppb | 2.7 | 46156.82 | 1 | 97.5 | 80 | 120 | |

LY 12/22/20

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1220072.04 | 2.7 | 1141329.81 | 106.9 | 60 | 120 | |
| Sc | 45 | No Gas | 4673065.33 | 1.1 | 4615577.5 | 101.25 | 60 | 120 | |
| Sc | 45 | H2 | 3211417.00 | 1.0 | 3170333.75 | 101.3 | 60 | 120 | |
| Sc | 45 | He | 549828.71 | 2.2 | 539902.19 | 101.84 | 60 | 120 | |
| Ge | 72 | No Gas | 1389598.75 | 1.8 | 1308491.96 | 106.2 | 60 | 120 | |
| Ge | 72 | H2 | 965869.21 | 0.9 | 930488.13 | 103.8 | 60 | 120 | |
| Ge | 72 | He | 365419.37 | 5.6 | 336689.17 | 108.53 | 60 | 120 | |
| In | 115 | No Gas | 8804783.80 | 1.7 | 8658209.05 | 101.69 | 60 | 120 | |
| Tb | 159 | No Gas | 10302887.37 | 2.0 | 10130338.49 | 101.7 | 60 | 120 | |
| Tb | 159 | He | 5378432.17 | 2.7 | 5158319.33 | 104.27 | 60 | 120 | |

# Interference Check Solution A (ICS-A) Report

| | |
|---|---|
| **Sample Name** | ICSA |
| **File Name** | H6L09012.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:26:14 |
| **Sample Type** | ICS-A |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.434 | ppb | 63.0 | 75412.86 | 2 | -50 | 50 | |
| Be | 9 | 6 | No Gas | 0.003 | ppb | 74.7 | 28.89 | 0.4 | -50 | 50 | |
| B | 11 | 6 | No Gas | 0.620 | ppb | 20.5 | 4468.49 | 10 | -50 | 50 | |
| Na | 23 | 45 | H2 | 104887.620 | ppb | 1.6 | 700278826.67 | 100000 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 102474.451 | ppb | 2.2 | 1510603477.33 | 100000 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 102691.114 | ppb | 3.1 | 2047137729.50 | 100000 | 80 | 120 | |
| Si | 28 | 45 | H2 | 5.625 | ppb | 7.8 | 16906.29 | 50 | -50 | 50 | |
| P | 31 | 45 | No Gas | 103483.643 | ppb | 2.6 | 117768954.67 | 100000 | 80 | 120 | |
| K | 39 | 45 | He | 100111.785 | ppb | 6.9 | 111098178.67 | 100000 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 104028.787 | ppb | 2.4 | 1576777216.00 | 100000 | 80 | 120 | |
| Ti | 47 | 45 | No Gas | 2123.530 | ppb | 2.7 | 5982518.00 | 2000 | 80 | 120 | |
| V | 51 | 45 | He | <0.000 | ppb | N/A | 2520.90 | 1 | -50 | 50 | |
| Cr | 52 | 45 | He | 0.847 | ppb | 9.7 | 12763.95 | 1 | -50 | 50 | > +/- 20% |
| Mn | 55 | 45 | No Gas | 0.092 | ppb | 17.4 | 17768.87 | 1 | -50 | 50 | |
| Fe | 56 | 45 | H2 | 104812.690 | ppb | 2.1 | 2527503445.33 | 100000 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 0.244 | ppb | 5.9 | 10975.09 | 0.75 | -50 | 50 | |
| Ni | 60 | 45 | He | 0.212 | ppb | 14.0 | 1055.38 | 1 | -50 | 50 | |
| Cu | 63 | 45 | He | 0.327 | ppb | 10.1 | 5477.77 | 2 | -50 | 50 | |
| Zn | 66 | 72 | No Gas | 1.369 | ppb | 3.5 | 11169.93 | 20 | -50 | 50 | |
| As | 75 | 72 | He | 0.104 | ppb | 5.8 | 381.01 | 1 | -50 | 50 | |
| Se | 78 | 72 | H2 | 0.197 | ppb | 5.8 | 213.33 | 1 | -50 | 50 | |
| Sr | 88 | 72 | No Gas | 0.892 | ppb | 4.1 | 54022.11 | 1 | -50 | 50 | > +/- 20% |
| Zr | 90 | 72 | No Gas | 0.131 | ppb | 16.4 | 5241.06 | 10 | -50 | 50 | |
| Mo | 95 | 115 | No Gas | 2056.030 | ppb | 0.8 | 23115096.30 | 2000 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 0.017 | ppb | 9.8 | 704.47 | 0.4 | -50 | 50 | |
| Cd | 111 | 115 | No Gas | 0.094 | ppb | 19.3 | 715.28 | 1 | -50 | 50 | |
| Sn | 118 | 115 | No Gas | 0.181 | ppb | 4.0 | 7038.56 | 1 | -50 | 50 | |
| Ba | 137 | 115 | No Gas | 0.056 | ppb | 3.3 | 721.13 | 1 | -50 | 50 | |
| W | 182 | 159 | No Gas | 0.172 | ppb | 13.5 | 3287.12 | 1 | -50 | 50 | |
| Hg | 201 | 159 | He | 0.001 | ppb | 306.5 | 28.33 | 0.5 | -50 | 50 | |
| Tl | 205 | 159 | No Gas | <0.000 | ppb | N/A | 626.68 | 0.5 | -50 | 50 | |
| Pb | 208 | 159 | No Gas | 0.037 | ppb | 26.5 | 6927.46 | 0.5 | -50 | 50 | |
| U | 238 | 159 | No Gas | <0.000 | ppb | N/A | 300.00 | 0.25 | -50 | 50 | |

DH 12/22/20

# Interference Check Solution A (ICS-A) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1218135.62 | 8.8 | 1141329.81 | 106.73 | 60 | 120 | |
| Sc | 45 | No Gas | 4901883.67 | 7.0 | 4615577.5 | 106.2 | 60 | 120 | |
| Sc | 45 | H2 | 3337767.83 | 2.2 | 3170333.75 | 105.28 | 60 | 120 | |
| Sc | 45 | He | 592444.94 | 5.2 | 539902.19 | 109.73 | 60 | 120 | |
| Ge | 72 | No Gas | 1424826.45 | 5.1 | 1308491.96 | 108.89 | 60 | 120 | |
| Ge | 72 | H2 | 952792.00 | 0.4 | 930488.13 | 102.4 | 60 | 120 | |
| Ge | 72 | He | 372186.82 | 4.1 | 336689.17 | 110.54 | 60 | 120 | |
| In | 115 | No Gas | 8308443.72 | 3.6 | 8658209.05 | 95.96 | 60 | 120 | |
| Tb | 159 | No Gas | 10133632.37 | 2.7 | 10130338.49 | 100.03 | 60 | 120 | |
| Tb | 159 | He | 5463078.00 | 4.8 | 5158319.33 | 105.91 | 60 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

| | |
|---|---|
| **Sample Name** | ICSAB |
| **File Name** | H6L09013.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:28:50 |
| **Sample Type** | ICSB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 18.078 | ppb | 0.7 | 252182.59 | 20 | 80 | 120 | |
| Be | 9 | 6 | No Gas | 18.081 | ppb | 4.9 | 67398.33 | 20 | 80 | 120 | |
| B | 11 | 6 | No Gas | 18.196 | ppb | 2.0 | 43368.00 | 20 | 80 | 120 | |
| Na | 23 | 45 | H2 | 93443.037 | ppb | 1.9 | 662069525.33 | 100000 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 93035.613 | ppb | 7.0 | 1486015744.00 | 100000 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 95314.038 | ppb | 3.1 | 2063742529.25 | 100000 | 80 | 120 | |
| Si | 28 | 45 | H2 | 173.468 | ppb | 1.9 | 378855.19 | 200 | 80 | 120 | |
| P | 31 | 45 | No Gas | 95235.689 | ppb | 5.6 | 117558282.67 | 100000 | 80 | 120 | |
| K | 39 | 45 | He | 100685.467 | ppb | 3.9 | 107907541.33 | 100000 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 94612.020 | ppb | 2.3 | 1521647061.33 | 100000 | 80 | 120 | |
| Ti | 47 | 45 | No Gas | 1973.325 | ppb | 4.8 | 6031068.83 | 2000 | 80 | 120 | |
| V | 51 | 45 | He | 19.246 | ppb | 3.4 | 180487.55 | 20 | 80 | 120 | |
| Cr | 52 | 45 | He | 20.546 | ppb | 4.7 | 225103.68 | 20 | 80 | 120 | |
| Mn | 55 | 45 | No Gas | 18.468 | ppb | 5.7 | 967457.02 | 20 | 80 | 120 | |
| Fe | 56 | 45 | H2 | 94836.516 | ppb | 2.8 | 2426221482.67 | 100000 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 17.881 | ppb | 6.7 | 817362.19 | 20 | 80 | 120 | |
| Ni | 60 | 45 | He | 19.152 | ppb | 4.2 | 76361.06 | 20 | 80 | 120 | |
| Cu | 63 | 45 | He | 19.481 | ppb | 5.9 | 200631.78 | 20 | 80 | 120 | |
| Zn | 66 | 72 | No Gas | 19.443 | ppb | 3.8 | 139449.53 | 20 | 80 | 120 | |
| As | 75 | 72 | He | 19.948 | ppb | 5.7 | 33819.96 | 20 | 80 | 120 | |
| Se | 78 | 72 | H2 | 17.580 | ppb | 5.8 | 13388.31 | 20 | 80 | 120 | |
| Sr | 88 | 72 | No Gas | 20.076 | ppb | 3.5 | 1213160.68 | 20 | 80 | 120 | |
| Zr | 90 | 72 | No Gas | 6.222 | ppb | 2.3 | 245742.53 | 20 | 80 | 120 | > +/- 20% |
| Mo | 95 | 115 | No Gas | 1955.529 | ppb | 4.4 | 23138610.75 | 2000 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 16.697 | ppb | 5.3 | 521455.75 | 20 | 80 | 120 | |
| Cd | 111 | 115 | No Gas | 17.623 | ppb | 4.1 | 110123.44 | 20 | 80 | 120 | |
| Sn | 118 | 115 | No Gas | 17.575 | ppb | 3.6 | 327709.45 | 20 | 80 | 120 | |
| Sb | 123 | 115 | No Gas | 17.711 | ppb | 4.5 | 360350.52 | 20 | 80 | 120 | |
| Ba | 137 | 115 | No Gas | 17.750 | ppb | 3.6 | 155012.00 | 20 | 80 | 120 | |
| W | 182 | 159 | No Gas | 17.886 | ppb | 6.6 | 332113.70 | 20 | 80 | 120 | |
| Hg | 201 | 159 | He | 1.974 | ppb | 6.7 | 2733.97 | 2 | 80 | 120 | |
| Tl | 205 | 159 | No Gas | 17.581 | ppb | 5.1 | 716456.29 | 20 | 80 | 120 | |
| Pb | 208 | 159 | No Gas | 17.591 | ppb | 6.3 | 973691.87 | 20 | 80 | 120 | |
| U | 238 | 159 | No Gas | 18.373 | ppb | 6.0 | 900581.28 | 20 | 80 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1297763.65 | 5.1 | 1141329.81 | 113.71 | 60 | 120 | |
| Sc | 45 | No Gas | 5323974.17 | 6.5 | 4615577.5 | 115.35 | 60 | 120 | |
| Sc | 45 | H2 | 3541860.25 | 2.9 | 3170333.75 | 111.72 | 60 | 120 | |
| Sc | 45 | He | 571205.42 | 2.9 | 539902.19 | 105.8 | 60 | 120 | |
| Ge | 72 | No Gas | 1478106.75 | 3.9 | 1308491.96 | 112.96 | 60 | 120 | |
| Ge | 72 | H2 | 1062566.98 | 5.2 | 930488.13 | 114.19 | 60 | 120 | |
| Ge | 72 | He | 359067.99 | 2.4 | 336689.17 | 106.65 | 60 | 120 | |
| In | 115 | No Gas | 8754812.13 | 3.9 | 8658209.05 | 101.12 | 60 | 120 | |
| Tb | 159 | No Gas | 10811846.24 | 4.8 | 10130338.49 | 106.73 | 60 | 120 | |
| Tb | 159 | He | 5469097.17 | 2.5 | 5158319.33 | 106.02 | 60 | 120 | |

# Continuing Calibration Verification (CCV) Report

| | |
|---|---|
| **Sample Name** | CCV1 |
| **File Name** | H6L09015.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:36:58 |
| **Sample Type** | CCV |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | % Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 24.168 | ppb | 5.1 | 292398.05 | 25 | 96.67 | 90 | 110 | |
| Be | 9 | 6 | No Gas | 24.206 | ppb | 6.6 | 84755.65 | 25 | 96.82 | 90 | 110 | |
| B | 11 | 6 | No Gas | 48.332 | ppb | 5.2 | 102898.54 | 50 | 96.66 | 90 | 110 | |
| Na | 23 | 45 | H2 | 23247.648 | ppb | 2.4 | 159859253.33 | 25000 | 92.99 | 90 | 110 | |
| Mg | 24 | 45 | No Gas | 24946.374 | ppb | 4.0 | 368077237.33 | 25000 | 99.79 | 90 | 110 | |
| Al | 27 | 45 | No Gas | 24155.891 | ppb | 5.2 | 482342406.15 | 25000 | 96.62 | 90 | 110 | |
| Si | 28 | 45 | H2 | 2361.616 | ppb | 0.5 | 4916079.50 | 2500 | 94.46 | 90 | 110 | |
| P | 31 | 45 | No Gas | 246.895 | ppb | 4.4 | 318140.65 | 250 | 98.76 | 90 | 110 | |
| K | 39 | 45 | He | 24541.261 | ppb | 3.3 | 26795486.00 | 25000 | 98.17 | 90 | 110 | |
| Ca | 40 | 45 | H2 | 23456.222 | ppb | 2.1 | 364857088.00 | 25000 | 93.82 | 90 | 110 | |
| Ti | 47 | 45 | No Gas | 233.950 | ppb | 3.1 | 660255.06 | 250 | 93.58 | 90 | 110 | |
| V | 51 | 45 | He | 246.547 | ppb | 2.4 | 2314192.83 | 250 | 98.62 | 90 | 110 | |
| Cr | 52 | 45 | He | 246.115 | ppb | 2.2 | 2701937.92 | 250 | 98.45 | 90 | 110 | |
| Mn | 55 | 45 | No Gas | 1522.170 | ppb | 4.5 | 72521784.00 | 1500 | 101.48 | 90 | 110 | |
| Fe | 56 | 45 | H2 | 23882.543 | ppb | 1.1 | 590990741.33 | 25000 | 95.53 | 90 | 110 | |
| Co | 59 | 45 | No Gas | 253.185 | ppb | 4.0 | 10679855.67 | 250 | 101.27 | 90 | 110 | |
| Ni | 60 | 45 | He | 243.055 | ppb | 3.4 | 981607.13 | 250 | 97.22 | 90 | 110 | |
| Cu | 63 | 45 | He | 253.227 | ppb | 2.2 | 2624408.83 | 250 | 101.29 | 90 | 110 | |
| Zn | 66 | 72 | No Gas | 250.552 | ppb | 3.9 | 1740656.46 | 250 | 100.22 | 90 | 110 | |
| As | 75 | 72 | He | 247.396 | ppb | 5.0 | 429695.98 | 250 | 98.96 | 90 | 110 | |
| Se | 78 | 72 | H2 | 235.986 | ppb | 0.7 | 170130.78 | 250 | 94.39 | 90 | 110 | |
| Sr | 88 | 72 | No Gas | 248.896 | ppb | 3.6 | 14730295.52 | 250 | 99.56 | 90 | 110 | |
| Zr | 90 | 72 | No Gas | 23.216 | ppb | 6.5 | 898045.25 | 25 | 92.86 | 90 | 110 | |
| Mo | 95 | 115 | No Gas | 239.209 | ppb | 4.4 | 2874084.47 | 250 | 95.68 | 90 | 110 | |
| Ag | 107 | 115 | No Gas | 22.953 | ppb | 4.6 | 727860.09 | 25 | 91.81 | 90 | 110 | |
| Cd | 111 | 115 | No Gas | 244.692 | ppb | 3.4 | 1550460.93 | 250 | 97.88 | 90 | 110 | |
| Sn | 118 | 115 | No Gas | 241.681 | ppb | 4.2 | 4522094.82 | 250 | 96.67 | 90 | 110 | |
| Sb | 123 | 115 | No Gas | 46.250 | ppb | 3.5 | 953659.93 | 50 | 92.5 | 90 | 110 | |
| Ba | 137 | 115 | No Gas | 484.874 | ppb | 3.1 | 4292296.92 | 500 | 96.97 | 90 | 110 | |
| W | 182 | 159 | No Gas | 24.821 | ppb | 5.4 | 461259.59 | 25 | 99.28 | 90 | 110 | |
| Hg | 201 | 159 | He | 2.521 | ppb | 2.0 | 3524.00 | 2.5 | 100.84 | 90 | 110 | |
| Tl | 205 | 159 | No Gas | 251.455 | ppb | 6.3 | 10238038.21 | 250 | 100.58 | 90 | 110 | |
| Pb | 208 | 159 | No Gas | 250.522 | ppb | 5.6 | 13807529.72 | 250 | 100.21 | 90 | 110 | |
| U | 238 | 159 | No Gas | 247.222 | ppb | 5.5 | 12119570.91 | 250 | 98.89 | 90 | 110 | |

# Continuing Calibration Verification (CCV) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1220488.09 | 6.2 | 1141329.81 | 106.94 | 60 | 120 | |
| Sc | 45 | No Gas | 4908040.17 | 3.5 | 4615577.5 | 106.34 | 60 | 120 | |
| Sc | 45 | H2 | 3424061.83 | 1.3 | 3170333.75 | 108 | 60 | 120 | |
| Sc | 45 | He | 579432.54 | 0.9 | 539902.19 | 107.32 | 60 | 120 | |
| Ge | 72 | No Gas | 1450050.08 | 3.6 | 1308491.96 | 110.82 | 60 | 120 | |
| Ge | 72 | H2 | 1010119.38 | 0.7 | 930488.13 | 108.56 | 60 | 120 | |
| Ge | 72 | He | 369793.85 | 3.0 | 336689.17 | 109.83 | 60 | 120 | |
| In | 115 | No Gas | 8886213.35 | 2.8 | 8658209.05 | 102.63 | 60 | 120 | |
| Tb | 159 | No Gas | 10820875.68 | 5.3 | 10130338.49 | 106.82 | 60 | 120 | |
| Tb | 159 | He | 5525243.00 | 0.9 | 5158319.33 | 107.11 | 60 | 120 | |

# Continuing Calibration Blank (CCB) Report

| | |
|---|---|
| **Sample Name** | CCB1 |
| **File Name** | H6L09016.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:39:35 |
| **Sample Type** | CCB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.058 | ppb | 167.2 | 70202.10 | 0.4 | |
| Be | 9 | 6 | No Gas | 0.015 | ppb | 35.2 | 72.22 | 0.08 | |
| B | 11 | 6 | No Gas | 0.675 | ppb | 26.9 | 4472.94 | 4 | |
| Na | 23 | 45 | H2 | <0.000 | ppb | N/A | 731318.60 | 40 | |
| Mg | 24 | 45 | No Gas | 8.154 | ppb | 54.7 | 150281.61 | 10 | |
| Al | 27 | 45 | No Gas | 7.953 | ppb | 55.6 | 185929.82 | 15 | |
| Si | 28 | 45 | H2 | 1.809 | ppb | 7.6 | 9140.33 | 8 | |
| P | 31 | 45 | No Gas | <0.000 | ppb | N/A | 34818.91 | 10 | |
| K | 39 | 45 | He | 2.079 | ppb | 116.4 | 128748.20 | 20 | |
| Ca | 40 | 45 | H2 | 2.128 | ppb | 14.6 | 129286.36 | 25 | |
| Ti | 47 | 45 | No Gas | 0.078 | ppb | 56.2 | 462.68 | 0.5 | |
| V | 51 | 45 | He | 0.020 | ppb | 6.4 | 2771.61 | 0.5 | |
| Cr | 52 | 45 | He | <0.000 | ppb | N/A | 2902.31 | 0.2 | |
| Mn | 55 | 45 | No Gas | 0.538 | ppb | 51.0 | 37999.73 | 0.2 | >LOD |
| Fe | 56 | 45 | H2 | 2.949 | ppb | 5.6 | 118661.93 | 10 | |
| Co | 59 | 45 | No Gas | 0.083 | ppb | 55.5 | 4122.08 | 0.15 | |
| Ni | 60 | 45 | He | 0.032 | ppb | 31.9 | 289.33 | 0.2 | |
| Cu | 63 | 45 | He | 0.135 | ppb | 3.2 | 3202.38 | 0.4 | |
| Zn | 66 | 72 | No Gas | 0.069 | ppb | 76.5 | 2196.18 | 2 | |
| As | 75 | 72 | He | 0.068 | ppb | 4.8 | 295.33 | 0.2 | |
| Se | 78 | 72 | H2 | 0.036 | ppb | 24.3 | 105.00 | 0.2 | |
| Sr | 88 | 72 | No Gas | 0.084 | ppb | 60.5 | 6755.30 | 0.2 | |
| Zr | 90 | 72 | No Gas | 0.007 | ppb | 36.9 | 530.01 | 2 | |
| Mo | 95 | 115 | No Gas | 0.098 | ppb | 42.9 | 1426.75 | 0.2 | |
| Ag | 107 | 115 | No Gas | 0.011 | ppb | 43.2 | 592.24 | 0.08 | |
| Cd | 111 | 115 | No Gas | 0.099 | ppb | 51.3 | 816.03 | 0.2 | |
| Sn | 118 | 115 | No Gas | 0.174 | ppb | 32.6 | 7577.78 | 0.2 | |
| Sb | 123 | 115 | No Gas | 0.022 | ppb | 37.3 | 1707.89 | 0.4 | |
| Ba | 137 | 115 | No Gas | 0.144 | ppb | 48.6 | 1582.33 | 0.2 | |
| W | 182 | 159 | No Gas | 0.019 | ppb | 42.1 | 660.02 | 0.3 | |
| Hg | 201 | 159 | He | 0.002 | ppb | 151.7 | 30.00 | 0.1 | |
| Tl | 205 | 159 | No Gas | 0.147 | ppb | 43.5 | 6725.35 | 0.1 | >LOD |
| Pb | 208 | 159 | No Gas | 0.165 | ppb | 35.4 | 14108.79 | 0.1 | >LOD |
| U | 238 | 159 | No Gas | 0.083 | ppb | 47.1 | 4564.31 | 0.05 | >LOD |

LY 12/22/20

# Continuing Calibration Blank (CCB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1185912.17 | 2.5 | 1141329.81 | 103.91 | 60 | 120 | |
| Sc | 45 | No Gas | 4774813.50 | 1.7 | 4615577.5 | 103.45 | 60 | 120 | |
| Sc | 45 | H2 | 3324173.75 | 1.7 | 3170333.75 | 104.85 | 60 | 120 | |
| Sc | 45 | He | 549392.73 | 1.8 | 539902.19 | 101.76 | 60 | 120 | |
| Ge | 72 | No Gas | 1359525.08 | 2.0 | 1308491.96 | 103.9 | 60 | 120 | |
| Ge | 72 | H2 | 960833.21 | 0.8 | 930488.13 | 103.26 | 60 | 120 | |
| Ge | 72 | He | 344940.76 | 1.6 | 336689.17 | 102.45 | 60 | 120 | |
| In | 115 | No Gas | 9094901.17 | 1.6 | 8658209.05 | 105.04 | 60 | 120 | |
| Tb | 159 | No Gas | 10637431.52 | 3.0 | 10130338.49 | 105.01 | 60 | 120 | |
| Tb | 159 | He | 5425697.00 | 1.2 | 5158319.33 | 105.18 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-02M |
| **File Name** | H6L09020.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:49:54 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 387.256 | 38.726 | ppb | 1.7 | 385617.70 | 50 | |
| Be | 9 | 6 | No Gas | 30.519 | 3.052 | ppb | 3.7 | 9706.69 | 50 | |
| B | 11 | 6 | No Gas | 1233.786 | 123.379 | ppb | 1.5 | 233659.42 | 100 | >LDR |
| Na | 23 | 45 | H2 | 1784008.797 | 178400.880 | ppb | 1.2 | 1190418944.00 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 78734.037 | 7873.404 | ppb | 3.8 | 111891842.67 | 50000 | |
| Al | 27 | 45 | No Gas | 2784.190 | 278.419 | ppb | 3.7 | 5386558.46 | 50000 | |
| Si | 28 | 45 | H2 | 15482.405 | 1548.240 | ppb | 0.7 | 3143442.92 | 5000 | |
| P | 31 | 45 | No Gas | 15.204 | 1.520 | ppb | 60.5 | 37118.89 | 500 | |
| K | 39 | 45 | He | 15647.042 | 1564.704 | ppb | 2.6 | 1801946.58 | 50000 | |
| Ca | 40 | 45 | H2 | 153620.565 | 15362.057 | ppb | 0.4 | 232964805.33 | 50000 | |
| Ti | 47 | 45 | No Gas | 28.591 | 2.859 | ppb | 1.2 | 8019.68 | 500 | |
| V | 51 | 45 | He | 33.110 | 3.311 | ppb | 1.8 | 33198.09 | 500 | |
| Cr | 52 | 45 | He | 29.977 | 2.998 | ppb | 2.3 | 35473.16 | 500 | |
| Mn | 55 | 45 | No Gas | 743.646 | 74.365 | ppb | 1.9 | 3426856.92 | 3000 | |
| Fe | 56 | 45 | H2 | 2952.979 | 295.298 | ppb | 2.9 | 7167031.67 | 50000 | |
| Co | 59 | 45 | No Gas | 29.064 | 2.906 | ppb | 2.8 | 118797.70 | 500 | |
| Ni | 60 | 45 | He | 31.433 | 3.143 | ppb | 1.3 | 12649.87 | 500 | |
| Cu | 63 | 45 | He | 35.844 | 3.584 | ppb | 1.2 | 38430.12 | 500 | |
| Zn | 66 | 72 | No Gas | 65.815 | 6.582 | ppb | 3.7 | 45886.71 | 500 | |
| As | 75 | 72 | He | 34.296 | 3.430 | ppb | 1.8 | 6143.40 | 500 | |
| Se | 78 | 72 | H2 | 29.721 | 2.972 | ppb | 7.6 | 2201.18 | 500 | |
| Sr | 88 | 72 | No Gas | 3770.551 | 377.055 | ppb | 3.0 | 21540021.92 | 500 | |
| Zr | 90 | 72 | No Gas | <0.000 | <0.000 | ppb | N/A | 246.67 | 50 | |
| Mo | 95 | 115 | No Gas | 71.425 | 7.143 | ppb | 4.4 | 83200.85 | 500 | |
| Ag | 107 | 115 | No Gas | 26.721 | 2.672 | ppb | 3.9 | 82158.60 | 50 | |
| Cd | 111 | 115 | No Gas | 27.394 | 2.739 | ppb | 3.9 | 16952.65 | 500 | |
| Sn | 118 | 115 | No Gas | 26.908 | 2.691 | ppb | 3.6 | 52676.33 | 500 | |
| Sb | 123 | 115 | No Gas | 27.665 | 2.766 | ppb | 4.1 | 56277.12 | 100 | |
| Ba | 137 | 115 | No Gas | 68.910 | 6.891 | ppb | 4.4 | 59253.62 | 1000 | |
| W | 182 | 159 | No Gas | 2.370 | 0.237 | ppb | 6.1 | 4470.81 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 19.67 | 5 | |
| Tl | 205 | 159 | No Gas | 27.896 | 2.790 | ppb | 6.5 | 108481.02 | 500 | |
| Pb | 208 | 159 | No Gas | 27.524 | 2.752 | ppb | 6.3 | 148769.06 | 500 | |
| U | 238 | 159 | No Gas | 30.547 | 3.055 | ppb | 3.7 | 142582.36 | 497 | |

QC ISTD Table

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1104983.79 | 3.5 | 1141329.81 | 96.82 | 60 | 120 | |
| Sc | 45 | No Gas | 4727304.33 | 3.5 | 4615577.5 | 102.42 | 60 | 120 | |
| Sc | 45 | H2 | 3337339.08 | 2.4 | 3170333.75 | 105.27 | 60 | 120 | |
| Sc | 45 | He | 569469.35 | 1.4 | 539902.19 | 105.48 | 60 | 120 | |
| Ge | 72 | No Gas | 1399580.29 | 3.7 | 1308491.96 | 106.96 | 60 | 120 | |
| Ge | 72 | H2 | 999226.52 | 1.2 | 930488.13 | 107.39 | 60 | 120 | |
| Ge | 72 | He | 368949.98 | 0.5 | 336689.17 | 109.58 | 60 | 120 | |
| In | 115 | No Gas | 8598208.22 | 4.2 | 8658209.05 | 99.31 | 60 | 120 | |
| Tb | 159 | No Gas | 10254274.87 | 4.3 | 10130338.49 | 101.22 | 60 | 120 | |
| Tb | 159 | He | 5330495.33 | 0.5 | 5158319.33 | 103.34 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-02S |
| **File Name** | H6L09021.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:52:29 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 387.343 | 38.734 | ppb | 7.1 | 395260.18 | 50 | |
| Be | 9 | 6 | No Gas | 30.210 | 3.021 | ppb | 6.9 | 9847.90 | 50 | |
| B | 11 | 6 | No Gas | 1251.904 | 125.190 | ppb | 3.9 | 243175.56 | 100 | >LDR |
| Na | 23 | 45 | H2 | 1778625.685 | 177862.568 | ppb | 3.2 | 1203574613.33 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 81082.284 | 8108.228 | ppb | 3.8 | 116690122.67 | 50000 | |
| Al | 27 | 45 | No Gas | 2859.850 | 285.985 | ppb | 3.5 | 5601929.29 | 50000 | |
| Si | 28 | 45 | H2 | 15563.518 | 1556.352 | ppb | 4.2 | 3203523.67 | 5000 | |
| P | 31 | 45 | No Gas | 12.649 | 1.265 | ppb | 45.5 | 37312.72 | 500 | |
| K | 39 | 45 | He | 15996.701 | 1599.670 | ppb | 3.4 | 1836011.46 | 50000 | |
| Ca | 40 | 45 | H2 | 153220.501 | 15322.050 | ppb | 3.5 | 235610021.33 | 50000 | |
| Ti | 47 | 45 | No Gas | 28.647 | 2.865 | ppb | 3.5 | 8131.75 | 500 | |
| V | 51 | 45 | He | 34.879 | 3.488 | ppb | 5.1 | 34756.64 | 500 | |
| Cr | 52 | 45 | He | 30.973 | 3.097 | ppb | 6.0 | 36463.11 | 500 | |
| Mn | 55 | 45 | No Gas | 758.113 | 75.811 | ppb | 3.4 | 3536065.08 | 3000 | |
| Fe | 56 | 45 | H2 | 3029.550 | 302.955 | ppb | 2.3 | 7458043.83 | 50000 | |
| Co | 59 | 45 | No Gas | 29.364 | 2.936 | ppb | 4.3 | 121486.44 | 500 | |
| Ni | 60 | 45 | He | 31.620 | 3.162 | ppb | 2.5 | 12704.59 | 500 | |
| Cu | 63 | 45 | He | 36.403 | 3.640 | ppb | 5.0 | 38914.20 | 500 | |
| Zn | 66 | 72 | No Gas | 66.268 | 6.627 | ppb | 2.1 | 46722.99 | 500 | |
| As | 75 | 72 | He | 35.769 | 3.577 | ppb | 3.9 | 6436.87 | 500 | |
| Se | 78 | 72 | H2 | 29.943 | 2.994 | ppb | 2.1 | 2244.19 | 500 | |
| Sr | 88 | 72 | No Gas | 3874.219 | 387.422 | ppb | 0.9 | 22387114.11 | 500 | |
| Zr | 90 | 72 | No Gas | <0.000 | <0.000 | ppb | N/A | 240.00 | 50 | |
| Mo | 95 | 115 | No Gas | 73.677 | 7.368 | ppb | 2.7 | 84188.13 | 500 | |
| Ag | 107 | 115 | No Gas | 27.925 | 2.793 | ppb | 2.2 | 84214.75 | 50 | |
| Cd | 111 | 115 | No Gas | 28.792 | 2.879 | ppb | 2.6 | 17468.86 | 500 | |
| Sn | 118 | 115 | No Gas | 27.995 | 2.800 | ppb | 2.8 | 53588.91 | 500 | |
| Sb | 123 | 115 | No Gas | 29.521 | 2.952 | ppb | 4.0 | 58813.88 | 100 | |
| Ba | 137 | 115 | No Gas | 71.783 | 7.178 | ppb | 4.3 | 60518.41 | 1000 | |
| W | 182 | 159 | No Gas | 2.390 | 0.239 | ppb | 10.0 | 4527.49 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 19.00 | 5 | |
| Tl | 205 | 159 | No Gas | 28.351 | 2.835 | ppb | 4.9 | 110837.70 | 500 | |
| Pb | 208 | 159 | No Gas | 28.274 | 2.827 | ppb | 4.1 | 153564.92 | 500 | |
| U | 238 | 159 | No Gas | 31.342 | 3.134 | ppb | 4.2 | 146988.11 | 497 | |

# Sample Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1135117.83 | 7.0 | 1141329.81 | 99.46 | 60 | 120 | |
| Sc | 45 | No Gas | 4786913.50 | 3.5 | 4615577.5 | 103.71 | 60 | 120 | |
| Sc | 45 | H2 | 3384876.25 | 1.4 | 3170333.75 | 106.77 | 60 | 120 | |
| Sc | 45 | He | 568797.79 | 3.5 | 539902.19 | 105.35 | 60 | 120 | |
| Ge | 72 | No Gas | 1414800.50 | 2.0 | 1308491.96 | 108.12 | 60 | 120 | |
| Ge | 72 | H2 | 1011426.35 | 3.4 | 930488.13 | 108.7 | 60 | 120 | |
| Ge | 72 | He | 371325.96 | 2.1 | 336689.17 | 110.29 | 60 | 120 | |
| In | 115 | No Gas | 8428498.35 | 2.7 | 8658209.05 | 97.35 | 60 | 120 | |
| Tb | 159 | No Gas | 10304374.03 | 3.9 | 10130338.49 | 101.72 | 60 | 120 | |
| Tb | 159 | He | 5352336.00 | 0.8 | 5158319.33 | 103.76 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-02A |
| **File Name** | H6L09022.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:55:05 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 626.081 | 62.608 | ppb | 2.4 | 623609.00 | 50 | >LDR |
| Be | 9 | 6 | No Gas | 289.690 | 28.969 | ppb | 3.7 | 98271.94 | 50 | |
| B | 11 | 6 | No Gas | 1474.673 | 147.467 | ppb | 4.4 | 297938.66 | 100 | >LDR |
| Na | 23 | 45 | H2 | 1876193.188 | 187619.319 | ppb | 5.1 | 1258711082.67 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 105498.689 | 10549.869 | ppb | 2.9 | 157965632.00 | 50000 | |
| Al | 27 | 45 | No Gas | 28620.445 | 2862.045 | ppb | 3.0 | 58013525.80 | 50000 | |
| Si | 28 | 45 | H2 | 16388.759 | 1638.876 | ppb | 3.6 | 3345632.58 | 5000 | |
| P | 31 | 45 | No Gas | 11.589 | 1.159 | ppb | 28.8 | 38685.87 | 500 | |
| K | 39 | 45 | He | 43351.934 | 4335.193 | ppb | 1.1 | 4963206.67 | 50000 | |
| Ca | 40 | 45 | H2 | 184739.692 | 18473.969 | ppb | 5.4 | 281640832.00 | 50000 | |
| Ti | 47 | 45 | No Gas | 270.233 | 27.023 | ppb | 1.1 | 77635.55 | 500 | |
| V | 51 | 45 | He | 302.673 | 30.267 | ppb | 2.0 | 293564.75 | 500 | |
| Cr | 52 | 45 | He | 306.328 | 30.633 | ppb | 2.2 | 347452.96 | 500 | |
| Mn | 55 | 45 | No Gas | 992.372 | 99.237 | ppb | 0.9 | 4811207.17 | 3000 | |
| Fe | 56 | 45 | H2 | 30967.018 | 3096.702 | ppb | 3.8 | 75153053.33 | 50000 | |
| Co | 59 | 45 | No Gas | 291.612 | 29.161 | ppb | 2.0 | 1248649.91 | 500 | |
| Ni | 60 | 45 | He | 299.204 | 29.920 | ppb | 1.7 | 123974.41 | 500 | |
| Cu | 63 | 45 | He | 316.681 | 31.668 | ppb | 2.3 | 338043.24 | 500 | |
| Zn | 66 | 72 | No Gas | 587.521 | 58.752 | ppb | 2.0 | 406801.40 | 500 | |
| As | 75 | 72 | He | 325.997 | 32.600 | ppb | 0.9 | 56462.65 | 500 | |
| Se | 78 | 72 | H2 | 302.993 | 30.299 | ppb | 4.7 | 21805.27 | 500 | |
| Sr | 88 | 72 | No Gas | 4021.589 | 402.159 | ppb | 2.3 | 23635386.84 | 500 | |
| Zr | 90 | 72 | No Gas | 0.909 | 0.091 | ppb | 1.6 | 3780.55 | 50 | |
| Mo | 95 | 115 | No Gas | 322.264 | 32.226 | ppb | 6.4 | 381219.72 | 500 | |
| Ag | 107 | 115 | No Gas | 263.678 | 26.368 | ppb | 8.3 | 822363.00 | 50 | |
| Cd | 111 | 115 | No Gas | 278.069 | 27.807 | ppb | 5.0 | 173578.97 | 500 | |
| Sn | 118 | 115 | No Gas | 272.832 | 27.283 | ppb | 5.9 | 506016.23 | 500 | |
| Sb | 123 | 115 | No Gas | 273.311 | 27.331 | ppb | 6.1 | 555060.00 | 100 | |
| Ba | 137 | 115 | No Gas | 313.120 | 31.312 | ppb | 6.7 | 272964.11 | 1000 | |
| W | 182 | 159 | No Gas | 3.672 | 0.367 | ppb | 7.7 | 6908.59 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 15.83 | 5 | |
| Tl | 205 | 159 | No Gas | 276.211 | 27.621 | ppb | 5.4 | 1090783.29 | 500 | |
| Pb | 208 | 159 | No Gas | 278.886 | 27.889 | ppb | 6.6 | 1493501.34 | 500 | |
| U | 238 | 159 | No Gas | 298.337 | 29.834 | ppb | 4.7 | 1417959.91 | 497 | |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1180707.83 | 4.1 | 1141329.81 | 103.45 | 60 | 120 | |
| Sc | 45 | No Gas | 4977042.17 | 3.0 | 4615577.5 | 107.83 | 60 | 120 | |
| Sc | 45 | H2 | 3358171.08 | 2.8 | 3170333.75 | 105.92 | 60 | 120 | |
| Sc | 45 | He | 593706.35 | 1.4 | 539902.19 | 109.97 | 60 | 120 | |
| Ge | 72 | No Gas | 1438766.21 | 0.3 | 1308491.96 | 109.96 | 60 | 120 | |
| Ge | 72 | H2 | 1005731.52 | 2.7 | 930488.13 | 108.09 | 60 | 120 | |
| Ge | 72 | He | 367283.22 | 1.1 | 336689.17 | 109.09 | 60 | 120 | |
| In | 115 | No Gas | 8753479.50 | 4.3 | 8658209.05 | 101.1 | 60 | 120 | |
| Tb | 159 | No Gas | 10482108.47 | 4.6 | 10130338.49 | 103.47 | 60 | 120 | |
| Tb | 159 | He | 5363223.50 | 1.7 | 5158319.33 | 103.97 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-02I |
| **File Name** | H6L09023.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:57:40 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 363.961 | 36.396 | ppb | 1.4 | 395004.21 | 50 | |
| Be | 9 | 6 | No Gas | 0.206 | 0.021 | ppb | 40.5 | 90.00 | 50 | |
| B | 11 | 6 | No Gas | 1223.747 | 122.375 | ppb | 0.9 | 249932.62 | 100 | >LDR |
| Na | 23 | 45 | H2 | 1682473.476 | 168247.348 | ppb | 2.6 | 1198762368.00 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 80235.020 | 8023.502 | ppb | 2.5 | 120393426.67 | 50000 | |
| Al | 27 | 45 | No Gas | 6.702 | 0.670 | ppb | 70.1 | 46373.24 | 50000 | |
| Si | 28 | 45 | H2 | 14355.180 | 1435.518 | ppb | 2.3 | 3111348.00 | 5000 | |
| P | 31 | 45 | No Gas | 11.701 | 1.170 | ppb | 45.1 | 38765.32 | 500 | |
| K | 39 | 45 | He | 13096.173 | 1309.617 | ppb | 4.1 | 1552470.63 | 50000 | |
| Ca | 40 | 45 | H2 | 142220.685 | 14222.069 | ppb | 3.4 | 230161994.67 | 50000 | |
| Ti | 47 | 45 | No Gas | 1.518 | 0.152 | ppb | 50.7 | 696.03 | 500 | |
| V | 51 | 45 | He | 4.450 | 0.445 | ppb | 7.8 | 6891.07 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2680.26 | 500 | |
| Mn | 55 | 45 | No Gas | 733.132 | 73.313 | ppb | 0.8 | 3565077.42 | 3000 | |
| Fe | 56 | 45 | H2 | 1.339 | 0.134 | ppb | 102.8 | 54861.36 | 50000 | |
| Co | 59 | 45 | No Gas | 0.377 | 0.038 | ppb | 8.8 | 2348.87 | 500 | |
| Ni | 60 | 45 | He | 1.765 | 0.176 | ppb | 13.5 | 887.36 | 500 | |
| Cu | 63 | 45 | He | 4.401 | 0.440 | ppb | 5.3 | 6522.90 | 500 | |
| Zn | 66 | 72 | No Gas | 9.655 | 0.966 | ppb | 3.9 | 8756.17 | 500 | |
| As | 75 | 72 | He | 3.252 | 0.325 | ppb | 5.7 | 763.35 | 500 | |
| Se | 78 | 72 | H2 | 0.066 | 0.007 | ppb | 168.5 | 95.67 | 500 | |
| Sr | 88 | 72 | No Gas | 3791.824 | 379.182 | ppb | 1.6 | 22945436.87 | 500 | |
| Zr | 90 | 72 | No Gas | <0.000 | <0.000 | ppb | N/A | 266.67 | 50 | |
| Mo | 95 | 115 | No Gas | 45.950 | 4.595 | ppb | 1.7 | 54183.31 | 500 | |
| Ag | 107 | 115 | No Gas | 0.173 | 0.017 | ppb | 18.2 | 747.80 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 95.43 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2977.01 | 500 | |
| Sb | 123 | 115 | No Gas | 0.469 | 0.047 | ppb | 11.8 | 2133.51 | 100 | |
| Ba | 137 | 115 | No Gas | 44.238 | 4.424 | ppb | 4.4 | 38527.01 | 1000 | |
| W | 182 | 159 | No Gas | 2.484 | 0.248 | ppb | 6.4 | 4774.25 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 15.17 | 5 | |
| Tl | 205 | 159 | No Gas | 0.498 | 0.050 | ppb | 12.0 | 2795.87 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 4059.15 | 500 | |
| U | 238 | 159 | No Gas | 2.721 | 0.272 | ppb | 4.9 | 13476.32 | 497 | |

# Sample Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1191471.84 | 3.9 | 1141329.81 | 104.39 | 60 | 120 | |
| Sc | 45 | No Gas | 4985995.00 | 1.3 | 4615577.5 | 108.03 | 60 | 120 | |
| Sc | 45 | H2 | 3564473.00 | 4.1 | 3170333.75 | 112.43 | 60 | 120 | |
| Sc | 45 | He | 578285.42 | 2.7 | 539902.19 | 107.11 | 60 | 120 | |
| Ge | 72 | No Gas | 1481750.63 | 2.6 | 1308491.96 | 113.24 | 60 | 120 | |
| Ge | 72 | H2 | 1078926.63 | 5.6 | 930488.13 | 115.95 | 60 | 120 | |
| Ge | 72 | He | 370407.88 | 4.2 | 336689.17 | 110.01 | 60 | 120 | |
| In | 115 | No Gas | 8684224.52 | 3.0 | 8658209.05 | 100.3 | 60 | 120 | |
| Tb | 159 | No Gas | 10459601.81 | 2.1 | 10130338.49 | 103.25 | 60 | 120 | |
| Tb | 159 | He | 5474860.00 | 3.0 | 5158319.33 | 106.14 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-02J |
| **File Name** | H6L09024.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:00:16 |
| **Sample Type** | Sample |
| **Total Dilution** | 50.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Flal** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 336.723 | 6.734 | ppb | 2.5 | 138631.83 | 50 | |
| Be | 9 | 6 | No Gas | 0.225 | 0.004 | ppb | 120.6 | 37.78 | 50 | |
| B | 11 | 6 | No Gas | 1246.019 | 24.920 | ppb | 2.4 | 56876.01 | 100 | |
| Na | 23 | 45 | H2 | 1724598.662 | 34491.973 | ppb | 4.9 | 239166277.33 | 50000 | |
| Mg | 24 | 45 | No Gas | 81209.466 | 1624.189 | ppb | 2.9 | 24292130.67 | 50000 | |
| Al | 27 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 25907.95 | 50000 | |
| Si | 28 | 45 | H2 | 13807.665 | 276.153 | ppb | 3.5 | 585715.46 | 5000 | |
| P | 31 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 37093.44 | 500 | |
| K | 39 | 45 | He | 12859.447 | 257.189 | ppb | 4.6 | 405699.11 | 50000 | |
| Ca | 40 | 45 | H2 | 141115.357 | 2822.307 | ppb | 1.7 | 44455406.67 | 50000 | |
| Ti | 47 | 45 | No Gas | 1.325 | 0.026 | ppb | 40.1 | 336.00 | 500 | |
| V | 51 | 45 | He | 14.979 | 0.300 | ppb | 5.4 | 5449.75 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2405.55 | 500 | |
| Mn | 55 | 45 | No Gas | 731.226 | 14.625 | ppb | 2.4 | 719084.21 | 3000 | |
| Fe | 56 | 45 | H2 | <0.000 | <0.000 | ppb | N/A | 27909.13 | 50000 | |
| Co | 59 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 624.68 | 500 | |
| Ni | 60 | 45 | He | 1.221 | 0.024 | ppb | 24.8 | 272.00 | 500 | |
| Cu | 63 | 45 | He | 7.137 | 0.143 | ppb | 12.5 | 3397.76 | 500 | |
| Zn | 66 | 72 | No Gas | 8.396 | 0.168 | ppb | 14.3 | 3110.36 | 500 | |
| As | 75 | 72 | He | 3.957 | 0.079 | ppb | 14.9 | 336.67 | 500 | |
| Se | 78 | 72 | H2 | <0.000 | <0.000 | ppb | N/A | 65.33 | 500 | |
| Sr | 88 | 72 | No Gas | 3808.903 | 76.178 | ppb | 3.2 | 4629844.40 | 500 | |
| Zr | 90 | 72 | No Gas | <0.000 | <0.000 | ppb | N/A | 176.67 | 50 | |
| Mo | 95 | 115 | No Gas | 42.873 | 0.857 | ppb | 1.9 | 10793.27 | 500 | |
| Ag | 107 | 115 | No Gas | 0.119 | 0.002 | ppb | 28.1 | 302.22 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 53.29 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2559.14 | 500 | |
| Sb | 123 | 115 | No Gas | 0.511 | 0.010 | ppb | 21.3 | 1467.86 | 100 | |
| Ba | 137 | 115 | No Gas | 43.533 | 0.871 | ppb | 3.8 | 8189.25 | 1000 | |
| W | 182 | 159 | No Gas | 2.338 | 0.047 | ppb | 12.1 | 1183.39 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 15.83 | 5 | |
| Tl | 205 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 702.24 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 2834.58 | 500 | |
| U | 238 | 159 | No Gas | 2.244 | 0.045 | ppb | 2.0 | 2785.87 | 497 | |

# Sample Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1268826.61 | 1.5 | 1141329.81 | 111.17 | 60 | 120 | |
| Sc | 45 | No Gas | 4967704.67 | 2.9 | 4615577.5 | 107.63 | 60 | 120 | |
| Sc | 45 | H2 | 3460553.75 | 2.6 | 3170333.75 | 109.15 | 60 | 120 | |
| Sc | 45 | He | 569424.21 | 2.4 | 539902.19 | 105.47 | 60 | 120 | |
| Ge | 72 | No Gas | 1487743.63 | 2.0 | 1308491.96 | 113.7 | 60 | 120 | |
| Ge | 72 | H2 | 1089336.71 | 3.3 | 930488.13 | 117.07 | 60 | 120 | |
| Ge | 72 | He | 371449.26 | 2.3 | 336689.17 | 110.32 | 60 | 120 | |
| In | 115 | No Gas | 9115822.86 | 2.3 | 8658209.05 | 105.29 | 60 | 120 | |
| Tb | 159 | No Gas | 10810093.18 | 0.6 | 10130338.49 | 106.71 | 60 | 120 | |
| Tb | 159 | He | 5358372.83 | 0.7 | 5158319.33 | 103.88 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-04I |
| **File Name** | H6L09025.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:02:51 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 700.635 | 70.064 | ppb | 3.2 | 704624.69 | 50 | >LDR |
| Be | 9 | 6 | No Gas | 0.032 | 0.003 | ppb | 62.3 | 31.11 | 50 | |
| B | 11 | 6 | No Gas | 1728.702 | 172.870 | ppb | 4.3 | 356107.61 | 100 | >LDR |
| Na | 23 | 45 | H2 | 2458098.069 | 245809.807 | ppb | 3.4 | 1743029845.33 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 15260.365 | 1526.036 | ppb | 3.5 | 23000186.67 | 50000 | |
| Al | 27 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 29180.89 | 50000 | |
| Si | 28 | 45 | H2 | 11962.482 | 1196.248 | ppb | 1.3 | 2584045.25 | 5000 | |
| P | 31 | 45 | No Gas | 8.924 | 0.892 | ppb | 132.5 | 38578.82 | 500 | |
| K | 39 | 45 | He | 22731.745 | 2273.174 | ppb | 1.1 | 2522309.83 | 50000 | |
| Ca | 40 | 45 | H2 | 131664.478 | 13166.448 | ppb | 2.4 | 212279002.67 | 50000 | |
| Ti | 47 | 45 | No Gas | 0.756 | 0.076 | ppb | 23.3 | 478.68 | 500 | |
| V | 51 | 45 | He | 3.075 | 0.308 | ppb | 2.9 | 5445.75 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2667.59 | 500 | |
| Mn | 55 | 45 | No Gas | 70.945 | 7.094 | ppb | 4.8 | 358423.42 | 3000 | |
| Fe | 56 | 45 | H2 | 3.444 | 0.344 | ppb | 13.3 | 59908.92 | 50000 | |
| Co | 59 | 45 | No Gas | 0.087 | 0.009 | ppb | 16.1 | 1110.05 | 500 | |
| Ni | 60 | 45 | He | 1.076 | 0.108 | ppb | 15.8 | 593.35 | 500 | |
| Cu | 63 | 45 | He | 1.750 | 0.175 | ppb | 2.9 | 3675.83 | 500 | |
| Zn | 66 | 72 | No Gas | 4.070 | 0.407 | ppb | 10.0 | 4732.83 | 500 | |
| As | 75 | 72 | He | 2.762 | 0.276 | ppb | 4.1 | 687.02 | 500 | |
| Se | 78 | 72 | H2 | <0.000 | <0.000 | ppb | N/A | 73.33 | 500 | |
| Sr | 88 | 72 | No Gas | 2910.563 | 291.056 | ppb | 4.7 | 17383975.98 | 500 | |
| Zr | 90 | 72 | No Gas | <0.000 | <0.000 | ppb | N/A | 253.34 | 50 | |
| Mo | 95 | 115 | No Gas | 49.186 | 4.919 | ppb | 8.5 | 58646.87 | 500 | |
| Ag | 107 | 115 | No Gas | 0.065 | 0.006 | ppb | 12.4 | 421.12 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 16.92 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2432.45 | 500 | |
| Sb | 123 | 115 | No Gas | 0.187 | 0.019 | ppb | 34.4 | 1585.65 | 100 | |
| Ba | 137 | 115 | No Gas | 38.320 | 3.832 | ppb | 6.5 | 33833.96 | 1000 | |
| W | 182 | 159 | No Gas | 1.179 | 0.118 | ppb | 9.0 | 2410.24 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 13.00 | 5 | |
| Tl | 205 | 159 | No Gas | 0.200 | 0.020 | ppb | 13.3 | 1614.55 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 2613.45 | 500 | |
| U | 238 | 159 | No Gas | 10.674 | 1.067 | ppb | 8.5 | 50906.82 | 497 | |

# Sample Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1207586.74 | 5.8 | 1141329.81 | 105.81 | 60 | 120 | |
| Sc | 45 | No Gas | 5009112.33 | 5.2 | 4615577.5 | 108.53 | 60 | 120 | |
| Sc | 45 | H2 | 3549029.08 | 3.1 | 3170333.75 | 111.94 | 60 | 120 | |
| Sc | 45 | He | 561415.31 | 1.8 | 539902.19 | 103.98 | 60 | 120 | |
| Ge | 72 | No Gas | 1463980.66 | 4.4 | 1308491.96 | 111.88 | 60 | 120 | |
| Ge | 72 | H2 | 1066311.21 | 5.1 | 930488.13 | 114.6 | 60 | 120 | |
| Ge | 72 | He | 374776.44 | 2.7 | 336689.17 | 111.31 | 60 | 120 | |
| In | 115 | No Gas | 8807974.62 | 5.9 | 8658209.05 | 101.73 | 60 | 120 | |
| Tb | 159 | No Gas | 10428785.14 | 6.5 | 10130338.49 | 102.95 | 60 | 120 | |
| Tb | 159 | He | 5298708.00 | 1.2 | 5158319.33 | 102.72 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-06I |
| **File Name** | H6L09026.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:05:27 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 977.981 | 97.798 | ppb | 1.2 | 956019.65 | 50 | >LDR |
| Be | 9 | 6 | No Gas | 0.035 | 0.004 | ppb | 51.4 | 32.22 | 50 | |
| B | 11 | 6 | No Gas | 2697.995 | 269.799 | ppb | 1.6 | 554596.94 | 100 | >LDR |
| Na | 23 | 45 | H2 | 4010103.534 | 401010.353 | ppb | 4.6 | 2909851221.33 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 4770.474 | 477.047 | ppb | 1.6 | 7048429.00 | 50000 | |
| Al | 27 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 30603.97 | 50000 | |
| Si | 28 | 45 | H2 | 8190.677 | 819.068 | ppb | 5.3 | 1811093.00 | 5000 | |
| P | 31 | 45 | No Gas | 27.091 | 2.709 | ppb | 12.5 | 39764.20 | 500 | |
| K | 39 | 45 | He | 34109.743 | 3410.974 | ppb | 2.6 | 3781050.25 | 50000 | |
| Ca | 40 | 45 | H2 | 112794.457 | 11279.446 | ppb | 5.6 | 186034037.33 | 50000 | |
| Ti | 47 | 45 | No Gas | 0.754 | 0.075 | ppb | 12.5 | 467.34 | 500 | |
| V | 51 | 45 | He | 1.168 | 0.117 | ppb | 26.2 | 3770.52 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2655.59 | 500 | |
| Mn | 55 | 45 | No Gas | 330.977 | 33.098 | ppb | 1.7 | 1585288.54 | 3000 | |
| Fe | 56 | 45 | H2 | 76.590 | 7.659 | ppb | 6.9 | 253103.03 | 50000 | |
| Co | 59 | 45 | No Gas | 0.251 | 0.025 | ppb | 4.0 | 1772.12 | 500 | |
| Ni | 60 | 45 | He | 0.737 | 0.074 | ppb | 3.9 | 468.68 | 500 | |
| Cu | 63 | 45 | He | 1.647 | 0.165 | ppb | 12.0 | 3629.15 | 500 | |
| Zn | 66 | 72 | No Gas | 3.350 | 0.335 | ppb | 6.4 | 4126.63 | 500 | |
| As | 75 | 72 | He | 1.076 | 0.108 | ppb | 8.0 | 383.68 | 500 | |
| Se | 78 | 72 | H2 | <0.000 | <0.000 | ppb | N/A | 80.00 | 500 | |
| Sr | 88 | 72 | No Gas | 3165.892 | 316.589 | ppb | 3.3 | 18453748.71 | 500 | |
| Zr | 90 | 72 | No Gas | <0.000 | <0.000 | ppb | N/A | 263.33 | 50 | |
| Mo | 95 | 115 | No Gas | 107.382 | 10.738 | ppb | 1.6 | 124335.46 | 500 | |
| Ag | 107 | 115 | No Gas | 0.085 | 0.009 | ppb | 17.4 | 471.12 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 16.02 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2283.53 | 500 | |
| Sb | 123 | 115 | No Gas | 0.285 | 0.028 | ppb | 2.9 | 1736.78 | 100 | |
| Ba | 137 | 115 | No Gas | 36.017 | 3.602 | ppb | 2.5 | 30935.69 | 1000 | |
| W | 182 | 159 | No Gas | 2.008 | 0.201 | ppb | 5.9 | 3783.91 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 16.83 | 5 | |
| Tl | 205 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 134.44 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 2453.44 | 500 | |
| U | 238 | 159 | No Gas | 0.738 | 0.074 | ppb | 2.8 | 3928.41 | 497 | |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1207561.14 | 4.1 | 1141329.81 | 105.8 | 60 | 120 | |
| Sc | 45 | No Gas | 4889859.50 | 3.3 | 4615577.5 | 105.94 | 60 | 120 | |
| Sc | 45 | H2 | 3635277.00 | 4.8 | 3170333.75 | 114.67 | 60 | 120 | |
| Sc | 45 | He | 570829.04 | 3.0 | 539902.19 | 105.73 | 60 | 120 | |
| Ge | 72 | No Gas | 1428023.84 | 3.6 | 1308491.96 | 109.14 | 60 | 120 | |
| Ge | 72 | H2 | 1115838.81 | 6.9 | 930488.13 | 119.92 | 60 | 120 | |
| Ge | 72 | He | 368962.73 | 4.5 | 336689.17 | 109.59 | 60 | 120 | |
| In | 115 | No Gas | 8544746.46 | 1.6 | 8658209.05 | 98.69 | 60 | 120 | |
| Tb | 159 | No Gas | 10099730.71 | 2.2 | 10130338.49 | 99.7 | 60 | 120 | |
| Tb | 159 | He | 5294123.83 | 1.3 | 5158319.33 | 102.63 | 60 | 120 | |

# Continuing Calibration Verification (CCV) Report

| | |
|---|---|
| **Sample Name** | CCV2 |
| **File Name** | H6L09027.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:08:03 |
| **Sample Type** | CCV |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | % Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 24.114 | ppb | 2.7 | 319007.93 | 25 | 96.46 | 90 | 110 | |
| Be | 9 | 6 | No Gas | 24.064 | ppb | 1.8 | 92170.41 | 25 | 96.26 | 90 | 110 | |
| B | 11 | 6 | No Gas | 50.518 | ppb | 2.1 | 117415.09 | 50 | 101.04 | 90 | 110 | |
| Na | 23 | 45 | H2 | 24698.570 | ppb | 5.2 | 173675776.00 | 25000 | 98.79 | 90 | 110 | |
| Mg | 24 | 45 | No Gas | 24877.584 | ppb | 3.0 | 392124480.00 | 25000 | 99.51 | 90 | 110 | |
| Al | 27 | 45 | No Gas | 24673.998 | ppb | 2.4 | 526578992.15 | 25000 | 98.7 | 90 | 110 | |
| Si | 28 | 45 | H2 | 2457.100 | ppb | 7.0 | 5228513.17 | 2500 | 98.28 | 90 | 110 | |
| P | 31 | 45 | No Gas | 244.020 | ppb | 5.0 | 336322.56 | 250 | 97.61 | 90 | 110 | |
| K | 39 | 45 | He | 25291.352 | ppb | 0.9 | 28007110.67 | 25000 | 101.17 | 90 | 110 | |
| Ca | 40 | 45 | H2 | 24463.571 | ppb | 4.3 | 389332170.67 | 25000 | 97.85 | 90 | 110 | |
| Ti | 47 | 45 | No Gas | 227.387 | ppb | 3.7 | 685525.11 | 250 | 90.95 | 90 | 110 | |
| V | 51 | 45 | He | 249.883 | ppb | 2.7 | 2378752.08 | 250 | 99.95 | 90 | 110 | |
| Cr | 52 | 45 | He | 250.466 | ppb | 1.2 | 2788962.83 | 250 | 100.19 | 90 | 110 | |
| Mn | 55 | 45 | No Gas | 1468.602 | ppb | 2.5 | 74780016.00 | 1500 | 97.91 | 90 | 110 | |
| Fe | 56 | 45 | H2 | 24342.892 | ppb | 4.6 | 618214016.00 | 25000 | 97.37 | 90 | 110 | |
| Co | 59 | 45 | No Gas | 247.594 | ppb | 3.1 | 11159452.67 | 250 | 99.04 | 90 | 110 | |
| Ni | 60 | 45 | He | 247.066 | ppb | 2.3 | 1012004.27 | 250 | 98.83 | 90 | 110 | |
| Cu | 63 | 45 | He | 254.816 | ppb | 0.5 | 2678794.83 | 250 | 101.93 | 90 | 110 | |
| Zn | 66 | 72 | No Gas | 248.905 | ppb | 1.7 | 1804419.67 | 250 | 99.56 | 90 | 110 | |
| As | 75 | 72 | He | 250.025 | ppb | 3.5 | 447731.97 | 250 | 100.01 | 90 | 110 | |
| Se | 78 | 72 | H2 | 237.063 | ppb | 10.5 | 179439.62 | 250 | 94.83 | 90 | 110 | |
| Sr | 88 | 72 | No Gas | 244.819 | ppb | 2.2 | 15117601.62 | 250 | 97.93 | 90 | 110 | |
| Zr | 90 | 72 | No Gas | 23.238 | ppb | 4.7 | 938068.97 | 25 | 92.95 | 90 | 110 | |
| Mo | 95 | 115 | No Gas | 237.850 | ppb | 2.0 | 2925981.48 | 250 | 95.14 | 90 | 110 | |
| Ag | 107 | 115 | No Gas | 22.711 | ppb | 2.4 | 737400.20 | 25 | 90.84 | 90 | 110 | |
| Cd | 111 | 115 | No Gas | 244.011 | ppb | 2.1 | 1582767.97 | 250 | 97.6 | 90 | 110 | |
| Sn | 118 | 115 | No Gas | 239.113 | ppb | 2.3 | 4580630.93 | 250 | 95.65 | 90 | 110 | |
| Sb | 123 | 115 | No Gas | 45.555 | ppb | 2.5 | 961601.97 | 50 | 91.11 | 90 | 110 | |
| Ba | 137 | 115 | No Gas | 486.247 | ppb | 2.2 | 4406249.13 | 500 | 97.25 | 90 | 110 | |
| W | 182 | 159 | No Gas | 24.088 | ppb | 4.8 | 455590.36 | 25 | 96.35 | 90 | 110 | |
| Hg | 201 | 159 | He | 2.521 | ppb | 4.5 | 3546.33 | 2.5 | 100.84 | 90 | 110 | |
| Tl | 205 | 159 | No Gas | 247.604 | ppb | 2.3 | 10266919.32 | 250 | 99.04 | 90 | 110 | |
| Pb | 208 | 159 | No Gas | 248.331 | ppb | 3.3 | 13934024.58 | 250 | 99.33 | 90 | 110 | |
| U | 238 | 159 | No Gas | 244.696 | ppb | 3.7 | 12210620.35 | 250 | 97.88 | 90 | 110 | |

# Continuing Calibration Verification (CCV) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1331980.53 | 1.2 | 1141329.81 | 116.7 | 60 | 120 | |
| Sc | 45 | No Gas | 5242394.83 | 2.6 | 4615577.5 | 113.58 | 60 | 120 | |
| Sc | 45 | H2 | 3506827.75 | 4.1 | 3170333.75 | 110.61 | 60 | 120 | |
| Sc | 45 | He | 587699.17 | 1.3 | 539902.19 | 108.85 | 60 | 120 | |
| Ge | 72 | No Gas | 1512059.79 | 2.1 | 1308491.96 | 115.56 | 60 | 120 | |
| Ge | 72 | H2 | 1066652.46 | 8.2 | 930488.13 | 114.63 | 60 | 120 | |
| Ge | 72 | He | 381147.04 | 2.9 | 336689.17 | 113.2 | 60 | 120 | |
| In | 115 | No Gas | 9093449.54 | 1.8 | 8658209.05 | 105.03 | 60 | 120 | |
| Tb | 159 | No Gas | 10999705.12 | 2.4 | 10130338.49 | 108.58 | 60 | 120 | |
| Tb | 159 | He | 5563664.67 | 2.7 | 5158319.33 | 107.86 | 60 | 120 | |

# Continuing Calibration Blank (CCB) Report

| | |
|---|---|
| **Sample Name** | CCB2 |
| **File Name** | H6L09028.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:10:40 |
| **Sample Type** | CCB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.018 | ppb | 586.3 | 73497.95 | 0.4 | |
| Be | 9 | 6 | No Gas | 0.022 | ppb | 28.3 | 100.00 | 0.08 | |
| B | 11 | 6 | No Gas | 1.643 | ppb | 5.2 | 6754.96 | 4 | |
| Na | 23 | 45 | H2 | 46.162 | ppb | 4.1 | 1095616.13 | 40 | >LOD |
| Mg | 24 | 45 | No Gas | 11.696 | ppb | 37.8 | 207454.97 | 10 | >LOD |
| Al | 27 | 45 | No Gas | 11.384 | ppb | 40.2 | 260611.29 | 15 | |
| Si | 28 | 45 | H2 | 1.273 | ppb | 10.8 | 8077.68 | 8 | |
| P | 31 | 45 | No Gas | <0.000 | ppb | N/A | 35889.71 | 10 | |
| K | 39 | 45 | He | 11.842 | ppb | 31.0 | 142402.54 | 20 | |
| Ca | 40 | 45 | H2 | 6.337 | ppb | 5.5 | 193329.30 | 25 | |
| Ti | 47 | 45 | No Gas | 0.117 | ppb | 27.2 | 589.35 | 0.5 | |
| V | 51 | 45 | He | 0.031 | ppb | 57.2 | 2948.32 | 0.5 | |
| Cr | 52 | 45 | He | <0.000 | ppb | N/A | 2834.96 | 0.2 | |
| Mn | 55 | 45 | No Gas | 0.727 | ppb | 40.4 | 48223.14 | 0.2 | >LOD |
| Fe | 56 | 45 | H2 | 5.848 | ppb | 7.0 | 188756.79 | 10 | |
| Co | 59 | 45 | No Gas | 0.124 | ppb | 35.6 | 5989.41 | 0.15 | |
| Ni | 60 | 45 | He | 0.048 | ppb | 23.6 | 362.67 | 0.2 | |
| Cu | 63 | 45 | He | 0.180 | ppb | 10.6 | 3743.85 | 0.4 | |
| Zn | 66 | 72 | No Gas | 0.112 | ppb | 37.7 | 2547.58 | 2 | |
| As | 75 | 72 | He | 0.071 | ppb | 36.5 | 304.67 | 0.2 | |
| Se | 78 | 72 | H2 | 0.055 | ppb | 20.9 | 115.33 | 0.2 | |
| Sr | 88 | 72 | No Gas | 0.139 | ppb | 40.9 | 10089.69 | 0.2 | |
| Zr | 90 | 72 | No Gas | 0.009 | ppb | 62.0 | 613.35 | 2 | |
| Mo | 95 | 115 | No Gas | 0.120 | ppb | 37.8 | 1732.35 | 0.2 | |
| Ag | 107 | 115 | No Gas | 0.013 | ppb | 44.9 | 646.69 | 0.08 | |
| Cd | 111 | 115 | No Gas | 0.107 | ppb | 48.6 | 889.91 | 0.2 | |
| Sn | 118 | 115 | No Gas | 0.095 | ppb | 41.5 | 6193.70 | 0.2 | |
| Sb | 123 | 115 | No Gas | 0.017 | ppb | 41.2 | 1650.11 | 0.4 | |
| Ba | 137 | 115 | No Gas | 0.209 | ppb | 35.9 | 2221.32 | 0.2 | >LOD |
| W | 182 | 159 | No Gas | 0.018 | ppb | 45.1 | 656.69 | 0.3 | |
| Hg | 201 | 159 | He | <0.000 | ppb | N/A | 22.67 | 0.1 | |
| Tl | 205 | 159 | No Gas | 0.157 | ppb | 28.9 | 7285.56 | 0.1 | >LOD |
| Pb | 208 | 159 | No Gas | 0.121 | ppb | 41.9 | 11977.90 | 0.1 | >LOD |
| U | 238 | 159 | No Gas | 0.115 | ppb | 32.6 | 6250.60 | 0.05 | >LOD |

LY 12|22|20

# Continuing Calibration Blank (CCB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1247802.28 | 1.9 | 1141329.81 | 109.33 | 60 | 120 | |
| Sc | 45 | No Gas | 4922934.67 | 0.6 | 4615577.5 | 106.66 | 60 | 120 | |
| Sc | 45 | H2 | 3332021.17 | 1.0 | 3170333.75 | 105.1 | 60 | 120 | |
| Sc | 45 | He | 563607.50 | 0.9 | 539902.19 | 104.39 | 60 | 120 | |
| Ge | 72 | No Gas | 1395987.29 | 1.5 | 1308491.96 | 106.69 | 60 | 120 | |
| Ge | 72 | H2 | 939219.48 | 0.1 | 930488.13 | 100.94 | 60 | 120 | |
| Ge | 72 | He | 351281.15 | 0.7 | 336689.17 | 104.33 | 60 | 120 | |
| In | 115 | No Gas | 9280180.81 | 1.1 | 8658209.05 | 107.18 | 60 | 120 | |
| Tb | 159 | No Gas | 10834626.79 | 1.3 | 10130338.49 | 106.95 | 60 | 120 | |
| Tb | 159 | He | 5485191.83 | 0.8 | 5158319.33 | 106.34 | 60 | 120 | |

# Interference Check Solution A (ICS-A) Report

| | |
|---|---|
| **Sample Name** | ICSA2 |
| **File Name** | H6L09038.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:36:37 |
| **Sample Type** | ICS-A |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.625 | ppb | 18.8 | 75170.63 | 2 | -50 | 50 | |
| Be | 9 | 6 | No Gas | 0.000 | ppb | 395.8 | 21.11 | 0.4 | -50 | 50 | |
| B | 11 | 6 | No Gas | 1.667 | ppb | 13.8 | 6448.15 | 10 | -50 | 50 | |
| Na | 23 | 45 | H2 | 97809.966 | ppb | 3.5 | 659628394.67 | 100000 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 94151.606 | ppb | 4.7 | 1396142976.00 | 100000 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 92934.290 | ppb | 4.9 | 1866283225.52 | 100000 | 80 | 120 | |
| Si | 28 | 45 | H2 | 5.094 | ppb | 3.2 | 16001.31 | 50 | -50 | 50 | |
| P | 31 | 45 | No Gas | 95550.419 | ppb | 2.4 | 109486389.33 | 100000 | 80 | 120 | |
| K | 39 | 45 | He | 97513.492 | ppb | 1.7 | 105459872.00 | 100000 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 96946.378 | ppb | 2.9 | 1484742442.67 | 100000 | 80 | 120 | |
| Ti | 47 | 45 | No Gas | 2002.470 | ppb | 3.2 | 5677966.67 | 2000 | 80 | 120 | |
| V | 51 | 45 | He | 0.008 | ppb | 94.5 | 2800.29 | 1 | -50 | 50 | |
| Cr | 52 | 45 | He | 0.857 | ppb | 4.0 | 12550.43 | 1 | -50 | 50 | > +/- 20% |
| Mn | 55 | 45 | No Gas | 0.121 | ppb | 22.9 | 19264.29 | 1 | -50 | 50 | |
| Fe | 56 | 45 | H2 | 100121.764 | ppb | 2.7 | 2439472554.67 | 100000 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 0.238 | ppb | 4.0 | 10826.30 | 0.75 | -50 | 50 | |
| Ni | 60 | 45 | He | 0.212 | ppb | 2.9 | 1028.71 | 1 | -50 | 50 | |
| Cu | 63 | 45 | He | 0.316 | ppb | 4.0 | 5226.34 | 2 | -50 | 50 | |
| Zn | 66 | 72 | No Gas | 1.260 | ppb | 3.2 | 10670.20 | 20 | -50 | 50 | |
| As | 75 | 72 | He | 0.106 | ppb | 3.6 | 379.68 | 1 | -50 | 50 | |
| Se | 78 | 72 | H2 | 0.107 | ppb | 9.8 | 156.00 | 1 | -50 | 50 | |
| Sr | 88 | 72 | No Gas | 0.869 | ppb | 4.2 | 53925.58 | 1 | -50 | 50 | > +/- 20% |
| Zr | 90 | 72 | No Gas | 0.089 | ppb | 9.3 | 3770.54 | 10 | -50 | 50 | |
| Mo | 95 | 115 | No Gas | 1919.350 | ppb | 2.6 | 22554400.21 | 2000 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 0.015 | ppb | 6.6 | 666.69 | 0.4 | -50 | 50 | |
| Cd | 111 | 115 | No Gas | 0.078 | ppb | 48.0 | 654.42 | 1 | -50 | 50 | |
| Sn | 118 | 115 | No Gas | 0.093 | ppb | 14.6 | 5752.37 | 1 | -50 | 50 | |
| Ba | 137 | 115 | No Gas | 0.076 | ppb | 11.2 | 931.14 | 1 | -50 | 50 | |
| W | 182 | 159 | No Gas | 0.128 | ppb | 4.8 | 2630.28 | 1 | -50 | 50 | |
| Hg | 201 | 159 | He | <0.000 | ppb | N/A | 19.67 | 0.5 | -50 | 50 | |
| Tl | 205 | 159 | No Gas | 0.002 | ppb | 256.9 | 900.03 | 0.5 | -50 | 50 | |
| Pb | 208 | 159 | No Gas | <0.000 | ppb | N/A | 4840.38 | 0.5 | -50 | 50 | |
| U | 238 | 159 | No Gas | <0.000 | ppb | N/A | 474.46 | 0.25 | -50 | 50 | |

LY 12/22/20

# Interference Check Solution A (ICS-A) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1184882.23 | 4.5 | 1141329.81 | 103.82 | 60 | 120 | |
| Sc | 45 | No Gas | 4933397.83 | 4.3 | 4615577.5 | 106.89 | 60 | 120 | |
| Sc | 45 | H2 | 3373825.00 | 4.1 | 3170333.75 | 106.42 | 60 | 120 | |
| Sc | 45 | He | 576076.65 | 2.2 | 539902.19 | 106.7 | 60 | 120 | |
| Ge | 72 | No Gas | 1457500.00 | 2.9 | 1308491.96 | 111.39 | 60 | 120 | |
| Ge | 72 | H2 | 973437.46 | 0.5 | 930488.13 | 104.62 | 60 | 120 | |
| Ge | 72 | He | 367782.94 | 0.6 | 336689.17 | 109.24 | 60 | 120 | |
| In | 115 | No Gas | 8683731.23 | 0.7 | 8658209.05 | 100.29 | 60 | 120 | |
| Tb | 159 | No Gas | 10528123.47 | 2.5 | 10130338.49 | 103.93 | 60 | 120 | |
| Tb | 159 | He | 5441320.83 | 1.7 | 5158319.33 | 105.49 | 60 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

| | |
|---|---|
| **Sample Name** | ICSAB2 |
| **File Name** | H6L09039.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:39:13 |
| **Sample Type** | ICSB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 19.062 | ppb | 1.5 | 233612.98 | 20 | 80 | 120 | |
| Be | 9 | 6 | No Gas | 19.319 | ppb | 1.4 | 64353.73 | 20 | 80 | 120 | |
| B | 11 | 6 | No Gas | 19.634 | ppb | 2.4 | 41559.28 | 20 | 80 | 120 | |
| Na | 23 | 45 | H2 | 97990.305 | ppb | 1.9 | 655734229.33 | 100000 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 95199.785 | ppb | 1.0 | 1409655338.67 | 100000 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 96466.676 | ppb | 1.3 | 1933851277.85 | 100000 | 80 | 120 | |
| Si | 28 | 45 | H2 | 183.684 | ppb | 1.8 | 378603.83 | 200 | 80 | 120 | |
| P | 31 | 45 | No Gas | 97028.112 | ppb | 2.0 | 111000514.67 | 100000 | 80 | 120 | |
| K | 39 | 45 | He | 102286.464 | ppb | 4.4 | 106154290.67 | 100000 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 98628.114 | ppb | 1.0 | 1498668032.00 | 100000 | 80 | 120 | |
| Ti | 47 | 45 | No Gas | 2003.764 | ppb | 1.4 | 5673687.67 | 2000 | 80 | 120 | |
| V | 51 | 45 | He | 19.999 | ppb | 4.3 | 181508.41 | 20 | 80 | 120 | |
| Cr | 52 | 45 | He | 20.821 | ppb | 3.8 | 220937.65 | 20 | 80 | 120 | |
| Mn | 55 | 45 | No Gas | 18.984 | ppb | 1.0 | 921257.50 | 20 | 80 | 120 | |
| Fe | 56 | 45 | H2 | 102661.012 | ppb | 2.4 | 2481294592.00 | 100000 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 18.872 | ppb | 1.0 | 799539.25 | 20 | 80 | 120 | |
| Ni | 60 | 45 | He | 19.790 | ppb | 3.8 | 76428.36 | 20 | 80 | 120 | |
| Cu | 63 | 45 | He | 20.177 | ppb | 4.8 | 201231.42 | 20 | 80 | 120 | |
| Zn | 66 | 72 | No Gas | 19.843 | ppb | 1.6 | 138039.03 | 20 | 80 | 120 | |
| As | 75 | 72 | He | 20.452 | ppb | 2.6 | 34400.37 | 20 | 80 | 120 | |
| Se | 78 | 72 | H2 | 19.948 | ppb | 1.8 | 13955.88 | 20 | 80 | 120 | |
| Sr | 88 | 72 | No Gas | 20.605 | ppb | 0.8 | 1208340.99 | 20 | 80 | 120 | |
| Zr | 90 | 72 | No Gas | 6.416 | ppb | 1.6 | 245846.81 | 20 | 80 | 120 | > +/- 20% |
| Mo | 95 | 115 | No Gas | 2010.029 | ppb | 2.2 | 23391127.96 | 2000 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 17.454 | ppb | 3.9 | 536024.80 | 20 | 80 | 120 | |
| Cd | 111 | 115 | No Gas | 18.323 | ppb | 2.1 | 112599.23 | 20 | 80 | 120 | |
| Sn | 118 | 115 | No Gas | 17.895 | ppb | 2.2 | 328040.65 | 20 | 80 | 120 | |
| Sb | 123 | 115 | No Gas | 18.293 | ppb | 2.2 | 366036.48 | 20 | 80 | 120 | |
| Ba | 137 | 115 | No Gas | 18.018 | ppb | 2.4 | 154719.30 | 20 | 80 | 120 | |
| W | 182 | 159 | No Gas | 18.698 | ppb | 2.4 | 337461.82 | 20 | 80 | 120 | |
| Hg | 201 | 159 | He | 2.059 | ppb | 7.6 | 2813.98 | 2 | 80 | 120 | |
| Tl | 205 | 159 | No Gas | 18.438 | ppb | 2.7 | 730004.22 | 20 | 80 | 120 | |
| Pb | 208 | 159 | No Gas | 18.424 | ppb | 0.5 | 991042.75 | 20 | 80 | 120 | |
| U | 238 | 159 | No Gas | 18.952 | ppb | 1.6 | 902761.80 | 20 | 80 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1158536.59 | 3.5 | 1141329.81 | 101.51 | 60 | 120 | |
| Sc | 45 | No Gas | 4921740.33 | 2.6 | 4615577.5 | 106.63 | 60 | 120 | |
| Sc | 45 | H2 | 3345141.17 | 1.5 | 3170333.75 | 105.51 | 60 | 120 | |
| Sc | 45 | He | 553416.15 | 4.2 | 539902.19 | 102.5 | 60 | 120 | |
| Ge | 72 | No Gas | 1433041.87 | 2.6 | 1308491.96 | 109.52 | 60 | 120 | |
| Ge | 72 | H2 | 975174.48 | 1.5 | 930488.13 | 104.8 | 60 | 120 | |
| Ge | 72 | He | 356125.01 | 2.9 | 336689.17 | 105.77 | 60 | 120 | |
| In | 115 | No Gas | 8605348.78 | 3.8 | 8658209.05 | 99.39 | 60 | 120 | |
| Tb | 159 | No Gas | 10489426.81 | 1.6 | 10130338.49 | 103.54 | 60 | 120 | |
| Tb | 159 | He | 5407538.17 | 5.9 | 5158319.33 | 104.83 | 60 | 120 | |

EMAX LABORATORIES, INC.

# ANALYSIS RUN LOG
*for*
ICP-MS



**Note:** For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

**Start Date:** 12/29/20 13:46

**End Date:** 12/29/20 21:45

**Comments:**

All soil/solid samples are diluted at 10x dilution prior to analysis.

Filter Lot #: N/A

see analytical sequence

CCV5-CCV9 Befail

| | |
|---|---|
| Book #: | AF6-030 |
| Instrument No.: | F6 |
| Analytical Batch: | 1F6L16 |
| Analytical Sequence: | F6L16 |
| Method File: | EM6020Hg |
| Micropipette ID: | ☐ 142781004 |
| Micropipette ID: | ☑ ICP-06 |
| Micropipette ID: | ☑ 339362028 |
| Micropipette ID: | ☑ GFAA-07 |
| Micropipette ID: | ☐ 339342032 |
| Micropipette ID: | ☑ 542780515 |
| Micropipette ID: | ☐ 542761827 |
| Micropipette ID: | ☐ |

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-200.8 | 6 |
| ☑ EMAX-6020 | 13 |
| ☐ EMAX-6020CA | 2 |
| ☐ EMAX- | |
| ☐ EMAX- | |

| STANDARDS ID | | STANDARDS ID | |
|---|---|---|---|
| S0 | SM6B-20-6501 | MRL1 | SM6B-203901 |
| S1 | 6502 | MRL2 | 7102 |
| S2 | 6601 | MRL3 | 7201 |
| S3 | 6602 | MRL4 | N/A |
| S4 | 6701 | MRL5 | |
| S5 | N/A | MRL6 | |
| S6 | | Internal Standard | SM6B-20-54-01 |
| S7 | | Post-Spike 1 | SM6A007-06-29 |
| ICV | SM6B-20-3701 | Post-Spike 2 | 06-30 |
| CCV | 6702 | Post-Spike 3 | N/A |
| ICSA | 6401 | Post-Spike 4 | |
| ICSAB | 6402 | TH 12/29/20 | |
| 6020 TUNE SOLN. | 3801 | | |
| 200.8 TUNE SOLN. | 3902 | | |

Analyzed By: TH

Date: 12/29/20

INITIAL CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW6020A
Sequence : IF6L16
InstrumentID: F6

| | | ICV | | | | ICSA | | | ICSAB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Samp ID : | | ICV | | | | ICSA | | | ICSAB | | |
| QC Limit : | | %R:90-110/RSD:<5 | | | | %R:80-120/<LOD | | | %R:80-120 | | |
| Lab File ID : | | F6L16009 | | | | F6L16013 | | | F6L16014 | | |
| DateAnalyed : | | 12/29/2014:09 | | | | 12/29/2014:27 | | | 12/29/2014:32 | | |
| Parameter | | Result | ICV EV | RSD | %Recovery | Result | ICSA EV | %Rec/LOD | Result | ICSAB EV | %Recovery |
| Lithium | | 29.22 | 30 | 1.53 | 97 | 0.63080 | 0 | >0 | 39.760 | 20 | 199* |
| Beryllium | | 28.61 | 30 | 0.53 | 95 | 0.0064120 | 0 | <0.1 | 20.730 | 20 | 104 |
| Boron | | 30.38 | 30 | 0.19 | 101 | 0.24960 | 0 | <5.0 | 20.580 | 20 | 103 |
| Sodium | | 29070 | 30000 | 1.05 | 97 | 100700 | 100000 | 101 | 98360 | 100000 | 98 |
| Magnesium | T | 28870 | 30000 | 0.55 | 96 | 98770 | 100000 | 99 | 98380 | 100000 | 98 |
| Aluminum | | 27660 | 30000 | 1.00 | 92 | 93970 | 100000 | 94 | 94350 | 100000 | 94 |
| Silicon | | 3034 | 3000 | 1.03 | 101 | 3.4060 | 0 | <20 | 230.50 | 200 | 115 |
| Phosphorus | | 292.0 | 300 | 0.91 | 97 | 89950 | 100000 | 90 | 88210 | 100000 | 88 |
| Potassium | | 29150 | 30000 | 0.69 | 97 | 99630 | 100000 | 100 | 98570 | 100000 | 99 |
| Calcium | | 29470 | 30000 | 0.78 | 98 | 102600 | 100000 | 103 | 100900 | 100000 | 101 |
| Titanium | | 293.0 | 300 | 0.55 | 98 | 2087.0 | 2000 | 104 | 2078.0 | 2000 | 104 |
| Vanadium | | 291.0 | 300 | 0.61 | 97 | 0.13390 | 0 | <0.5 | 20.440 | 20 | 102 |
| Chromium | T | 285.1 | 300 | 0.76 | 95 | 0.93550 | 0 | >0.25 | 20.810 | 20 | 104 |
| Manganese | T | 1864 | 2000 | 0.93 | 93 | 0.30080 | 0 | <0.5 | 19.990 | 20 | 100 |
| Iron | | 28930 | 30000 | 0.55 | 96 | 97840 | 100000 | 98 | 96720 | 100000 | 97 |
| Cobalt | | 281.8 | 300 | 0.83 | 94 | 0.44720 | 0 | >0.2 | 19.790 | 20 | 99 |
| Nickel | | 280.3 | 300 | 0.71 | 93 | 0.27900 | 0 | >0.2 | 19.120 | 20 | 96 |
| Copper | | 269.8 | 300 | 0.44 | 90 | 0.15870 | 0 | <0.5 | 18.210 | 20 | 91 |
| Zinc | | 301.3 | 300 | 0.44 | 100 | 2.9450 | 0 | <10 | 22.900 | 20 | 114 |
| Arsenic | T | 292.1 | 300 | 0.72 | 97 | 0.28480 | 0 | >0.25 | 19.860 | 20 | 99 |
| Selenium | T | 297.8 | 300 | 0.50 | 99 | 0.15730 | 0 | <0.3 | 21.890 | 20 | 109 |
| Strontium | | 296.0 | 300 | 0.54 | 99 | 0.91060 | 0 | <1.0 | 20.880 | 20 | 104 |
| Zirconium | | 26.52 | 30 | 0.90 | 88* | 0.078570 | 0 | <2.0 | 5.7440 | 20 | 29* |
| Molybdenum | T | 301.1 | 300 | 0.46 | 100 | 2039.0 | 2000 | 102 | 2016.0 | 2000 | 101 |
| Silver | | 29.17 | 30 | 0.64 | 97 | 0.014300 | 0 | <0.2 | 18.530 | 20 | 93 |
| Cadmium | | 297.7 | 300 | 0.83 | 99 | 0.13370 | 0 | <0.2 | 19.640 | 20 | 98 |
| Tin | | 293.9 | 300 | 0.95 | 98 | 0.054910 | 0 | <0.2 | 20.140 | 20 | 101 |
| Antimony | | 58.06 | 60 | 1.02 | 97 | 0.027490 | 0 | <0.5 | 20.320 | 20 | 102 |
| Barium | | 306.3 | 300 | 0.89 | 102 | 0.052900 | 0 | <0.5 | 20.680 | 20 | 103 |
| Tungsten | | 34.36 | 30 | 1.28 | 115* | 0.16130 | 0 | <1.0 | 22.450 | 20 | 112 |
| Thallium | | 280.8 | 300 | 0.30 | 94 | 0.016640 | 0 | <0.2 | 19.240 | 20 | 96 |
| Lead | | 282.0 | 300 | 0.69 | 94 | 0.016050 | 0 | <0.1 | 19.430 | 20 | 97 |
| Uranium | | 282.4 | 300 | 0.95 | 94 | 0.0036290 | 0 | <0.1 | 19.390 | 20 | 97 |

Unit: ug/L
T: Target analyte
EV: Expected Value
Comment: * Out of QC limit

CONTINUING CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW6020A
Sequence : IF6L16
Instrument ID: F6

| | | CCV SampleID | | CCV1 | | | CCV2 | | |
|---|---|---|---|---|---|---|---|---|---|
| | | CCV DataFileID | | F6L16016 | | | F6L16028 | | |
| | | CCV DateTime | | 12/29/20 14:41 | | | 12/29/20 15:38 | | |
| PARAMETER | | CCV EV | RESULT | %REC | RSD | RESULT | %REC | RSD | |
| Lithium | | 25 | 25.8 | 103 | 1.84 | 26.1 | 104 | 1.17 | |
| Beryllium | | 25 | 24.8 | 99 | 1.14 | 25.1 | 100 | 1.15 | |
| Boron | | 50 | 51.5 | 103 | 0.88 | 52.3 | 105 | 1.53 | |
| Sodium | | 25000 | 24600 | 98 | 1.17 | 25100 | 100 | 1.59 | |
| Magnesium | T | 25000 | 25800 | 103 | 0.57 | 26000 | 104 | 0.89 | |
| Aluminum | | 25000 | 24600 | 98 | 1.31 | 24400 | 97 | 0.22 | |
| Silicon | | 2500 | 2260 | 90 | 1.15 | 2330 | 93 | 0.42 | |
| Phosphorus | | 250 | 269 | 107 | 1.49 | 256 | 102 | 1.23 | |
| Potassium | | 25000 | 24700 | 99 | 1.09 | 24900 | 100 | 0.36 | |
| Calcium | | 25000 | 24900 | 100 | 0.79 | 25200 | 101 | 0.40 | |
| Titanium | | 250 | 247 | 99 | 0.57 | 248 | 99 | 0.92 | |
| Vanadium | | 250 | 254 | 102 | 0.92 | 250 | 100 | 0.26 | |
| Chromium | T | 250 | 250 | 100 | 0.33 | 245 | 98 | 0.77 | |
| Manganese | T | 1500 | 1460 | 98 | 0.82 | 1460 | 98 | 1.72 | |
| Iron | | 25000 | 24900 | 100 | 0.31 | 24900 | 100 | 0.96 | |
| Cobalt | | 250 | 238 | 95 | 0.85 | 240 | 96 | 0.76 | |
| Nickel | | 250 | 243 | 97 | 0.71 | 237 | 95 | 0.47 | |
| Copper | | 250 | 240 | 96 | 0.44 | 234 | 94 | 0.70 | |
| Zinc | | 250 | 258 | 103 | 1.23 | 260 | 104 | 1.40 | |
| Arsenic | T | 250 | 249 | 99 | 0.54 | 249 | 100 | 0.29 | |
| Selenium | T | 250 | 258 | 103 | 0.26 | 256 | 102 | 0.38 | |
| Strontium | | 250 | 257 | 103 | 1.86 | 258 | 103 | 0.58 | |
| Zirconium | | 25 | 0.312 | 1* | 1.88 | 0.301 | 1* | 1.77 | |
| Molybdenum | T | 250 | 255 | 102 | 0.89 | 254 | 102 | 0.76 | |
| Silver | | 25 | 25.3 | 101 | 0.42 | 25.3 | 101 | 0.59 | |
| Cadmium | | 250 | 256 | 102 | 0.60 | 255 | 102 | 0.82 | |
| Tin | | 250 | 256 | 102 | 0.12 | 255 | 102 | 0.47 | |
| Antimony | | 50 | 51.7 | 103 | 0.92 | 51.5 | 103 | 1.31 | |
| Barium | | 500 | 513 | 103 | 1.64 | 516 | 103 | 1.32 | |
| Tungsten | | 25 | 57.9 | 231* | 1.01 | 57.4 | 230* | 0.49 | |
| Mercury | | 2.5 | 0.000000 | 0* | | 0.000000 | 0* | | |
| Thallium | | 250 | 245 | 98 | 1.22 | 241 | 96 | 0.51 | |
| Lead | | 250 | 245 | 98 | 0.44 | 244 | 98 | 0.82 | |
| Uranium | | 250 | 249 | 100 | 1.38 | 244 | 98 | 0.90 | |

Unit: ug/L
T: Target analyte
%Rec QC Limit: 90-110
RSD QC Limit: <5
CCV EV: CCV Expected Value ug/L
Comment: * Out of QC limit

CONTINUING CALIBRATION BLANK SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : SW6020A
Sequence : IF6L16
Instrument ID: F6

| CB SampleID | : ICB | CCB1 | CCB2 |
|---|---|---|---|
| CB DataFileID | : F6L16010 | F6L16017 | F6L16029 |
| CB DateTime | : 12/29/2014:13 | 12/29/2014:45 | 12/29/2015:42 |

| PARAMETER | | LOD | RESULT | < LOD > | RESULT | < LOD > | RESULT | < LOD > |
|---|---|---|---|---|---|---|---|---|
| Lithium | | 0 | 0.07 | >0 | 0.10 | >0 | 0.08 | >0 |
| Beryllium | | 0.1 | 0.010 | <0.1 | 0.007 | <0.1 | 0.005 | <0.1 |
| Boron | | 5.0 | 0.3 | <5.0 | 0.2 | <5.0 | 0.3 | <5.0 |
| Sodium | | 50 | 30 | <50 | 10 | <50 | 7 | <50 |
| Magnesium | T | 20 | 10 | <20 | 5 | <20 | 2 | <20 |
| Aluminum | | 20 | 10 | <20 | 4 | <20 | 2 | <20 |
| Silicon | | 20 | 7 | <20 | 1 | <20 | 1 | <20 |
| Phosphorus | | 25 | 2 | <25 | 0.04 | <25 | 1 | <25 |
| Potassium | | 20 | 20 | <20 | 4 | <20 | 3 | <20 |
| Calcium | | 25 | 30 | >25 | 10 | <25 | 10 | <25 |
| Titanium | | 0.5 | 0.1 | <0.5 | 0.05 | <0.5 | 0.02 | <0.5 |
| Vanadium | | 0.5 | 0.2 | <0.5 | 0.07 | <0.5 | 0.1 | <0.5 |
| Chromium | T | 0.25 | 0.1 | <0.25 | 0.04 | <0.25 | 0.06 | <0.25 |
| Manganese | T | 0.5 | 0.7 | >0.5 | 0.2 | <0.5 | 0.10 | <0.5 |
| Iron | | 10 | 30 | >10 | 10 | >10 | 10 | >10 |
| Cobalt | | 0.2 | 0.1 | <0.2 | 0.02 | <0.2 | 0.010 | <0.2 |
| Nickel | | 0.2 | 0.1 | <0.2 | 0.03 | <0.2 | 0.02 | <0.2 |
| Copper | | 0.5 | 0.1 | <0.5 | 0.006 | <0.5 | 0.004 | <0.5 |
| Zinc | | 10 | 0.3 | <10 | 0.1 | <10 | 0.2 | <10 |
| Arsenic | T | 0.25 | 0.2 | <0.25 | 0.06 | <0.25 | 0.07 | <0.25 |
| Selenium | T | 0.3 | 0.3 | >0.3 | 0.1 | <0.3 | 0.1 | <0.3 |
| Strontium | | 1.0 | 0.1 | <1.0 | 0.03 | <1.0 | 0.02 | <1.0 |
| Zirconium | | 2.0 | 0.01 | <2.0 | 0.002 | <2.0 | 0.002 | <2.0 |
| Molybdenum | T | 0.5 | 0.2 | <0.5 | 0.07 | <0.5 | 0.03 | <0.5 |
| Silver | | 0.2 | 0.01 | <0.2 | 0.004 | <0.2 | 0.003 | <0.2 |
| Cadmium | | 0.2 | 0.1 | <0.2 | 0.02 | <0.2 | 0.02 | <0.2 |
| Tin | | 0.2 | 0.2 | <0.2 | 0.06 | <0.2 | 0.03 | <0.2 |
| Antimony | | 0.5 | 0.02 | <0.5 | 0.03 | <0.5 | 0.03 | <0.5 |
| Barium | | 0.5 | 0.2 | <0.5 | 0.06 | <0.5 | 0.04 | <0.5 |
| Tungsten | | 1.0 | 0.04 | <1.0 | 0.04 | <1.0 | 0.03 | <1.0 |
| Mercury | | 0.1 | 0.00 | <0.1 | 0.00 | <0.1 | 0.00 | <0.1 |
| Thallium | | 0.2 | 0.2 | <0.2 | 0.03 | <0.2 | 0.01 | <0.2 |
| Lead | | 0.1 | 0.1 | >0.1 | 0.02 | <0.1 | 0.01 | <0.1 |
| Uranium | | 0.1 | 0.1 | >0.1 | 0.04 | <0.1 | 0.03 | <0.1 |

Unit: ug/L
CB: Calibration Blank
T: Target analyte
Acceptance Criteria: CCB Result <LOD
Comment:

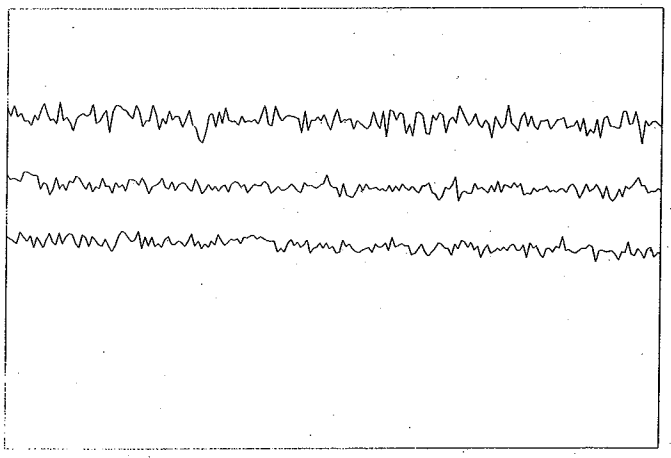
| | Method | Type | Vial | Data File | Sample | Comment | Dil/Lvl | ISTD Conc | Action on Failure | Skip | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Keyword | | TUNBEG | Start of TUNE | | | | | | |
| 2 | C:\ICPCHEM\1\METHODS\TN6020_D.M | Tun6 | 1301 | F6L16001 | 6020tunchk | | 1.000 | | | | |
| 3 | C:\ICPCHEM\1\METHODS\TN200_8C.M | Tun2 | 1302 | F6L16002 | 200.8tunchk | | 1.000 | | | | |
| 4 | | Keyword | | TUNEND | End of TUNE | | | | | | |
| 5 | | Keyword | | CALBEG | Start of CALIB | | | | | | |
| 6 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalBlk | 1101 | F6L16003 | BLNK | | Level 1 | | | | |
| 7 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalBlk | 1102 | F6L16004 | S0 | | Level 1 | | | | |
| 8 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalStd | 1104 | F6L16005 | S1 0.5 | | Level 2 | | | | |
| 9 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalStd | 1105 | F6L16006 | S2 50 | | Level 3 | | | | |
| 10 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalStd | 1106 | F6L16007 | S3 250 | | Level 4 | | | | |
| 11 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalStd | 1107 | F6L16008 | S4 500 | | Level 5 | | | | |
| 12 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICV1 | 1204 | F6L16009 | ICV | | 1.000 | | | | |
| 13 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICB | 1102 | F6L16010 | ICB | | 1.000 | | | | |
| 14 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1305 | F6L16011 | MRLL2901 ✓ | 1/100/10 ppb | 1.000 | | | | |
| 15 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1306 | F6L16012 | MRLL2902 | 0.4/40/4 ppb | 1.000 | | | | |
| 16 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICS-A | 1303 | F6L16013 | ICSA | | 1.000 | | | | |
| 17 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICS-AB | 1304 | F6L16014 | ICSAB | | 1.000 | | | | |
| 18 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1307 | F6L16015 | MRLL2903 | 500 ppb CAT | 1.000 | | | | |
| 19 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16016 | CCV1 | | 1.000 | | | | |
| 20 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16017 | CCB1 | | 1.000 | | | | |
| 21 | | Keyword | | CALEND | End of CALIB | | | | | | |
| 22 | | Keyword | | SMPLBEG | Start of SMPL | | | | | | |
| 23 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2101 | F6L16018 | IML009WB | | 1.000 | | | | |
| 24 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2102 | F6L16019 | IML009WL | | 1.000 | | | | |
| 25 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2103 | F6L16020 | IML009WC | | 1.000 | | | | |
| 26 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2104 | F6L16021 | IML011WB | | 1.000 | | | | |
| 27 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2105 | F6L16022 | IML011WL | | 1.000 | | | | |
| 28 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2106 | F6L16023 | IML011WC | | 1.000 | | | | |
| 29 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2404 | F6L16024 | L116-16 | | 1.000 | | | | |
| 30 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2405 | F6L16025 | IML024WB | | 1.000 | | | | |
| 31 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2406 | F6L16026 | IML024WL | | 1.000 | | | | |
| 32 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2407 | F6L16027 | IML024WC | | 1.000 | | | | |
| 33 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16028 | CCV2 | | 1.000 | | | | |
| 34 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16029 | CCB2 | | 1.000 | | | | |
| 35 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2107 | F6L16030 | L102-01 | Na mg Cat | 1.000 | | | | |
| 36 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2108 | F6L16031 | L102-02 | | 1.000 | | | | |
| 37 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2109 | F6L16032 | L102-03 | | 1.000 | | | | |
| 38 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2110 | F6L16033 | L102-04 | | 1.000 | | | | |
| 39 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2111 | F6L16034 | L102-05 | | 1.000 | | | | |
| 40 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2112 | F6L16035 | L102-07 | | 1.000 | | | | |
| 41 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2201 | F6L16036 | L102-08 | | 1.000 | | | | |
| 42 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2202 | F6L16037 | L102-09 | Na Ca ↑ | 1.000 | | | | |

| | Method | Type | Vial | Data File | Sample | Comment | Dil/Lvl | ISTD Conc | Action on Failure | Skip | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 43 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2203 | F6L16038 | L102-10 | Ca ↑ | 1.000 | | | | |
| 44 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2204 | F6L16039 | L102-12 | Na Mg Ca ↑ | 1.000 | | | | |
| 45 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16040 | CCV3 | | 1.000 | | | | |
| 46 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16041 | CCB3 | | 1.000 | | | | |
| 47 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2205 | F6L16042 | L102-13 | Na Mg Ca ↑ | 1.000 | | | | |
| 48 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2206 | F6L16043 | L102-14 | ↓ | 1.000 | | | | |
| 49 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2207 | F6L16044 | L102-16 | ↓ | 1.000 | | | | |
| 50 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2208 | F6L16045 | L102-17A | Ca ↑ | 1.000 | | | | |
| 51 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2209 | F6L16046 | L102-17 | ↓ | 1.000 | | | | |
| 52 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2210 | F6L16047 | L102-17J | ↓ | 5.000 | | | | |
| 53 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2211 | F6L16048 | L102-17M | ↓ | 1.000 | | | | |
| 54 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2212 | F6L16049 | L102-17S | ↓ | 1.000 | | | | |
| 55 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2301 | F6L16050 | L102-18 | Na Mg Ca ↑ | 1.000 | | | | |
| 56 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16051 | CCV4 | | 1.000 | | | | |
| 57 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16052 | CCB4 | | 1.000 | | | | |
| 58 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1305 | F6L16053 | MRLL2904 Na,Ca,Fe | 1/100/10 ppb Se fail ✓ | 1.000 | | | | |
| 59 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICS-A | 1303 | F6L16054 | ICSA2 | | 1.000 | | | | |
| 60 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICS-AB | 1304 | F6L16055 | ICSAB2 | | 1.000 | | | | |
| 61 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1305 | F6L16056 | MRLL2905 ✓ | 1/100/10 ppb | 1.000 | | | | |
| 62 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1307 | F6L16057 | MRLL2906 | 500 CAT | 1.000 | | | | |
| 63 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2302 | F6L16058 | L116-01 ! | Na Mg Ca↑↑↑ ISJ ! | 1.000 | | | | |
| 64 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16059 | CCV5 | Be ↓ | 1.000 | | | | |
| 65 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16060 | CCB5 | | 1.000 | | | | |
| 66 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2501 | F6L16061 | IML023WB | | 1.000 | | | | |
| 67 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2502 | F6L16062 | IML023WL | | 1.000 | | | | |
| 68 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2503 | F6L16063 | IML023WC | | 1.000 | | | | |
| 69 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2504 | F6L16064 | IML032WB | | 1.000 | | | | |
| 70 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2505 | F6L16065 | IML032WL | | 1.000 | | | | |
| 71 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2506 | F6L16066 | IML032WC | | 1.000 | | | | |
| 72 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3207 | F6L16067 | L174-01A | | 1.000 | | | | |
| 73 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2507 | F6L16068 | L174-01 | | 1.000 | | | | |
| 74 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3208 | F6L16069 | L174-01J | | 5.000 | | | | |
| 75 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3209 | F6L16070 | L174-01M ✓ | | 1.000 | | | | |
| 76 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16071 | CCV6 | Be ↓ | 1.000 | | | | |
| 77 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16072 | CCB6 | | 1.000 | | | | |
| 78 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3210 | F6L16073 | L174-01S ✓ | | 1.000 | | | | |
| 79 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2508 | F6L16074 | L174-02 | | 1.000 | | | | |
| 80 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2509 | F6L16075 | L174-03 | | 1.000 | | | | |
| 81 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2510 | F6L16076 | L174-04 | | 1.000 | | | | |
| 82 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2511 | F6L16077 | L174-05 | | 1.000 | | | | |
| 83 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2512 | F6L16078 | L174-06 | | 1.000 | | | | |
| 84 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3101 | F6L16079 | L174-07 | | 1.000 | | | | |

| | Method | Type | Vial | Data File | Sample | Comment | Dil/Lvl | ISTD Conc | Action on Failure | Skip | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 85 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3102 | F6L16080 | L174-08 | | 1.000 | | | | |
| 86 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3103 | F6L16081 | L174-09 | | 1.000 | | | | |
| 87 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16082 | CCV7 Rerun | | 1.000 | | | | |
| 88 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16083 | CCB7 | | 1.000 | | | | |
| 89 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3104 | F6L16084 | L161-01 | | 1.000 | | | | |
| 90 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3105 | F6L16085 | L161-02 | | 1.000 | | | | |
| 91 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3106 | F6L16086 | L161-03A | | 1.000 | | | | |
| 92 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3107 | F6L16087 | L161-03 | | 1.000 | | | | |
| 93 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3108 | F6L16088 | L161-03J | | 5.000 | | | | |
| 94 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3109 | F6L16089 | L161-03M | | 1.000 | | | | |
| 95 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3110 | F6L16090 | L161-03S | | 1.000 | | | | |
| 96 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3111 | F6L16091 | L174-04 | | 1.000 | | | | |
| 97 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3112 | F6L16092 | L174-05 | | 1.000 | | | | |
| 98 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3201 | F6L16093 | L174-06 | | 1.000 | | | | |
| 99 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16094 | CCV8 Rerun | | 1.000 | | | | |
| 100 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16095 | CCB8 | | 1.000 | | | | |
| 101 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3202 | F6L16096 | L174-07 | | 1.000 | | | | |
| 102 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3203 | F6L16097 | L174-08 | | 1.000 | | | | |
| 103 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3204 | F6L16098 | L174-09 | | 1.000 | | | | |
| 104 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3205 | F6L16099 | L174-10 | | 1.000 | | | | |
| 105 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3206 | F6L16100 | L174-11 | | 1.000 | | | | |
| 106 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16101 | CCV9 Rerun | | 1.000 | | | | |
| 107 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16102 | CCB9 | | 1.000 | | | | |
| 108 | | Keyword | | StandBy | | | | | | | |
| 109 | | Keyword | | SMPLEND | End of SMPL | | | | | | |
| 110 | | Keyword | | End | End of Sequence | | | | | | |
| 111 | | Keyword | | BLKBEG | Start of BLANK | | | | | | |
| 112 | | Keyword | | BLKEND | End of BLANK | | | | | | |
| 113 | | Keyword | | ERRBEG | Start of ERRTERM | | | | | | |
| 114 | | Keyword | | ERREND | End of ERRTERM | | | | | | |

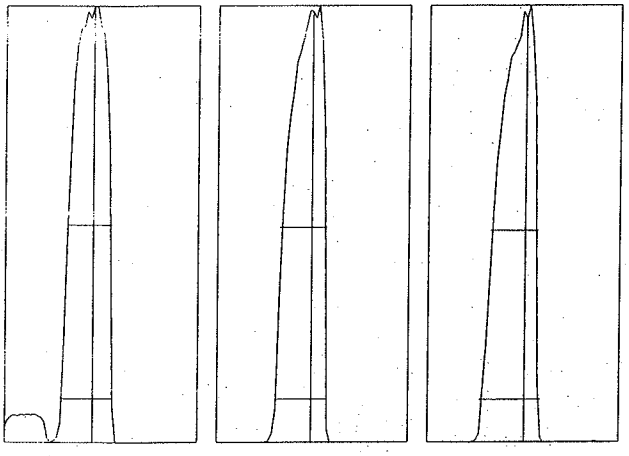
# Tune Report

Tune File : ATUNE.U
Comment : IF6L16



| | | |
|---|---|---|
| Integration Time: | 0.1000 sec | |
| Sampling Period: | 0.6200 sec | |
| n: | 200 | |
| Oxide: | 156/140 | 1.350% |
| Doubly Charged: | 70/140 | 1.994% |

| m/z | Range | Count | Mean | RSD% | Background |
|---|---|---|---|---|---|
| 7 | 50,000 | 22106.0 | 23099.8 | 3.21 | 1.60 |
| 89 | 100,000 | 58398.0 | 59399.7 | 2.19 | 2.30 |
| 205 | 50,000 | 36379.0 | 37301.4 | 2.51 | 6.60 |
| 156/140 | 2 | 1.474% | 1.388% | 6.76 | |
| 70/140 | 5 | 2.054% | 1.915% | 4.29 | |



| m/z: | 7 | 89 | 205 |
|---|---|---|---|
| Height: | 7,069 | 17,608 | 11,354 |
| Axis: | 6.90 | 89.00 | 205.05 |
| W-50%: | 0.70 | 0.75 | 0.75 |
| W-10%: | 0.800 | 0.800 | 0.9500 |

Integration Time: 0.0300 sec
Acquisition Time: 10.1600 sec

Y axis : Linear



Generated : Dec 29, 2020 11:16:49
Printed : Dec 29, 2020 11:16:51

# Tune Report

Tune File : ATUNE.U
Comment : IF6L16

## Tuning Parameters

| ===Plasma Condition=== | | | ===Ion Lenses=== | | | ===Q-Pole Parameters=== | | |
|---|---|---|---|---|---|---|---|---|
| RF Power | : | 1500 W | Extract 1 | : | 1 V | AMU Gain | : | 141 |
| RF Matching | : | 1.7 V | Extract 2 | : | -140 V | AMU Offset | : | 115 |
| Smpl Depth | : | 8 mm | Omega Bias-ce | : | -20 V | Axis Gain | : | 0.9962 |
| Torch-H | : | -1.2 mm | Omega Lens-ce | : | 1 V | Axis Offset | : | -0.03 |
| Torch-V | : | 0.1 mm | Cell Entrance | : | -30 V | QP Bias | : | -3 V |
| Carrier Gas | : | 0.9 L/min | QP Focus | : | 2 V | | | |
| Makeup Gas | : | 0.14 L/min | Cell Exit | : | -30 V | ===Detector Parameters=== | | |
| Optional Gas | : | --- % | | | | Discriminator | : | 8 mV |
| Nebulizer Pump | : | 0.1 rps | ===Octopole Parameters=== | | | Analog HV | : | 2130 V |
| Sample Pump | : | --- rps | OctP RF | : | 169 V | Pulse HV | : | 1510 V |
| S/C Temp | : | 2 degC | OctP Bias | : | -6 V | | | |

| ===Reaction Cell=== | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Reaction Mode | : | OFF | | | | | | |
| H2 Gas | : | 0 mL/min | He Gas | : | 0 mL/min | Optional Gas | : | --- % |



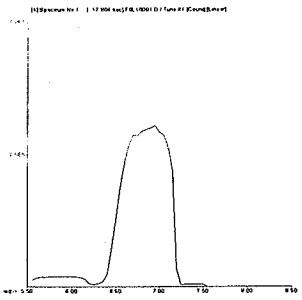
Generated : Dec 29, 2020 11:16:49
Printed : Dec 29, 2020 11:16:54

# 6020 QC Tune Report

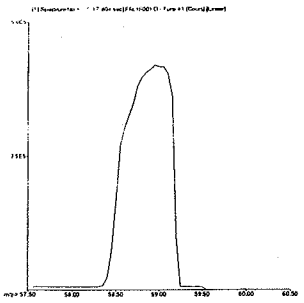
**Data File:** C:\DATA\IF62020\L\IF6L16.B\F6L16001.D
**Date Acquired:** Dec 29 2020 11:36 am
**Acq. Method:** TN6020_D.M
**Operator:** THuang
**Sample Name:** 6020tunchk
**Misc Info:**
**Vial Number:** 1301
**Current Method:** C:\ICPCHEM\1\METHODS\TN6020_D.M

**RSD (%)**

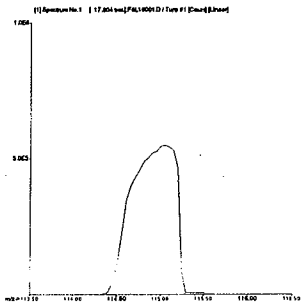
| Element | Actual | Required | Flag |
|---|---|---|---|
| 7 Li | 2.67 | 5.00 | |
| 59 Co | 1.87 | 5.00 | |
| 115 In | 2.22 | 5.00 | |
| 205 Tl | 0.90 | 5.00 | |



**7 Li**
**Mass Calib.**
Actual: 6.90
Required: 6.90 - 7.10
Flag:
**Peak Width-10%**
Actual: 0.60
Limit 0.90
Flag:



**59 Co**
**Mass Calib.**
Actual: 58.95
Required: 58.90 - 59.10
Flag:
**Peak Width-10%**
Actual: 0.60
Limit 0.90
Flag:



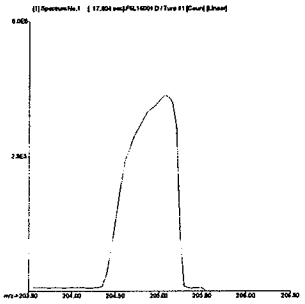
**115 In**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 115.05 | |
| Required: | 114.90 - | 115.10 |
| Flag: | | |

**Peak Width-10%**

| | |
|---|---|
| Actual: | 0.65 |
| Limit | 0.90 |
| Flag: | |



**205 Tl**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 205.05 | |
| Required: | 204.90 - | 205.10 |
| Flag: | | |

**Peak Width-10%**

| | |
|---|---|
| Actual: | 0.65 |
| Limit | 0.90 |
| Flag: | |

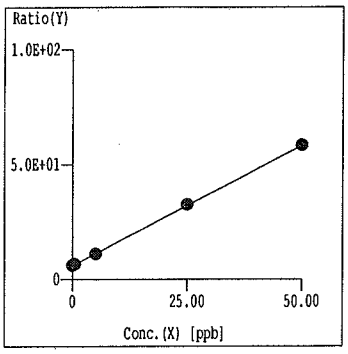
Last Calib: Dec 29, 2020 02:07 pm
Calibration Type: External Calibration Method
Calibration Title:
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Multi Tune: #1 h2.u
#2 he.u
#3 norm.u

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

| | Data File | Sample Name | Date Acquired |
|---|---|---|---|
| 1 | c:\data\if62020\l\if6l16.b\f6l16004.d\f6l16004.d# | S0 | Dec 29 2020 01:46 pm |
| 2 | c:\data\if62020\l\if6l16.b\f6l16005.d\f6l16005.d# | S1 0.5 | Dec 29 2020 01:51 pm |
| 3 | c:\data\if62020\l\if6l16.b\f6l16006.d\f6l16006.d# | S2 50 | Dec 29 2020 01:56 pm |
| 4 | c:\data\if62020\l\if6l16.b\f6l16007.d\f6l16007.d# | S3 250 | Dec 29 2020 02:00 pm |
| 5 | c:\data\if62020\l\if6l16.b\f6l16008.d\f6l16008.d# | S4 500 | Dec 29 2020 02:04 pm |
| 6 | --- | | |
| 7 | --- | | |
| 8 | --- | | |
| 9 | --- | | |
| 10 | --- | | |
| 11 | --- | | |
| 12 | --- | | |
| 13 | --- | | |
| 14 | --- | | |
| 15 | --- | | |
| 16 | --- | | |
| 17 | --- | | |
| 18 | --- | | |
| 19 | --- | | |
| 20 | --- | | |

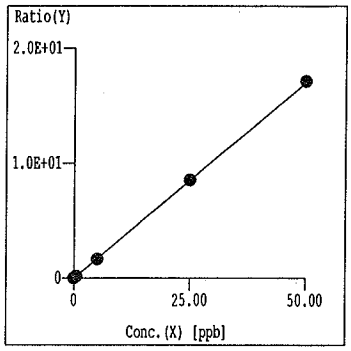
=== Graph Detail ===

Step Mass Element ISTD Unit
(3) 7 Li 6 ppb



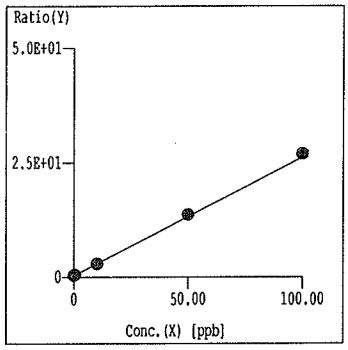

Curve Fit: Y=aX+b
r = 1.0000
Y = 1.041E+000*X +6.096E+000
X = 9.604E-001*Y -5.854E+000
DL = 1.960E-01 ppb
BEC = 5.854 ppb

Step Mass Element ISTD Unit
(3) 9 Be 6 ppb



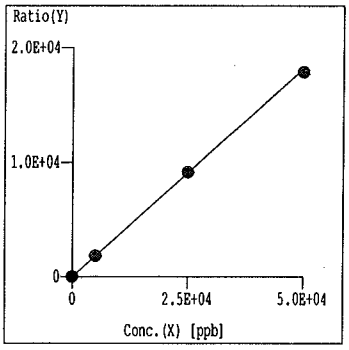

Curve Fit: Y=aX+b
r = 1.0000
Y = 3.402E-001*X +6.332E-003
X = 2.939E+000*Y -1.861E-002
DL = 5.022E-03 ppb
BEC = 1.861E-02 ppb

Step Mass Element ISTD Unit
(3) 11 B 6 ppb



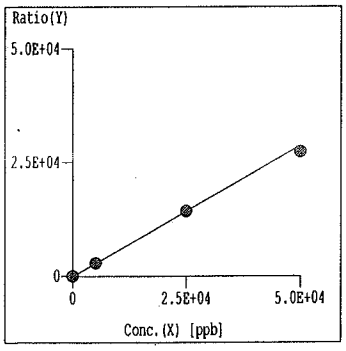

Curve Fit: Y=aX+b
r = 1.0000
Y = 2.578E-001*X +3.821E-001
X = 3.879E+000*Y -1.482E+000
DL = 5.025E-02 ppb
BEC = 1.482 ppb

Step Mass Element ISTD Unit
(1) 23 Na 45 ppb



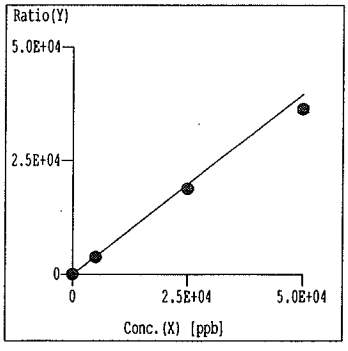

Curve Fit: Y=aX+b
r = 0.9999
Y = 3.635E-001*X +9.463E+000
X = 2.751E+000*Y -2.604E+001
DL = 4.316 ppb
BEC = 26.04 ppb

Step Mass Element ISTD Unit
(3) 24 Mg 45 ppb




Curve Fit: Y=aX+b
r = 0.9997
Y = 5.724E-001*X +9.069E-001
X = 1.747E+000*Y -1.584E+000
DL = 4.425E-02 ppb
BEC = 1.584 ppb

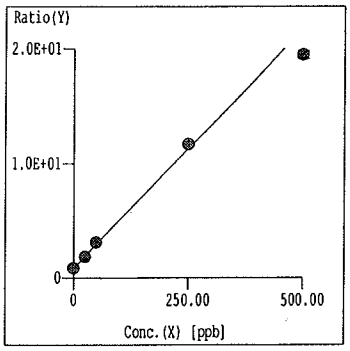
Step Mass Element ISTD Unit
(3) 27 Al 45 ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 7.916E-001*X +1.946E+000
X = 1.263E+000*Y -2.458E+000
DL = 4.340E-02 ppb
BEC = 2.458 ppb

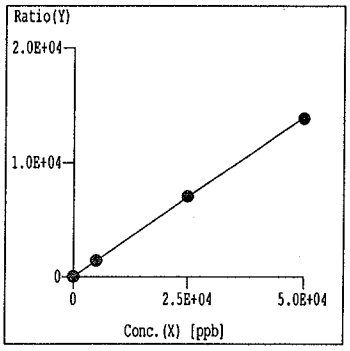
=== Graph Detail ===

Step Mass Element (3) 31 P | ISTD 45 | Unit ppb



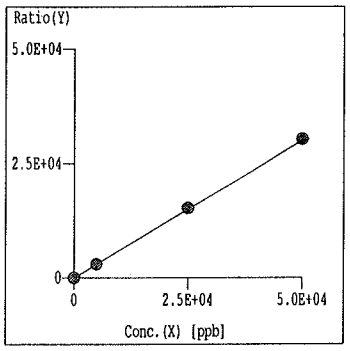

Curve Fit: Y=aX+b
r = 0.9968
Y = 4.177E-002*X +8.570E-001
X = 2.394E+001*Y -2.052E+001
DL = 2.399 ppb
BEC = 20.52 ppb

Step Mass Element (2) 39 K | ISTD 45 | Unit ppb



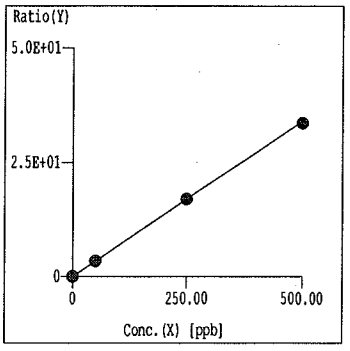

Curve Fit: Y=aX+b
r = 1.0000
Y = 2.795E-001*X +2.283E+001
X = 3.578E+000*Y -8.170E+001
DL = 9.405E-01 ppb
BEC = 81.70 ppb

Step Mass Element (1) 40 Ca | ISTD 45 | Unit ppb



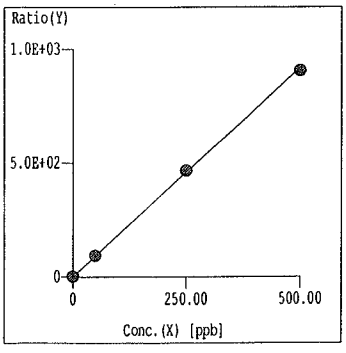

Curve Fit: Y=aX+b
r = 1.0000
Y = 6.002E-001*X +8.321E+000
X = 1.666E+000*Y -1.386E+001
DL = 2.720E-01 ppb
BEC = 13.86 ppb

Step Mass Element (3) 47 Ti | ISTD 45 | Unit ppb



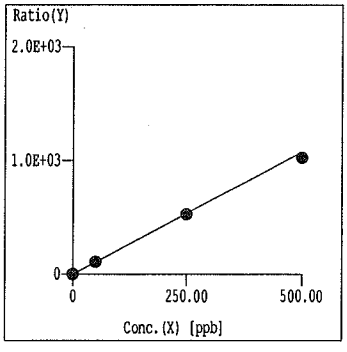

Curve Fit: Y=aX+b
r = 1.0000
Y = 6.811E-002*X +5.986E-003
X = 1.468E+001*Y -8.789E-002
DL = 1.419E-02 ppb
BEC = 8.789E-02 ppb

Step Mass Element (2) 51 V | ISTD 45 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 1.837E+000*X +9.428E-001
X = 5.443E-001*Y -5.132E-001
DL = 3.434E-02 ppb
BEC = 5.132E-01 ppb

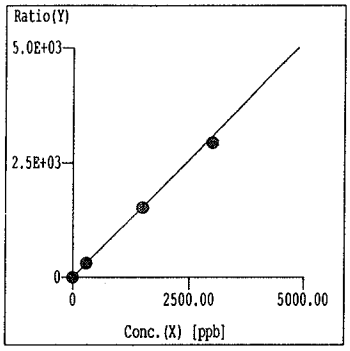
Step Mass Element (2) 52 Cr | ISTD 45 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 2.153E+000*X +2.259E-001
X = 4.645E-001*Y -1.049E-001
DL = 4.555E-03 ppb
BEC = 1.049E-01 ppb

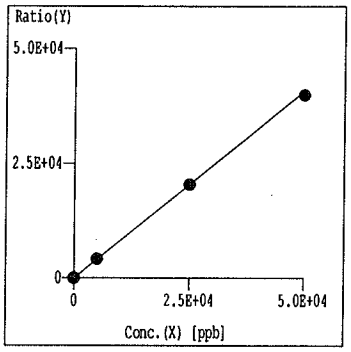
=== Graph Detail ===

Step Mass Element (3) 55 Mn | ISTD 45 | Unit ppb



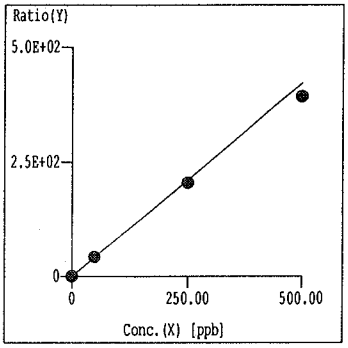

Curve Fit: Y=aX+b
r = 0.9998
Y = 1.027E+000*X +1.361E-001
X = 9.741E-001*Y -1.326E-001
DL = 9.353E-03 ppb
BEC = 1.326E-01 ppb

Step Mass Element (1) 56 Fe | ISTD 45 | Unit ppb



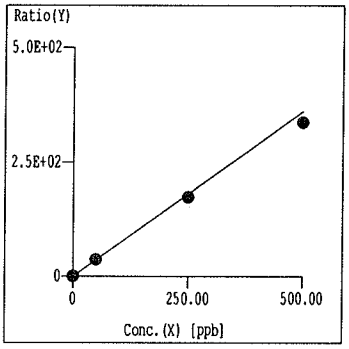

Curve Fit: Y=aX+b
r = 0.9999
Y = 8.162E-001*X +1.710E+000
X = 1.225E+000*Y -2.095E+000
DL = 1.163E-01 ppb
BEC = 2.095 ppb

Step Mass Element (3) 59 Co | ISTD 45 | Unit ppb



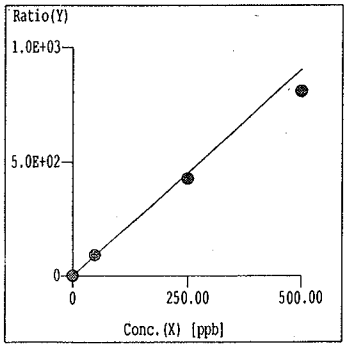

Curve Fit: Y=aX+b
r = 0.9998
Y = 8.436E-001*X +2.320E-002
X = 1.185E+000*Y -2.751E-002
DL = 6.845E-03 ppb
BEC = 2.751E-02 ppb

Step Mass Element (2) 60 Ni | ISTD 45 | Unit ppb



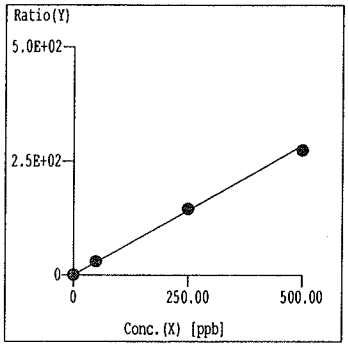

Curve Fit: Y=aX+b
r = 0.9999
Y = 7.217E-001*X +1.062E-001
X = 1.386E+000*Y -1.471E-001
DL = 6.728E-03 ppb
BEC = 1.471E-01 ppb

Step Mass Element (2) 63 Cu | ISTD 45 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9996
Y = 1.803E+000*X +2.987E-001
X = 5.545E-001*Y -1.656E-001
DL = 9.005E-03 ppb
BEC = 1.656E-01 ppb

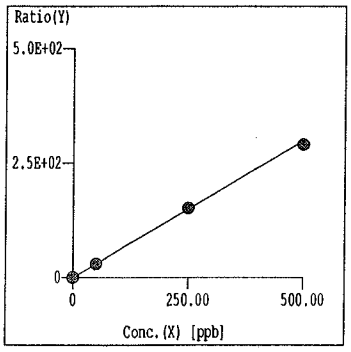
Step Mass Element (3) 66 Zn | ISTD 72 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9995
Y = 5.688E-001*X +5.389E-001
X = 1.758E+000*Y -9.475E-001
DL = 5.430E-02 ppb
BEC = 9.475E-01 ppb

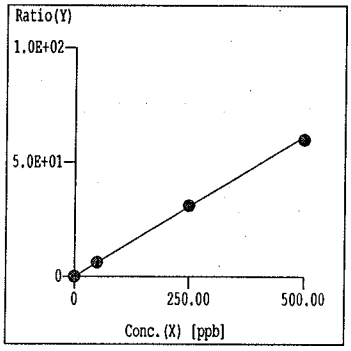
=== Graph Detail ===

Step Mass Element (2) 75 As | ISTD 72 | Unit ppb



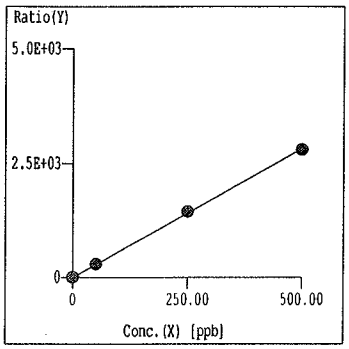

Curve Fit: Y=aX+b
r = 0.9998
Y = 5.975E-001*X +5.707E-002
X = 1.674E+000*Y -9.551E-002
DL = 8.557E-03 ppb
BEC = 9.551E-02 ppb

Step Mass Element (1) 78 Se | ISTD 72 | Unit ppb



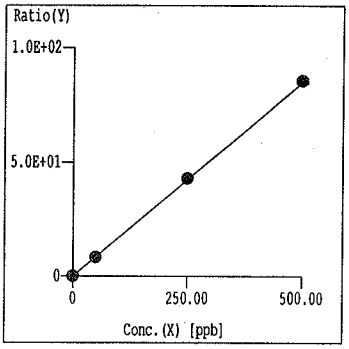

Curve Fit: Y=aX+b
r = 0.9999
Y = 1.227E-001*X +2.538E-003
X = 8.153E+000*Y -2.069E-002
DL = 3.953E-03 ppb
BEC = 2.069E-02 ppb

Step Mass Element (3) 88 Sr | ISTD 72 | Unit ppb



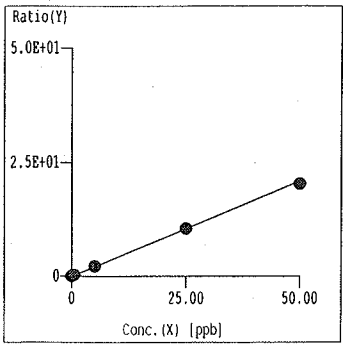

Curve Fit: Y=aX+b
r = 0.9999
Y = 5.651E+000*X +1.261E-001
X = 1.770E-001*Y -2.232E-002
DL = 1.013E-03 ppb
BEC = 2.232E-02 ppb

Step Mass Element (3) 95 Mo | ISTD 115 | Unit ppb



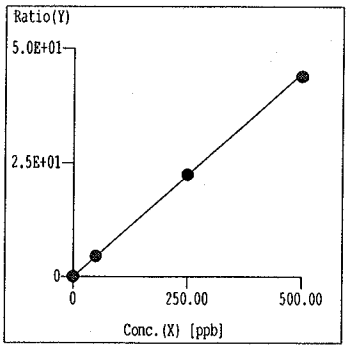

Curve Fit: Y=aX+b
r = 1.0000
Y = 1.698E-001*X +4.492E-003
X = 5.890E+000*Y -2.646E-002
DL = 2.100E-03 ppb
BEC = 2.646E-02 ppb

Step Mass Element (3) 107 Ag | ISTD 115 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 4.183E-001*X +1.777E-003
X = 2.391E+000*Y -4.249E-003
DL = 1.169E-03 ppb
BEC = 4.249E-03 ppb

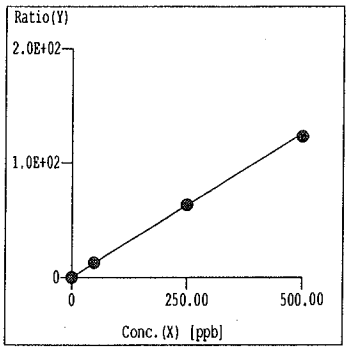
Step Mass Element (3) 111 Cd | ISTD 115 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 8.920E-002*X +2.298E-003
X = 1.121E+001*Y -2.577E-002
DL = 2.666E-02 ppb
BEC = 2.577E-02 ppb

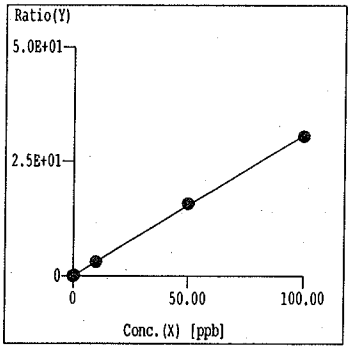
=== Graph Detail ===

Step Mass Element (3) 118 Sn | ISTD 115 | Unit ppb



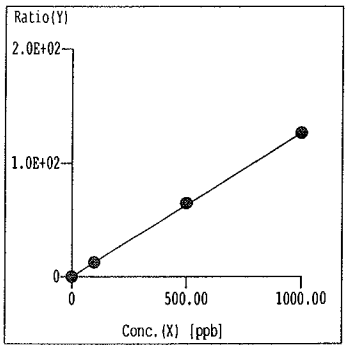

Curve Fit: Y=aX+b
r = 0.9999
Y = 2.511E-001*X +1.841E-002
X = 3.983E+000*Y -7.334E-002
DL = 1.591E-02 ppb
BEC = 7.334E-02 ppb

Step Mass Element (3) 121 Sb | ISTD 115 | Unit ppb



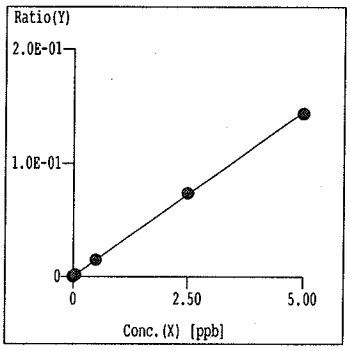

Curve Fit: Y=aX+b
r = 0.9999
Y = 3.067E-001*X +3.247E-003
X = 3.261E+000*Y -1.059E-002
DL = 2.562E-03 ppb
BEC = 1.059E-02 ppb

Step Mass Element (3) 137 Ba | ISTD 115 | Unit ppb



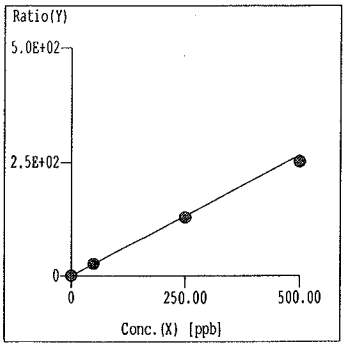

Curve Fit: Y=aX+b
r = 0.9999
Y = 1.265E-001*X +4.359E-003
X = 7.905E+000*Y -3.446E-002
DL = 1.311E-02 ppb
BEC = 3.446E-02 ppb

Step Mass Element (3) 201 Hg | ISTD 159 | Unit ppb



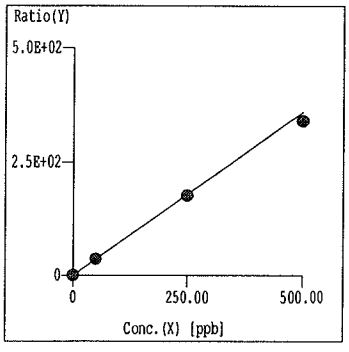

Curve Fit: Y=aX+b
r = 0.9999
Y = 2.900E-002*X +2.420E-004
X = 3.449E+001*Y -8.345E-003
DL = 8.190E-03 ppb
BEC = 8.345E-03 ppb

Step Mass Element (3) 205 Tl | ISTD 159 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 5.323E-001*X +2.437E-002
X = 1.879E+000*Y -4.579E-002
DL = 8.612E-03 ppb
BEC = 4.579E-02 ppb

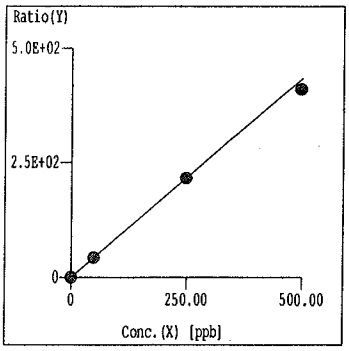
Step Mass Element (3) 208 Pb | ISTD 159 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9998
Y = 7.188E-001*X +3.521E-002
X = 1.391E+000*Y -4.898E-002
DL = 4.442E-03 ppb
BEC = 4.898E-02 ppb

=== Graph Detail ===

| Step | Mass | Element | ISTD | Unit |
|---|---|---|---|---|
| (3) | 238 | U | 159 | ppb |




Curve Fit: Y=aX+b
r = 0.9997
Y = 8.680E-001*X +4.786E-003
X = 1.152E+000*Y -5.513E-003
DL = 1.600E-03 ppb
BEC = 5.513E-03 ppb

**Calibration Blank QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16003 |
| Date Acquired: | Dec 29 2020 01:42 pm |
| Operator: | THuang |
| Sample Name: | BLNK |
| Misc Info: | |
| Vial Number: | 1101 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg |
| Last Cal Update: | Dec 29 2020 01:45 pm |
| Sample Type: | CalBlk |
| Total Dil Factor: | 1.00 |

**QC&ISTD Elements**

| Element | | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|---|
| 6 | Li | 994848.50 | A | 413500.00 | 41.56 |
| 7 | Li | 59503.52 | P | 25310.00 | 42.54 |
| 9 | Be | 270.01 | P | 45.83 | 16.97 |
| 11 | B | 5708.00 | P | 1632.00 | 28.59 |
| 23 | Na | 313141.91 | P | 14120.00 | 4.51 |
| 24 | Mg | 27562.35 | P | 2975.00 | 10.79 |
| 27 | Al | 40310.71 | P | 7289.00 | 18.08 |
| 28 | Si | 16400.46 | P | 1771.00 | 10.80 |
| 31 | P | 16703.43 | P | 14680.00 | 87.89 |
| 39 | K | 95457.40 | P | 3014.00 | 3.16 |
| 40 | Ca | 157060.00 | P | 15230.00 | 9.70 |
| 45 | Sc | 1145458.00 | A | 138800.00 | 12.12 |
| 45 | Sc | 61010.70 | P | 46410.00 | 76.07 |
| 45 | Sc | 1212065.00 | A | 599700.00 | 49.48 |
| 47 | Ti | 96.67 | P | 23.33 | 24.13 |
| 51 | V | 294.67 | P | 138.80 | 47.10 |
| 52 | Cr | 452.90 | P | 168.50 | 37.21 |
| 55 | Mn | 6066.33 | P | 3032.00 | 49.98 |
| 56 | Fe | 165574.91 | P | 22800.00 | 13.77 |
| 59 | Co | 1836.86 | P | 531.90 | 28.96 |
| 60 | Ni | 134.22 | P | 54.86 | 40.87 |
| 63 | Cu | 676.47 | P | 200.30 | 29.61 |
| 66 | Zn | 682.27 | P | 299.80 | 43.94 |
| 72 | Ge | 239851.80 | P | 27180.00 | 11.33 |
| 72 | Ge | 24881.91 | P | 18710.00 | 75.20 |
| 72 | Ge | 232738.09 | P | 112700.00 | 48.42 |
| 75 | As | 40.67 | P | 14.89 | 36.61 |
| 78 | Se | 23.11 | P | 1.54 | 6.66 |
| 88 | Sr | 395.58 | P | 77.06 | 19.48 |
| 90 | Zr | 221.14 | P | 108.90 | 49.25 |
| 95 | Mo | 398.91 | P | 55.01 | 13.79 |
| 107 | Ag | 51.11 | P | 22.20 | 43.43 |
| 111 | Cd | 11.64 | P | 22.51 | 193.38 |
| 115 | In | 1395649.00 | A | 681400.00 | 48.82 |
| 118 | Sn | 1023.41 | P | 169.60 | 16.57 |
| 121 | Sb | 203.34 | P | 12.02 | 5.91 |
| 137 | Ba | 163.34 | P | 48.08 | 29.44 |
| 159 | Tb | 1816262.00 | A | 878500.00 | 48.37 |
| 182 | W | 767.90 | P | 351.00 | 45.71 |
| 201 | Hg | | P | | |
| 201 | Hg | 30.00 | P | 5.77 | 19.25 |
| 205 | Tl | 1409.02 | P | 114.80 | 8.15 |
| 208 | Pb | 3200.29 | P | 672.80 | 21.02 |
| 209 | Bi | 1135336.00 | M | 526400.00 | 46.37 |
| 235 | U | 11.11 | P | 7.70 | 69.28 |
| 238 | U | 518.92 | P | 56.71 | 10.93 |

Calibration Blank QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16004 |
| Date Acquired: | Dec 29 2020 01:46 pm |
| Operator: | THuang |
| Sample Name: | S0 |
| Misc Info: | |
| Vial Number: | 1102 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg |
| Last Cal Update: | Dec 29 2020 01:45 pm |
| Sample Type: | CalBlk |
| Total Dil Factor: | 1.00 |

**QC&ISTD Elements**

| Element | | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|---|
| 6 | Li | 3394344.00 | A | 33620.00 | 0.99 |
| 7 | Li | 207421.30 | P | 293.50 | 0.14 |
| 9 | Be | 217.79 | P | 18.96 | 8.71 |
| 11 | B | 12948.06 | P | 177.30 | 1.37 |
| 23 | Na | 268036.59 | P | 14220.00 | 5.31 |
| 24 | Mg | 40200.46 | P | 156.60 | 0.39 |
| 27 | Al | 86180.56 | P | 228.60 | 0.27 |
| 28 | Si | 6641.11 | P | 253.60 | 3.82 |
| 31 | P | 38252.04 | P | 1592.00 | 4.16 |
| 39 | K | 158487.30 | P | 1498.00 | 0.95 |
| 40 | Ca | 247377.09 | P | 5519.00 | 2.23 |
| 45 | Sc | 2921253.00 | A | 82550.00 | 2.83 |
| 45 | Sc | 704233.19 | P | 7723.00 | 1.10 |
| 45 | Sc | 4437904.00 | A | 26030.00 | 0.59 |
| 47 | Ti | 241.12 | P | 13.47 | 5.59 |
| 51 | V | 7301.83 | P | 86.86 | 1.19 |
| 52 | Cr | 1513.64 | P | 8.57 | 0.57 |
| 55 | Mn | 5291.11 | P | 170.40 | 3.22 |
| 56 | Fe | 49072.71 | P | 643.40 | 1.31 |
| 59 | Co | 966.73 | P | 89.70 | 9.28 |
| 60 | Ni | 644.91 | P | 9.00 | 1.40 |
| 63 | Cu | 1263.40 | P | 25.44 | 2.01 |
| 66 | Zn | 4808.73 | P | 102.50 | 2.13 |
| 72 | Ge | 595893.13 | P | 15320.00 | 2.57 |
| 72 | Ge | 270821.91 | P | 1452.00 | 0.54 |
| 72 | Ge | 815341.69 | P | 5857.00 | 0.72 |
| 75 | As | 154.45 | P | 5.43 | 3.52 |
| 78 | Se | 15.11 | P | 1.02 | 6.74 |
| 88 | Sr | 1026.74 | P | 18.56 | 1.81 |
| 90 | Zr | 305.57 | P | 18.96 | 6.20 |
| 95 | Mo | 228.90 | P | 5.09 | 2.22 |
| 107 | Ag | 88.89 | P | 8.39 | 9.44 |
| 111 | Cd | 73.32 | P | 40.09 | 54.68 |
| 115 | In | 5098577.00 | A | 23240.00 | 0.46 |
| 118 | Sn | 943.41 | P | 65.68 | 6.96 |
| 121 | Sb | 164.45 | P | 13.47 | 8.19 |
| 137 | Ba | 215.57 | P | 29.13 | 13.51 |
| 159 | Tb | 6539240.00 | A | 50430.00 | 0.77 |
| 182 | W | 562.25 | P | 18.95 | 3.37 |
| 201 | Hg | | P | | |
| 201 | Hg | 15.56 | P | 5.09 | 32.73 |
| 205 | Tl | 738.94 | P | 102.10 | 13.82 |
| 208 | Pb | 2227.95 | P | 59.85 | 2.69 |
| 209 | Bi | 4086853.00 | A | 12160.00 | 0.30 |
| 235 | U | 8.89 | P | 3.85 | 43.30 |
| 238 | U | 287.79 | P | 32.03 | 11.13 |

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16005.D\F6L16005.D#
Date Acquired: Dec 29 2020 01:51 pm
Operator: THuang
Sample Name: S1 0.5
Misc Info:
Vial Number: 1104
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 01:49 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 3395493.00 | A | 54450.00 | 1.60 |
| 7 Li | 226773.09 | P | 830.50 | 0.37 |
| 9 Be | 5908.00 | P | 189.90 | 3.21 |
| 11 B | 18424.93 | P | 319.40 | 1.73 |
| 23 Na | 840187.50 | M | 29040.00 | 3.46 |
| 24 Mg | 1495330.00 | A | 23270.00 | 1.56 |
| 27 Al | 1896981.00 | A | 5700.00 | 0.30 |
| 28 Si | 367445.19 | P | 5895.00 | 1.60 |
| 31 P | 83992.73 | P | 1176.00 | 1.40 |
| 39 K | 261019.59 | P | 1904.00 | 0.73 |
| 40 Ca | 1081151.00 | A | 16980.00 | 1.57 |
| 45 Sc | 3018340.00 | A | 64370.00 | 2.13 |
| 45 Sc | 705567.00 | P | 4311.00 | 0.61 |
| 45 Sc | 4522477.00 | A | 6891.00 | 0.15 |
| 47 Ti | 2090.23 | P | 45.83 | 2.19 |
| 51 V | 12684.10 | P | 117.30 | 0.92 |
| 52 Cr | 9929.78 | P | 15.50 | 0.16 |
| 55 Mn | 30220.18 | P | 158.30 | 0.52 |
| 56 Fe | 1385675.00 | A | 21070.00 | 1.52 |
| 59 Co | 21621.89 | P | 435.70 | 2.02 |
| 60 Ni | 3526.88 | P | 24.78 | 0.70 |
| 63 Cu | 9075.48 | P | 82.11 | 0.90 |
| 66 Zn | 6996.32 | P | 135.50 | 1.94 |
| 72 Ge | 613742.13 | P | 10370.00 | 1.69 |
| 72 Ge | 272398.50 | P | 1920.00 | 0.70 |
| 72 Ge | 818606.81 | P | 5141.00 | 0.63 |
| 75 As | 970.48 | P | 11.00 | 1.13 |
| 78 Se | 398.45 | P | 29.76 | 7.47 |
| 88 Sr | 26404.65 | P | 733.20 | 2.78 |
| 90 Zr | 115019.30 | P | 835.20 | 0.73 |
| 95 Mo | 4558.66 | P | 73.75 | 1.62 |
| 107 Ag | 13589.06 | P | 215.50 | 1.59 |
| 111 Cd | 2756.74 | P | 93.29 | 3.38 |
| 115 In | 5077645.00 | A | 53170.00 | 1.05 |
| 118 Sn | 7252.08 | P | 232.70 | 3.21 |
| 121 Sb | 8107.02 | P | 135.10 | 1.67 |
| 137 Ba | 3547.24 | P | 104.80 | 2.95 |
| 159 Tb | 6544913.00 | A | 14880.00 | 0.23 |
| 182 W | 4230.80 | P | 110.20 | 2.60 |
| 201 Hg | | P | | |
| 201 Hg | 108.89 | P | 25.89 | 23.78 |
| 205 Tl | 19875.22 | P | 55.11 | 0.28 |
| 208 Pb | 27996.92 | P | 440.00 | 1.57 |
| 209 Bi | 4099137.00 | A | 26280.00 | 0.64 |
| 235 U | 86.67 | P | 15.28 | 17.63 |
| 238 U | 30864.67 | P | 300.90 | 0.97 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3395493.50 | 1.60 | 3394344.30 | 100.0 | 60 - 125 | |
| 45 Sc | 3018340.50 | 2.13 | 2921252.80 | 103.3 | 60 - 125 | |
| 45 Sc | 705567.00 | 0.61 | 704233.19 | 100.2 | 60 - 125 | |
| 45 Sc | 4522477.00 | 0.15 | 4437904.00 | 101.9 | 60 - 125 | |
| 72 Ge | 613742.13 | 1.69 | 595893.06 | 103.0 | 60 - 125 | |
| 72 Ge | 272398.50 | 0.70 | 270821.88 | 100.6 | 60 - 125 | |
| 72 Ge | 818606.81 | 0.63 | 815341.69 | 100.4 | 60 - 125 | |
| 115 In | 5077645.00 | 1.05 | 5098577.00 | 99.6 | 60 - 125 | |
| 159 Tb | 6544913.00 | 0.23 | 6539240.00 | 100.1 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16006.D\F6L16006.D#
Date Acquired: Dec 29 2020 01:56 pm
Operator: THuang
Sample Name: S2 50
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 01:54 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 3364749.00 | A | 40930.00 | 1.22 |
| 7 Li | 374626.09 | P | 2184.00 | 0.58 |
| 9 Be | 55289.04 | P | 911.90 | 1.65 |
| 11 B | 98637.56 | P | 600.80 | 0.61 |
| 23 Na | 53568592.00 | A | 1286000.00 | 2.40 |
| 24 Mg | 128622800.00 | A | 955700.00 | 0.74 |
| 27 Al | 168113900.00 | A | 1081000.00 | 0.64 |
| 28 Si | 1402282.00 | A | 38000.00 | 2.71 |
| 31 P | 138531.41 | P | 3359.00 | 2.42 |
| 39 K | 9745572.00 | A | 92920.00 | 0.95 |
| 40 Ca | 88933912.00 | A | 1400000.00 | 1.57 |
| 45 Sc | 2942298.00 | A | 51500.00 | 1.75 |
| 45 Sc | 686225.88 | P | 5626.00 | 0.82 |
| 45 Sc | 4444431.00 | A | 22820.00 | 0.51 |
| 47 Ti | 151550.91 | P | 1644.00 | 1.08 |
| 51 V | 643648.69 | P | 4910.00 | 0.76 |
| 52 Cr | 745230.69 | P | 5957.00 | 0.80 |
| 55 Mn | 13623450.00 | A | 81260.00 | 0.60 |
| 56 Fe | 121607900.00 | A | 2264000.00 | 1.86 |
| 59 Co | 1899035.00 | A | 3901.00 | 0.21 |
| 60 Ni | 253071.80 | P | 2374.00 | 0.94 |
| 63 Cu | 632454.38 | P | 5876.00 | 0.93 |
| 66 Zn | 243280.50 | P | 938.50 | 0.39 |
| 72 Ge | 590594.88 | P | 14530.00 | 2.46 |
| 72 Ge | 261475.00 | P | 1783.00 | 0.68 |
| 72 Ge | 800245.63 | P | 5017.00 | 0.63 |
| 75 As | 77619.87 | P | 842.20 | 1.09 |
| 78 Se | 36340.09 | P | 963.70 | 2.65 |
| 88 Sr | 2347360.00 | A | 16750.00 | 0.71 |
| 90 Zr | 251049.00 | P | 3196.00 | 1.27 |
| 95 Mo | 414046.09 | P | 1203.00 | 0.29 |
| 107 Ag | 107427.50 | P | 1219.00 | 1.13 |
| 111 Cd | 222290.70 | P | 1694.00 | 0.76 |
| 115 In | 4948506.00 | A | 43230.00 | 0.87 |
| 118 Sn | 631583.88 | P | 1858.00 | 0.29 |
| 121 Sb | 150599.41 | P | 1272.00 | 0.84 |
| 137 Ba | 623484.81 | P | 5657.00 | 0.91 |
| 159 Tb | 6569784.00 | A | 16310.00 | 0.25 |
| 182 W | 36862.87 | P | 543.30 | 1.47 |
| 201 Hg | | P | | |
| 201 Hg | 966.74 | P | 20.28 | 2.10 |
| 205 Tl | 1752137.00 | A | 9523.00 | 0.54 |
| 208 Pb | 2392928.00 | A | 14270.00 | 0.60 |
| 209 Bi | 3916270.00 | A | 13070.00 | 0.33 |
| 235 U | 7210.01 | P | 237.30 | 3.29 |
| 238 U | 2821313.00 | A | 30620.00 | 1.09 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3364749.00 | 1.22 | 3394344.30 | 99.1 | 60 - 125 | |
| 45 Sc | 2942298.00 | 1.75 | 2921252.80 | 100.7 | 60 - 125 | |
| 45 Sc | 686225.88 | 0.82 | 704233.19 | 97.4 | 60 - 125 | |
| 45 Sc | 4444431.00 | 0.51 | 4437904.00 | 100.1 | 60 - 125 | |
| 72 Ge | 590594.88 | 2.46 | 595893.06 | 99.1 | 60 - 125 | |
| 72 Ge | 261474.97 | 0.68 | 270821.88 | 96.5 | 60 - 125 | |
| 72 Ge | 800245.63 | 0.63 | 815341.69 | 98.1 | 60 - 125 | |
| 115 In | 4948506.00 | 0.87 | 5098577.00 | 97.1 | 60 - 125 | |
| 159 Tb | 6569783.50 | 0.25 | 6539240.00 | 100.5 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16007.D\F6L16007.D#
Date Acquired: Dec 29 2020 02:00 pm
Operator: THuang
Sample Name: S3 250
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 01:59 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 3070820.00 | A | 22220.00 | 0.72 |
| 7 Li | 998924.00 | A | 21750.00 | 2.18 |
| 9 Be | 261948.20 | P | 1103.00 | 0.42 |
| 11 B | 420081.50 | P | 2844.00 | 0.68 |
| 23 Na | 264738300.00 | A | 5041000.00 | 1.90 |
| 24 Mg | 618702720.00 | A | 3899000.00 | 0.63 |
| 27 Al | 811840580.00 | A | 4021000.00 | 0.50 |
| 28 Si | 6641200.00 | A | 121400.00 | 1.83 |
| 31 P | 504863.59 | P | 4608.00 | 0.91 |
| 39 K | 46380300.00 | A | 400500.00 | 0.86 |
| 40 Ca | 442126400.00 | A | 9062000.00 | 2.05 |
| 45 Sc | 2898424.00 | A | 46600.00 | 1.61 |
| 45 Sc | 658430.81 | P | 5728.00 | 0.87 |
| 45 Sc | 4323753.00 | A | 40480.00 | 0.94 |
| 47 Ti | 733356.13 | P | 5033.00 | 0.69 |
| 51 V | 3068001.00 | A | 22720.00 | 0.74 |
| 52 Cr | 3484613.00 | A | 29180.00 | 0.84 |
| 55 Mn | 65763800.00 | A | 495900.00 | 0.75 |
| 56 Fe | 590022980.00 | A | 13190000.00 | 2.24 |
| 59 Co | 8849336.00 | A | 48660.00 | 0.55 |
| 60 Ni | 1140497.00 | A | 7198.00 | 0.63 |
| 63 Cu | 2810033.00 | A | 38350.00 | 1.36 |
| 66 Zn | 1138357.00 | A | 1885.00 | 0.17 |
| 72 Ge | 562565.81 | P | 11890.00 | 2.11 |
| 72 Ge | 249600.00 | P | 1962.00 | 0.79 |
| 72 Ge | 781503.81 | P | 4137.00 | 0.53 |
| 75 As | 377451.50 | P | 2308.00 | 0.61 |
| 78 Se | 174054.09 | P | 4212.00 | 2.42 |
| 88 Sr | 11306360.00 | A | 123300.00 | 1.09 |
| 90 Zr | 668542.31 | P | 5619.00 | 0.84 |
| 95 Mo | 2010391.00 | A | 16030.00 | 0.80 |
| 107 Ag | 490844.50 | P | 1356.00 | 0.28 |
| 111 Cd | 1048799.00 | M | 17200.00 | 1.64 |
| 115 In | 4680121.00 | A | 26650.00 | 0.57 |
| 118 Sn | 2938674.00 | A | 17440.00 | 0.59 |
| 121 Sb | 731709.88 | P | 3944.00 | 0.54 |
| 137 Ba | 3032151.00 | A | 30320.00 | 1.00 |
| 159 Tb | 6302473.00 | A | 9759.00 | 0.15 |
| 182 W | 376228.91 | P | 3178.00 | 0.84 |
| 201 Hg | | P | | |
| 201 Hg | 4637.64 | P | 47.02 | 1.01 |
| 205 Tl | 8156427.00 | A | 42610.00 | 0.52 |
| 208 Pb | 11138540.00 | A | 88520.00 | 0.79 |
| 209 Bi | 3621229.00 | A | 20680.00 | 0.57 |
| 235 U | 35232.25 | P | 44.81 | 0.13 |
| 238 U | 13567640.00 | A | 103400.00 | 0.76 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3070820.30 | 0.72 | 3394344.30 | 90.5 | 60 - 125 | |
| 45 Sc | 2898424.00 | 1.61 | 2921252.80 | 99.2 | 60 - 125 | |
| 45 Sc | 658430.81 | 0.87 | 704233.19 | 93.5 | 60 - 125 | |
| 45 Sc | 4323753.50 | 0.94 | 4437904.00 | 97.4 | 60 - 125 | |
| 72 Ge | 562565.75 | 2.11 | 595893.06 | 94.4 | 60 - 125 | |
| 72 Ge | 249600.05 | 0.79 | 270821.88 | 92.2 | 60 - 125 | |
| 72 Ge | 781503.81 | 0.53 | 815341.69 | 95.8 | 60 - 125 | |
| 115 In | 4680121.00 | 0.57 | 5098577.00 | 91.8 | 60 - 125 | |
| 159 Tb | 6302473.00 | 0.15 | 6539240.00 | 96.4 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16007.D\F6L16007.D#
Date Acquired: Dec 29 2020 02:00 pm
Operator: THuang
Sample Name: S3 250
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 01:59 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 3070820.00 | A | 22220.00 | 0.72 |
| 7 Li | 998924.00 | A | 21750.00 | 2.18 |
| 9 Be | 261948.20 | P | 1103.00 | 0.42 |
| 11 B | 420081.50 | P | 2844.00 | 0.68 |
| 23 Na | 264738300.00 | A | 5041000.00 | 1.90 |
| 24 Mg | 618702720.00 | A | 3899000.00 | 0.63 |
| 27 Al | 811840580.00 | A | 4021000.00 | 0.50 |
| 28 Si | 6641200.00 | A | 121400.00 | 1.83 |
| 31 P | 504863.59 | P | 4608.00 | 0.91 |
| 39 K | 46380300.00 | A | 400500.00 | 0.86 |
| 40 Ca | 442126400.00 | A | 9062000.00 | 2.05 |
| 45 Sc | 2898424.00 | A | 46600.00 | 1.61 |
| 45 Sc | 658430.81 | P | 5728.00 | 0.87 |
| 45 Sc | 4323753.00 | A | 40480.00 | 0.94 |
| 47 Ti | 733356.13 | P | 5033.00 | 0.69 |
| 51 V | 3068001.00 | A | 22720.00 | 0.74 |
| 52 Cr | 3484613.00 | A | 29180.00 | 0.84 |
| 55 Mn | 65763800.00 | A | 495900.00 | 0.75 |
| 56 Fe | 590022980.00 | A | 13190000.00 | 2.24 |
| 59 Co | 8849336.00 | A | 48660.00 | 0.55 |
| 60 Ni | 1140497.00 | A | 7198.00 | 0.63 |
| 63 Cu | 2810033.00 | A | 38350.00 | 1.36 |
| 66 Zn | 1138357.00 | A | 1885.00 | 0.17 |
| 72 Ge | 562565.81 | P | 11890.00 | 2.11 |
| 72 Ge | 249600.00 | P | 1962.00 | 0.79 |
| 72 Ge | 781503.81 | P | 4137.00 | 0.53 |
| 75 As | 377451.50 | P | 2308.00 | 0.61 |
| 78 Se | 174054.09 | P | 4212.00 | 2.42 |
| 88 Sr | 11306360.00 | A | 123300.00 | 1.09 |
| 90 Zr | 668542.31 | P | 5619.00 | 0.84 |
| 95 Mo | 2010391.00 | A | 16030.00 | 0.80 |
| 107 Ag | 490844.50 | P | 1356.00 | 0.28 |
| 111 Cd | 1048799.00 | M | 17200.00 | 1.64 |
| 115 In | 4680121.00 | A | 26650.00 | 0.57 |
| 118 Sn | 2938674.00 | A | 17440.00 | 0.59 |
| 121 Sb | 731709.88 | P | 3944.00 | 0.54 |
| 137 Ba | 3032151.00 | A | 30320.00 | 1.00 |
| 159 Tb | 6302473.00 | A | 9759.00 | 0.15 |
| 182 W | 376228.91 | P | 3178.00 | 0.84 |
| 201 Hg | | P | | |
| 201 Hg | 4637.64 | P | 47.02 | 1.01 |
| 205 Tl | 8156427.00 | A | 42610.00 | 0.52 |
| 208 Pb | 11138540.00 | A | 88520.00 | 0.79 |
| 209 Bi | 3621229.00 | A | 20680.00 | 0.57 |
| 235 U | 35232.25 | P | 44.81 | 0.13 |
| 238 U | 13567640.00 | A | 103400.00 | 0.76 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3070820.30 | 0.72 | 3394344.30 | 90.5 | 60 - 125 | |
| 45 Sc | 2898424.00 | 1.61 | 2921252.80 | 99.2 | 60 - 125 | |
| 45 Sc | 658430.81 | 0.87 | 704233.19 | 93.5 | 60 - 125 | |
| 45 Sc | 4323753.50 | 0.94 | 4437904.00 | 97.4 | 60 - 125 | |
| 72 Ge | 562565.75 | 2.11 | 595893.06 | 94.4 | 60 - 125 | |
| 72 Ge | 249600.05 | 0.79 | 270821.88 | 92.2 | 60 - 125 | |
| 72 Ge | 781503.81 | 0.53 | 815341.69 | 95.8 | 60 - 125 | |
| 115 In | 4680121.00 | 0.57 | 5098577.00 | 91.8 | 60 - 125 | |
| 159 Tb | 6302473.00 | 0.15 | 6539240.00 | 96.4 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16008.D\F6L16008.D#
Date Acquired: Dec 29 2020 02:04 pm
Operator: THuang
Sample Name: S4 500
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 02:03 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 2818302.00 | A | 46800.00 | 1.66 |
| 7 Li | 1644370.00 | A | 10290.00 | 0.63 |
| 9 Be | 482631.41 | P | 6525.00 | 1.35 |
| 11 B | 758666.88 | A | 7129.00 | 0.94 |
| 23 Na | 508376700.00 | A | 23680000.00 | 4.66 |
| 24 Mg | 1153067000.00 | A | 690900.00 | 0.06 |
| 27 Al | 1534178000.00 | A | 19520000.00 | 1.27 |
| 28 Si | 12861810.00 | A | 498900.00 | 3.88 |
| 31 P | 822573.81 | A | 6728.00 | 0.82 |
| 39 K | 89244632.00 | A | 89280.00 | 0.10 |
| 40 Ca | 862059070.00 | A | 32690000.00 | 3.79 |
| 45 Sc | 2847647.00 | A | 110200.00 | 3.87 |
| 45 Sc | 644659.31 | P | 2232.00 | 0.35 |
| 45 Sc | 4226859.00 | A | 42790.00 | 1.01 |
| 47 Ti | 1419396.00 | A | 14900.00 | 1.05 |
| 51 V | 5834624.00 | A | 19500.00 | 0.33 |
| 52 Cr | 6603028.00 | A | 27760.00 | 0.42 |
| 55 Mn | 123962000.00 | A | 1142000.00 | 0.92 |
| 56 Fe | 1134194000.00 | A | 48280000.00 | 4.26 |
| 59 Co | 16607760.00 | A | 96260.00 | 0.58 |
| 60 Ni | 2169937.00 | A | 19330.00 | 0.89 |
| 63 Cu | 5204495.00 | A | 11300.00 | 0.22 |
| 66 Zn | 2120621.00 | A | 7617.00 | 0.36 |
| 72 Ge | 551968.00 | P | 18060.00 | 3.27 |
| 72 Ge | 245232.20 | P | 632.80 | 0.26 |
| 72 Ge | 774279.81 | P | 1922.00 | 0.25 |
| 75 As | 711829.19 | P | 1146.00 | 0.16 |
| 78 Se | 330278.91 | P | 11510.00 | 3.48 |
| 88 Sr | 21695260.00 | A | 93120.00 | 0.43 |
| 90 Zr | 1359902.00 | A | 21270.00 | 1.56 |
| 95 Mo | 3855607.00 | A | 29580.00 | 0.77 |
| 107 Ag | 912827.19 | P | 3516.00 | 0.39 |
| 111 Cd | 1976104.00 | A | 11090.00 | 0.56 |
| 115 In | 4505223.00 | A | 31950.00 | 0.71 |
| 118 Sn | 5522207.00 | A | 4738.00 | 0.09 |
| 121 Sb | 1368559.00 | A | 9093.00 | 0.66 |
| 137 Ba | 5691965.00 | A | 32370.00 | 0.57 |
| 159 Tb | 6099389.00 | A | 32000.00 | 0.52 |
| 182 W | 761091.63 | P | 1319.00 | 0.17 |
| 201 Hg | | P | | |
| 201 Hg | 8746.45 | P | 43.60 | 0.50 |
| 205 Tl | 15340180.00 | A | 92170.00 | 0.60 |
| 208 Pb | 20749750.00 | A | 159400.00 | 0.77 |
| 209 Bi | 3402795.00 | A | 14130.00 | 0.42 |
| 235 U | 66194.82 | P | 132.70 | 0.20 |
| 238 U | 24997630.00 | A | 99890.00 | 0.40 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2818302.30 | 1.66 | 3394344.30 | 83.0 | 60 - 125 | |
| 45 Sc | 2847647.30 | 3.87 | 2921252.80 | 97.5 | 60 - 125 | |
| 45 Sc | 644659.25 | 0.35 | 704233.19 | 91.5 | 60 - 125 | |
| 45 Sc | 4226858.50 | 1.01 | 4437904.00 | 95.2 | 60 - 125 | |
| 72 Ge | 551968.00 | 3.27 | 595893.06 | 92.6 | 60 - 125 | |
| 72 Ge | 245232.23 | 0.26 | 270821.88 | 90.6 | 60 - 125 | |
| 72 Ge | 774279.81 | 0.25 | 815341.69 | 95.0 | 60 - 125 | |
| 115 In | 4505223.00 | 0.71 | 5098577.00 | 88.4 | 60 - 125 | |
| 159 Tb | 6099388.50 | 0.52 | 6539240.00 | 93.3 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**ICV QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16009.D\F6L16009.D# |
| Date Acquired: | Dec 29 2020 02:09 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICV |
| Misc Info: | |
| Vial Number: | 1204 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | ICV1 |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc. RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 29.22 | ppb | 1125876.0 | 1.53 | 30.00 | 90 - 110 | |
| 9 Be | 28.61 | ppb | 300251.8 | 0.53 | 30.00 | 90 - 110 | |
| 11 B | 30.38 | ppb | 253219.3 | 0.19 | 30.00 | 90 - 110 | |
| 23 Na | 29070.00 | ppb | 303894020.0 | 1.05 | 30000.00 | 90 - 110 | |
| 24 Mg | 28870.00 | ppb | 715167490.0 | 0.55 | 30000.00 | 90 - 110 | |
| 27 Al | 27660.00 | ppb | 947674300.0 | 1.00 | 30000.00 | 90 - 110 | |
| 28 Si | 3034.00 | ppb | 8312414.0 | 1.03 | 3000.00 | 90 - 110 | |
| 31 P | 292.00 | ppb | 564916.9 | 0.91 | 300.00 | 90 - 110 | |
| 39 K | 29150.00 | ppb | 53508728.0 | 0.69 | 30000.00 | 90 - 110 | |
| 40 Ca | 29470.00 | ppb | 508601220.0 | 0.78 | 30000.00 | 90 - 110 | |
| 47 Ti | 293.00 | ppb | 863834.6 | 0.55 | 300.00 | 90 - 110 | |
| 51 V | 291.00 | ppb | 3507866.0 | 0.61 | 300.00 | 90 - 110 | |
| 52 Cr | 285.10 | ppb | 4021484.0 | 0.76 | 300.00 | 90 - 110 | |
| 55 Mn | 1864.00 | ppb | 82810232.0 | 0.93 | 2000.00 | 90 - 110 | |
| 56 Fe | 28930.00 | ppb | 678725820.0 | 0.55 | 30000.00 | 90 - 110 | |
| 59 Co | 281.80 | ppb | 10289920.0 | 0.83 | 300.00 | 90 - 110 | |
| 60 Ni | 280.30 | ppb | 1325535.0 | 0.71 | 300.00 | 90 - 110 | |
| 63 Cu | 269.80 | ppb | 3189443.0 | 0.44 | 300.00 | 90 - 110 | ~~Fail~~ 90% TH 12/29/20 |
| 66 Zn | 301.30 | ppb | 1340982.0 | 0.44 | 300.00 | 90 - 110 | |
| 75 As | 292.10 | ppb | 431774.7 | 0.72 | 300.00 | 90 - 110 | |
| 78 Se | 297.80 | ppb | 203136.6 | 0.50 | 300.00 | 90 - 110 | |
| 88 Sr | 296.00 | ppb | 13045420.0 | 0.54 | 300.00 | 90 - 110 | |
| 90 Zr | 26.52 | ppb | 810992.5 | 0.90 | 30.00 | 90 - 110 | Fail |
| 95 Mo | 301.10 | ppb | 2367304.0 | 0.46 | 300.00 | 90 - 110 | |
| 107 Ag | 29.17 | ppb | 565110.0 | 0.64 | 30.00 | 90 - 110 | |
| 111 Cd | 297.70 | ppb | 1229782.0 | 0.83 | 300.00 | 90 - 110 | |
| 118 Sn | 293.90 | ppb | 3417782.0 | 0.95 | 300.00 | 90 - 110 | |
| 121 Sb | 58.06 | ppb | 824672.5 | 1.02 | 60.00 | 90 - 110 | |
| 137 Ba | 306.30 | ppb | 1794337.0 | 0.89 | 300.00 | 90 - 110 | |
| 182 W | 34.36 | ppb | 444969.1 | 1.28 | 30.00 | 90 - 110 | Fail |
| 201 Hg | 2.80 | ppb | 5189.0 | 0.82 | 3.00 | 90 - 110 | |
| 205 Tl | 280.80 | ppb | 9513254.0 | 0.30 | 300.00 | 90 - 110 | |
| 208 Pb | 282.00 | ppb | 12898210.0 | 0.69 | 300.00 | 90 - 110 | |
| 235 U | 2.87 | ppb | 58357.2 | 0.70 | 2.20 | 90 - 110 | Fail |
| 238 U | 282.40 | ppb | 15595090.0 | 0.95 | 300.00 | 90 - 110 | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3082635.3 | 0.91 | 3394344.30 | 90.8 | 60 - 125 | |
| 45 Sc | 2873571.0 | 2.37 | 2921252.80 | 98.4 | 60 - 125 | |
| 45 Sc | 654994.6 | 0.76 | 704233.19 | 93.0 | 60 - 125 | |
| 45 Sc | 4327618.5 | 0.29 | 4437904.00 | 97.5 | 60 - 125 | |
| 72 Ge | 555930.8 | 2.33 | 595893.06 | 93.3 | 60 - 125 | |
| 72 Ge | 247327.2 | 0.49 | 270821.88 | 91.3 | 60 - 125 | |
| 72 Ge | 779948.6 | 0.54 | 815341.69 | 95.7 | 60 - 125 | |
| 115 In | 4630364.5 | 0.16 | 5098577.00 | 90.8 | 60 - 125 | |
| 159 Tb | 6362963.0 | 0.51 | 6539240.00 | 97.3 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

4 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

**Data Results:**

| | |
|---|---|
| Analytes: | Fail |
| ISTD: | Pass |

**ICB QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16010.D\F6L16010.D# |
| Date Acquired: | Dec 29 2020 02:13 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICB |
| Misc Info: | |
| Vial Number: | 1102 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | ICB |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.0747 | ppb | 210795.0 | 62.63 | 0.20 | |
| 9 Be | 0.0096 | ppb | 327.8 | 62.07 | 0.10 | |
| 11 B | 0.3108 | ppb | 15779.7 | 20.47 | 5.00 | |
| 23 Na | 33.5800 | ppb | 626939.0 | 19.87 | 40.00 | |
| 24 Mg | 13.3200 | ppb | 379532.1 | 12.74 | 10.00 | Fail |
| 27 Al | 12.4400 | ppb | 524569.3 | 15.69 | 20.00 | |
| 28 Si | 6.5560 | ppb | 26908.0 | 13.96 | 20.00 | |
| 31 P | 1.9060 | ppb | 41644.6 | 66.06 | 10.00 | |
| 39 K | 18.4100 | ppb | 191847.4 | 30.08 | 20.00 | |
| 40 Ca | 32.5800 | ppb | 806113.1 | 20.50 | 25.00 | Fail |
| 47 Ti | 0.1333 | ppb | 670.0 | 22.93 | 0.50 | |
| 51 V | 0.1732 | ppb | 8645.7 | 21.58 | 0.50 | |
| 52 Cr | 0.1492 | ppb | 3752.1 | 24.28 | 0.20 | |
| 55 Mn | 0.6786 | ppb | 37033.4 | 12.89 | 0.20 | Fail |
| 56 Fe | 34.1400 | ppb | 854681.9 | 19.23 | 10.00 | Fail |
| 59 Co | 0.1052 | ppb | 4977.9 | 11.96 | 0.20 | |
| 60 Ni | 0.1355 | ppb | 1398.3 | 25.67 | 0.20 | |
| 63 Cu | 0.1237 | ppb | 3577.6 | 32.09 | 0.40 | |
| 66 Zn | 0.2582 | ppb | 5483.4 | 14.08 | 2.00 | |
| 75 As | 0.1829 | ppb | 436.7 | 25.87 | 0.20 | |
| 78 Se | 0.3430 | ppb | 259.6 | 13.84 | 0.20 | Fail |
| 90 Zr | 0.0124 | ppb | 707.8 | 32.63 | 2.00 | |
| 95 Mo | 0.1607 | ppb | 1605.7 | 17.47 | 0.40 | |
| 107 Ag | 0.0132 | ppb | 370.0 | 5.80 | 0.20 | |
| 111 Cd | 0.1095 | ppb | 610.1 | 21.88 | 0.20 | |
| 118 Sn | 0.1570 | ppb | 2926.0 | 5.72 | 0.20 | |
| 121 Sb | 0.0227 | ppb | 516.7 | 26.31 | 0.40 | |
| 137 Ba | 0.1561 | ppb | 1219.0 | 15.83 | 0.20 | |
| 182 W | 0.0387 | ppb | 1013.4 | 16.52 | 1.00 | |
| 201 Hg | 0.0096 | ppb | 34.4 | 20.78 | 0.10 | |
| 205 Tl | 0.1580 | ppb | 7169.1 | 10.34 | 0.20 | |
| 208 Pb | 0.1246 | ppb | 8248.1 | 13.30 | 0.10 | Fail |
| 235 U | 0.0013 | ppb | 36.7 | 55.12 | 1.00 | |
| 238 U | 0.1185 | ppb | 7112.7 | 9.55 | 0.10 | Fail |

< 1/2 WQ
TH 12/29/20

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3415141.8 | 2.77 | 3394344.30 | 100.6 | 60 - 125 | |
| 45 Sc | 2898869.0 | 2.61 | 2921252.80 | 99.2 | 60 - 125 | |
| 45 Sc | 685664.0 | 0.48 | 704233.19 | 97.4 | 60 - 125 | |
| 45 Sc | 4444488.5 | 1.29 | 4437904.00 | 100.1 | 60 - 125 | |
| 72 Ge | 582762.3 | 2.04 | 595893.06 | 97.8 | 60 - 125 | |
| 72 Ge | 262336.3 | 0.64 | 270821.88 | 96.9 | 60 - 125 | |
| 72 Ge | 799570.6 | 0.50 | 815341.69 | 98.1 | 60 - 125 | |
| 115 In | 5059053.0 | 0.98 | 5098577.00 | 99.2 | 60 - 125 | |
| 159 Tb | 6609610.5 | 0.05 | 6539240.00 | 101.1 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

7 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

**Data Results:**

Analytes: Fail
ISTD: Pass

# Sample QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16011.D\F6L16011.D# |
| Date Acquired: | Dec 29 2020 02:18 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | MRLL2901 |
| Misc Info: | 1/100/10 ppb |
| Vial Number: | 1305 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | Sample |
| Dilution Factor: | 1.00 |
| Autodil Factor: | Undiluted |
| Final Dil Factor: | 1.00 |

| Tune # | Name |
|---|---|
| #1 | h2.u |
| #2 | he.u |
| #3 | norm.u |

QC Elements

| Element | Tune | ISTD | CPS | Corr Conc | Raw Conc | Units | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 7 Li | # 3 | 6 | 254047.6 | 0.0000 | 1.0140 | ppb | 2.73 | 50.00 | |
| 9 Be | # 3 | 6 | 11185.5 | 0.0000 | 0.9069 | ppb | 1.31 | 50.00 | |
| 11 B | # 3 | 6 | 104347.8 | 0.0000 | 9.9120 | ppb | 1.57 | 100.00 | |
| 23 Na | # 1 | 45 | 1404574.0 | 0.0000 | 105.6000 | ppb | 0.65 | 50000.00 | |
| 24 Mg | # 3 | 45 | 2802836.0 | 0.0000 | 106.4000 | ppb | 0.87 | 50000.00 | |
| 27 Al | # 3 | 45 | 3631117.0 | 0.0000 | 98.7500 | ppb | 1.31 | 50000.00 | |
| 28 Si | # 1 | 45 | 329290.6 | 0.0000 | 114.5000 | ppb | 1.30 | 5000.00 | |
| 31 P | # 3 | 45 | 135929.3 | 0.0000 | 51.2800 | ppb | 0.71 | 500.00 | |
| 39 K | # 2 | 45 | 371649.9 | 0.0000 | 109.4000 | ppb | 0.50 | 50000.00 | |
| 40 Ca | # 1 | 45 | 2294423.0 | 0.0000 | 116.3000 | ppb | 0.68 | 50000.00 | |
| 47 Ti | # 3 | 45 | 3813.9 | 0.0000 | 1.1480 | ppb | 2.84 | 500.00 | |
| 51 V | # 2 | 45 | 19799.1 | 0.0000 | 1.0360 | ppb | 0.38 | 500.00 | |
| 52 Cr | # 2 | 45 | 17845.6 | 0.0000 | 1.0860 | ppb | 0.73 | 500.00 | |
| 55 Mn | # 3 | 45 | 58678.6 | 0.0000 | 1.1290 | ppb | 2.50 | 3000.00 | |
| 56 Fe | # 1 | 45 | 2712728.0 | 0.0000 | 111.1000 | ppb | 1.42 | 50000.00 | |
| 59 Co | # 3 | 45 | 41818.6 | 0.0000 | 1.0660 | ppb | 1.49 | 500.00 | |
| 60 Ni | # 2 | 45 | 6235.8 | 0.0000 | 1.0950 | ppb | 1.60 | 500.00 | |
| 63 Cu | # 2 | 45 | 15335.7 | 0.0000 | 1.0560 | ppb | 0.52 | 500.00 | |
| 66 Zn | # 3 | 72 | 55571.7 | 0.0000 | 11.0200 | ppb | 0.88 | 500.00 | |
| 75 As | # 2 | 72 | 1760.1 | 0.0000 | 0.9995 | ppb | 2.74 | 500.00 | |
| 78 Se | # 1 | 72 | 764.5 | 0.0000 | 1.0290 | ppb | 4.95 | 500.00 | |
| 88 Sr | # 3 | 72 | 102691.2 | 0.0000 | 2.2040 | ppb | 0.65 | 500.00 | |
| 90 Zr | # 3 | 72 | 111733.5 | 0.0000 | 3.4830 | ppb | 0.68 | 50.00 | |
| 95 Mo | # 3 | 115 | 8884.1 | 0.0000 | 0.9957 | ppb | 1.13 | 500.00 | |
| 107 Ag | # 3 | 115 | 22689.7 | 0.0000 | 1.0550 | ppb | 2.57 | 50.00 | |
| 111 Cd | # 3 | 115 | 5055.2 | 0.0000 | 1.0810 | ppb | 2.84 | 500.00 | |
| 118 Sn | # 3 | 115 | 14544.5 | 0.0000 | 1.0580 | ppb | 4.65 | 500.00 | |
| 121 Sb | # 3 | 115 | 15979.4 | 0.0000 | 1.0070 | ppb | 1.38 | 500.00 | |
| 137 Ba | # 3 | 115 | 7118.7 | 0.0000 | 1.0650 | ppb | 5.05 | 1000.00 | |
| 182 W | # 3 | 159 | 32191.9 | 0.0000 | 2.3260 | ppb | 0.22 | 50.00 | |
| 201 Hg | # 3 | 159 | 220.0 | 0.0000 | 0.1048 | ppb | 13.47 | 25.00 | |
| 205 Tl | # 3 | 159 | 39534.4 | 0.0000 | 1.0620 | ppb | 0.66 | 500.00 | |
| 208 Pb | # 3 | 159 | 54955.0 | 0.0000 | 1.0920 | ppb | 1.86 | 500.00 | |
| 235 U | # 3 | 159 | 145.6 | 0.0000 | 0.0064 | ppb | 6.27 | 30.00 | |
| 238 U | # 3 | 159 | 59230.4 | 0.0000 | 1.0130 | ppb | 0.63 | 500.00 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li # 3 | 3552297.80 | 0.86 | 3394344.30 | 104.7 | 60 - 125 | |
| 45 Sc # 1 | 2936094.30 | 1.85 | 2921252.80 | 100.5 | 60 - 125 | |
| 45 Sc # 2 | 695873.88 | 0.87 | 704233.19 | 98.8 | 60 - 125 | |
| 45 Sc # 3 | 4532580.00 | 1.10 | 4437904.00 | 102.1 | 60 - 125 | |
| 72 Ge # 1 | 593502.38 | 2.44 | 595893.06 | 99.6 | 60 - 125 | |
| 72 Ge # 2 | 269012.97 | 0.81 | 270821.88 | 99.3 | 60 - 125 | |
| 72 Ge # 3 | 816081.19 | 0.47 | 815341.69 | 100.1 | 60 - 125 | |
| 115 In # 3 | 5119451.00 | 0.55 | 5098577.00 | 100.4 | 60 - 125 | |
| 159 Tb # 3 | 6702216.50 | 1.29 | 6539240.00 | 102.5 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Pass

ISTD: Pass

**ICS-A QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16013.D\F6L16013.D# |
| Date Acquired: | Dec 29 2020 02:27 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICSA |
| Misc Info: | |
| Vial Number: | 1303 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | ICS-A |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.63 | ppb | 182594.2 | 13.15 | --- | |
| 9 Be | -0.01 | ppb | 112.2 | 43.40 | --- | |
| 11 B | 0.25 | ppb | 12072.9 | 13.25 | --- | |
| 23 Na | 100700.00 | ppb | 978113980.0 | 0.93 | 120000.00 | |
| 24 Mg | 98770.00 | ppb | 2178687000.0 | 1.07 | 120000.00 | |
| 27 Al | 93970.00 | ppb | 2866373900.0 | 0.62 | 120000.00 | |
| 28 Si | 3.41 | ppb | 16834.9 | 13.91 | --- | |
| 31 P | 89950.00 | ppb | 144808300.0 | 0.55 | --- | |
| 39 K | 99630.00 | ppb | 168199810.0 | 0.72 | 120000.00 | |
| 40 Ca | 102600.00 | ppb | 1645282900.0 | 1.40 | 120000.00 | |
| 47 Ti | 2087.00 | ppb | 5478783.0 | 0.75 | 2400.00 | |
| 51 V | 0.13 | ppb | 7174.7 | 2.90 | --- | |
| 52 Cr | 0.94 | ppb | 13518.1 | 1.34 | --- | |
| 55 Mn | 0.30 | ppb | 17143.2 | 0.87 | --- | |
| 56 Fe | 97840.00 | ppb | 2132677000.0 | 0.25 | 120000.00 | |
| 59 Co | 0.45 | ppb | 15434.1 | 2.87 | --- | |
| 60 Ni | 0.28 | ppb | 1856.1 | 4.91 | --- | |
| 63 Cu | 0.16 | ppb | 3530.2 | 4.84 | --- | |
| 66 Zn | 2.95 | ppb | 16316.2 | 2.25 | --- | |
| 75 As | 0.28 | ppb | 530.2 | 6.84 | --- | |
| 78 Se | 0.16 | ppb | 111.6 | 5.94 | --- | |
| 88 Sr | 0.91 | ppb | 38849.3 | 1.27 | --- | |
| 90 Zr | 0.08 | ppb | 2564.8 | 5.06 | --- | |
| 95 Mo | 2039.00 | ppb | 14129520.0 | 0.76 | 2400.00 | |
| 107 Ag | 0.01 | ppb | 316.7 | 6.68 | --- | |
| 111 Cd | 0.13 | ppb | 580.6 | 35.02 | --- | |
| 118 Sn | 0.05 | ppb | 1314.6 | 13.93 | --- | |
| 121 Sb | 0.03 | ppb | 476.7 | 4.78 | --- | |
| 137 Ba | 0.05 | ppb | 451.1 | 2.76 | --- | |
| 182 W | 0.16 | ppb | 2254.7 | 3.00 | --- | |
| 201 Hg | 0.00 | ppb | 21.1 | 91.82 | --- | |
| 205 Tl | -0.02 | ppb | 868.9 | 12.83 | --- | |
| 208 Pb | 0.02 | ppb | 2618.0 | 2.90 | --- | |
| 235 U | 0.00 | ppb | 21.1 | 37.53 | --- | |
| 238 U | 0.00 | ppb | 444.5 | 24.08 | --- | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2704169.8 | 0.39 | 3394344.30 | 79.7 | 60 - 125 | |
| 45 Sc | 2670423.0 | 2.36 | 2921252.80 | 91.4 | 60 - 125 | |
| 45 Sc | 603514.9 | 0.94 | 704233.19 | 85.7 | 60 - 125 | |
| 45 Sc | 3853435.3 | 1.10 | 4437904.00 | 86.8 | 60 - 125 | |
| 72 Ge | 511199.1 | 2.38 | 595893.06 | 85.8 | 60 - 125 | |
| 72 Ge | 233391.7 | 0.72 | 270821.88 | 86.2 | 60 - 125 | |
| 72 Ge | 736981.9 | 1.14 | 815341.69 | 90.4 | 60 - 125 | |
| 115 In | 4081847.8 | 0.49 | 5098577.00 | 80.1 | 60 - 125 | |
| 159 Tb | 5600540.5 | 0.14 | 6539240.00 | 85.6 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

**ICS-AB QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16014.D\F6L16014.D# |
| Date Acquired: | Dec 29 2020 02:32 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICSAB |
| Misc Info: | |
| Vial Number: | 1304 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | ICS-AB |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 39.76 | ppb | 1213307.0 | 0.51 | 20.00 | 80 - 120 | Fail |
| 9 Be | 20.73 | ppb | 180380.7 | 0.18 | 20.00 | 80 - 120 | |
| 11 B | 20.58 | ppb | 145296.3 | 0.86 | 20.00 | 80 - 120 | |
| 23 Na | 98360.00 | ppb | 973840770.0 | 0.21 | 100000.00 | 80 - 120 | |
| 24 Mg | 98380.00 | ppb | 2183457000.0 | 1.09 | 100000.00 | 80 - 120 | |
| 27 Al | 94350.00 | ppb | 2895550000.0 | 1.23 | 100000.00 | 80 - 120 | |
| 28 Si | 230.50 | ppb | 605961.9 | 1.46 | 200.00 | 80 - 120 | |
| 31 P | 88210.00 | ppb | 142884700.0 | 0.74 | 100000.00 | 80 - 120 | |
| 39 K | 98570.00 | ppb | 164939300.0 | 0.79 | 100000.00 | 80 - 120 | |
| 40 Ca | 100900.00 | ppb | 1649245100.0 | 1.23 | 100000.00 | 80 - 120 | |
| 47 Ti | 2078.00 | ppb | 5487106.0 | 1.29 | 2000.00 | 80 - 120 | |
| 51 V | 20.44 | ppb | 230300.0 | 0.37 | 20.00 | 80 - 120 | |
| 52 Cr | 20.81 | ppb | 269330.0 | 0.33 | 20.00 | 80 - 120 | |
| 55 Mn | 19.99 | ppb | 801012.4 | 0.92 | 20.00 | 80 - 120 | |
| 56 Fe | 96720.00 | ppb | 2149738000.0 | 0.70 | 100000.00 | 80 - 120 | |
| 59 Co | 19.79 | ppb | 648146.2 | 0.81 | 20.00 | 80 - 120 | |
| 60 Ni | 19.12 | ppb | 83158.8 | 0.88 | 20.00 | 80 - 120 | |
| 63 Cu | 18.21 | ppb | 198198.5 | 0.19 | 20.00 | 80 - 120 | |
| 66 Zn | 22.90 | ppb | 98263.0 | 0.65 | 20.00 | 80 - 120 | |
| 75 As | 19.86 | ppb | 27561.5 | 0.34 | 20.00 | 80 - 120 | |
| 78 Se | 21.89 | ppb | 13878.6 | 0.98 | 20.00 | 80 - 120 | |
| 88 Sr | 20.88 | ppb | 855593.1 | 0.34 | 20.00 | 80 - 120 | |
| 90 Zr | 5.74 | ppb | 163369.3 | 0.44 | 20.00 | 80 - 120 | Fail |
| 95 Mo | 2016.00 | ppb | 14277580.0 | 0.68 | 2000.00 | 80 - 120 | |
| 107 Ag | 18.53 | ppb | 323271.2 | 0.16 | 20.00 | 80 - 120 | |
| 111 Cd | 19.64 | ppb | 73172.6 | 0.79 | 20.00 | 80 - 120 | |
| 118 Sn | 20.14 | ppb | 211639.6 | 0.38 | 20.00 | 80 - 120 | |
| 121 Sb | 20.32 | ppb | 260071.5 | 0.55 | 20.00 | 80 - 120 | |
| 137 Ba | 20.68 | ppb | 109313.6 | 0.48 | 20.00 | 80 - 120 | |
| 182 W | 22.45 | ppb | 259623.5 | 0.41 | 20.00 | 80 - 120 | |
| 201 Hg | 1.94 | ppb | 3209.4 | 1.91 | 2.00 | 80 - 120 | |
| 205 Tl | 19.24 | ppb | 583184.1 | 1.10 | 20.00 | 80 - 120 | |
| 208 Pb | 19.43 | ppb | 795068.9 | 1.10 | 20.00 | 80 - 120 | |
| 235 U | 0.14 | ppb | 2599.2 | 6.44 | 0.14 | 80 - 120 | |
| 238 U | 19.39 | ppb | 956234.6 | 1.86 | 19.86 | 80 - 120 | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2554672.8 | 1.35 | 3394344.30 | 75.3 | 60 - 125 | |
| 45 Sc | 2723388.0 | 3.08 | 2921252.80 | 93.2 | 60 - 125 | |
| 45 Sc | 598219.9 | 1.04 | 704233.19 | 84.9 | 60 - 125 | |
| 45 Sc | 3877217.5 | 1.09 | 4437904.00 | 87.4 | 60 - 125 | |
| 72 Ge | 516273.1 | 1.71 | 595893.06 | 86.6 | 60 - 125 | |
| 72 Ge | 231185.8 | 1.23 | 270821.88 | 85.4 | 60 - 125 | |
| 72 Ge | 724386.0 | 0.85 | 815341.69 | 88.8 | 60 - 125 | |
| 115 In | 4170602.0 | 0.92 | 5098577.00 | 81.8 | 60 - 125 | |
| 159 Tb | 5679471.0 | 0.29 | 6539240.00 | 86.9 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

2 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail

ISTD: Pass

**CCV QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16016.D\F6L16016.D# |
| Date Acquired: | Dec 29 2020 02:41 pm |
| Operator: | THuang |
| Sample Name: | CCV1 |
| Misc Info: | |
| Vial Number: | 1206 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal Update: | Dec 29 2020 02:07 pm |
| Sample Type: | CCV |
| Total Dil Factor: | 1.00 |

**QC Elements**

| Element | Conc. | RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|
| 7 Li | 25.82 ppb | 1.84 | 25.00 | 90 - 110 | |
| 9 Be | 24.79 ppb | 1.14 | 25.00 | 90 - 110 | |
| 11 B | 51.53 ppb | 0.88 | 50.00 | 90 - 110 | |
| 23 Na | 24620.00 ppb | 1.17 | 25000.00 | 90 - 110 | |
| 24 Mg | 25850.00 ppb | 0.57 | 25000.00 | 90 - 110 | |
| 27 Al | 24590.00 ppb | 1.31 | 25000.00 | 90 - 110 | |
| 28 Si | 2262.00 ppb | 1.15 | 2500.00 | 90 - 110 | |
| 31 P | 268.70 ppb | 1.49 | 250.00 | 90 - 110 | |
| 39 K | 24690.00 ppb | 1.09 | 25000.00 | 90 - 110 | |
| 40 Ca | 24930.00 ppb | 0.79 | 25000.00 | 90 - 110 | |
| 47 Ti | 247.40 ppb | 0.57 | 250.00 | 90 - 110 | |
| 51 V | 254.20 ppb | 0.92 | 250.00 | 90 - 110 | |
| 52 Cr | 250.00 ppb | 0.33 | 250.00 | 90 - 110 | |
| 55 Mn | 1465.00 ppb | 0.82 | 1500.00 | 90 - 110 | |
| 56 Fe | 24940.00 ppb | 0.31 | 25000.00 | 90 - 110 | |
| 59 Co | 237.70 ppb | 0.85 | 250.00 | 90 - 110 | |
| 60 Ni | 243.30 ppb | 0.71 | 250.00 | 90 - 110 | |
| 63 Cu | 239.70 ppb | 0.44 | 250.00 | 90 - 110 | |
| 66 Zn | 257.60 ppb | 1.23 | 250.00 | 90 - 110 | |
| 75 As | 248.70 ppb | 0.54 | 250.00 | 90 - 110 | |
| 78 Se | 257.80 ppb | 0.26 | 250.00 | 90 - 110 | |
| 88 Sr | 256.80 ppb | 1.86 | 250.00 | 90 - 110 | |
| 90 Zr | 0.31 ppb | 1.88 | 25.00 | 90 - 110 | Fail |
| 95 Mo | 255.10 ppb | 0.89 | 250.00 | 90 - 110 | |
| 107 Ag | 25.27 ppb | 0.42 | 25.00 | 90 - 110 | |
| 111 Cd | 255.90 ppb | 0.60 | 250.00 | 90 - 110 | |
| 118 Sn | 255.70 ppb | 0.12 | 250.00 | 90 - 110 | |
| 121 Sb | 51.74 ppb | 0.92 | 50.00 | 90 - 110 | |
| 137 Ba | 513.30 ppb | 1.64 | 500.00 | 90 - 110 | |
| 182 W | 57.87 ppb | 1.01 | 25.00 | 90 - 110 | Fail |
| 201 Hg | 2.61 ppb | 2.02 | 2.50 | 90 - 110 | |
| 205 Tl | 245.00 ppb | 1.22 | 250.00 | 90 - 110 | |
| 208 Pb | 245.10 ppb | 0.44 | 250.00 | 90 - 110 | |
| 235 U | 1.77 ppb | 1.08 | 1.80 | 90 - 110 | |
| 238 U | 249.50 ppb | 1.38 | 250.00 | 90 - 110 | |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3081403.80 | 0.59 | 3394344.30 | 90.8 | 60 - 125 | |
| 45 Sc | 2773635.50 | 3.35 | 2921252.80 | 94.9 | 60 - 125 | |
| 45 Sc | 626351.25 | 0.91 | 704233.19 | 88.9 | 60 - 125 | |
| 45 Sc | 4317219.00 | 0.24 | 4437904.00 | 97.3 | 60 - 125 | |
| 72 Ge | 533180.38 | 2.34 | 595893.06 | 89.5 | 60 - 125 | |
| 72 Ge | 240675.94 | 0.48 | 270821.88 | 88.9 | 60 - 125 | |
| 72 Ge | 769230.63 | 0.91 | 815341.69 | 94.3 | 60 - 125 | |
| 115 In | 4608532.50 | 0.68 | 5098577.00 | 90.4 | 60 - 125 | |
| 159 Tb | 6351575.50 | 0.46 | 6539240.00 | 97.1 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**

**Analytes: Fail**
**ISTD: Pass**

# CCB QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16017.D\F6L16017.D# |
| Date Acquired: | Dec 29 2020 02:45 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | CCB1 |
| Misc Info: | |
| Vial Number: | 1102 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | CCB |
| Dilution Factor: | 1.00 |

QC Elements

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.0954 | ppb | 211504.2 | 113.30 | 0.20 | |
| 9 Be | -0.0067 | ppb | 138.9 | 18.62 | 0.10 | |
| 11 B | 0.2369 | ppb | 15127.9 | 23.21 | 5.00 | |
| 23 Na | 9.9570 | ppb | 375405.8 | 5.40 | 40.00 | |
| 24 Mg | 4.5580 | ppb | 157619.6 | 11.25 | 10.00 | |
| 27 Al | 3.8970 | ppb | 225461.4 | 11.95 | 20.00 | |
| 28 Si | 1.4440 | ppb | 12699.1 | 15.62 | 20.00 | |
| 31 P | 0.0425 | ppb | 38471.1 | 1528.00 | 10.00 | |
| 39 K | 4.1480 | ppb | 158228.0 | 30.23 | 20.00 | |
| 40 Ca | 9.6040 | ppb | 404462.7 | 4.64 | 25.00 | |
| 47 Ti | 0.0548 | ppb | 435.6 | 16.36 | 0.50 | |
| 51 V | 0.0701 | ppb | 7067.3 | 11.04 | 0.50 | |
| 52 Cr | 0.0448 | ppb | 2125.1 | 8.51 | 0.20 | |
| 55 Mn | 0.1723 | ppb | 14028.2 | 11.14 | 0.20 | |
| 56 Fe | 10.5600 | ppb | 296766.4 | 3.60 | 10.00 | Fail TH 12/29/20 |
| 59 Co | 0.0205 | ppb | 1812.4 | 16.35 | 0.20 | |
| 60 Ni | 0.0264 | ppb | 825.6 | 36.66 | 0.20 | |
| 63 Cu | -0.0063 | ppb | 1895.2 | 95.28 | 0.40 | |
| 66 Zn | 0.1433 | ppb | 4976.6 | 16.31 | 2.00 | |
| 75 As | 0.0577 | ppb | 234.9 | 29.58 | 0.20 | |
| 78 Se | 0.1096 | ppb | 90.9 | 13.25 | 0.20 | |
| 88 Sr | 0.0342 | ppb | 2563.7 | 23.46 | 0.20 | |
| 90 Zr | -0.0016 | ppb | 271.1 | 22.31 | 2.00 | |
| 95 Mo | 0.0726 | ppb | 860.1 | 16.85 | 0.40 | |
| 107 Ag | 0.0036 | ppb | 168.9 | 14.30 | 0.20 | |
| 111 Cd | 0.0226 | ppb | 220.5 | 33.22 | 0.20 | |
| 118 Sn | 0.0558 | ppb | 1657.9 | 16.92 | 0.20 | |
| 121 Sb | 0.0305 | ppb | 644.5 | 8.61 | 0.40 | |
| 137 Ba | 0.0599 | ppb | 610.0 | 18.98 | 0.20 | |
| 182 W | 0.0423 | ppb | 1091.2 | 2.19 | 1.00 | |
| 201 Hg | 0.0092 | ppb | 34.4 | 10.54 | 0.10 | |
| 205 Tl | 0.0272 | ppb | 2635.9 | 21.82 | 0.20 | |
| 208 Pb | 0.0244 | ppb | 3581.5 | 23.81 | 0.10 | |
| 235 U | 0.0001 | ppb | 11.1 | 98.43 | 1.00 | |
| 238 U | 0.0389 | ppb | 2619.3 | 16.65 | 0.10 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3414686.0 | 1.67 | 3394344.30 | 100.6 | 60 - 125 | |
| 45 Sc | 2870586.5 | 3.17 | 2921252.80 | 98.3 | 60 - 125 | |
| 45 Sc | 659463.4 | 0.41 | 704233.19 | 93.6 | 60 - 125 | |
| 45 Sc | 4479997.5 | 1.41 | 4437904.00 | 100.9 | 60 - 125 | |
| 72 Ge | 569627.8 | 2.49 | 595893.06 | 95.6 | 60 - 125 | |
| 72 Ge | 256643.0 | 0.31 | 270821.88 | 94.8 | 60 - 125 | |
| 72 Ge | 802068.8 | 0.69 | 815341.69 | 98.4 | 60 - 125 | |
| 115 In | 5113084.5 | 0.27 | 5098577.00 | 100.3 | 60 - 125 | |
| 159 Tb | 6789017.0 | 1.55 | 6539240.00 | 103.8 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

| | |
|---|---|
| 1 :Element Failures | 0 :Max. Number of Failures Allowed |
| 0 :ISTD Failures | 0 :Max. Nnumber of ISTD Failures Allowed |

Data Results:

| | |
|---|---|
| Analytes: | Fail |
| ISTD: | Pass |

## CCB QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16021.D\F6L16021.D# |
| Date Acquired: | Dec 29 2020 03:04 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | IML011WB |
| Misc Info: | |
| Vial Number: | 2104 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | MBW |
| Dilution Factor: | 1.00 |

QC Elements

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.2618 | ppb | 211271.5 | 35.62 | 1.00 | |
| 9 Be | -0.0110 | ppb | 85.6 | 3.22 | 0.50 | |
| 11 B | 0.7195 | ppb | 18825.4 | 5.25 | 5.00 | |
| 23 Na | 2.6370 | ppb | 289490.8 | 28.56 | 50.00 | |
| 24 Mg | 1.4320 | ppb | 76327.7 | 3.45 | 50.00 | |
| 27 Al | 0.2325 | ppb | 94130.1 | 45.59 | 50.00 | |
| 28 Si | -0.1026 | ppb | 8210.3 | 82.82 | 25.00 | |
| 31 P | -1.1370 | ppb | 35787.3 | 55.86 | 25.00 | |
| 39 K | -4.7370 | ppb | 140234.4 | 11.56 | 50.00 | |
| 40 Ca | 6.2870 | ppb | 336094.3 | 4.05 | 50.00 | |
| 47 Ti | 0.0840 | ppb | 517.8 | 8.74 | 1.00 | |
| 51 V | -0.0481 | ppb | 5570.9 | 13.59 | 0.50 | |
| 52 Cr | 0.0382 | ppb | 2008.6 | 8.00 | 0.50 | |
| 55 Mn | 0.0388 | ppb | 7777.8 | 3.55 | 0.50 | |
| 56 Fe | 2.4620 | ppb | 103317.8 | 4.59 | 50.00 | |
| 59 Co | -0.0123 | ppb | 565.6 | 4.85 | 0.50 | |
| 60 Ni | 0.0422 | ppb | 890.7 | 15.35 | 0.50 | |
| 63 Cu | 0.2988 | ppb | 5460.4 | 3.63 | 0.50 | |
| 66 Zn | 1.3070 | ppb | 10112.7 | 2.48 | 10.00 | |
| 75 As | -0.0082 | ppb | 132.2 | 10.27 | 0.50 | |
| 78 Se | 0.0041 | ppb | 16.9 | 209.62 | 0.50 | |
| 88 Sr | 0.0415 | ppb | 2844.8 | 4.04 | 1.00 | |
| 90 Zr | 0.0064 | ppb | 512.3 | 21.78 | 2.50 | |
| 95 Mo | 0.0036 | ppb | 255.6 | 26.68 | 1.00 | |
| 107 Ag | 0.0466 | ppb | 1064.5 | 0.88 | 0.50 | |
| 111 Cd | -0.0382 | ppb | -55.5 | 19.48 | 0.50 | |
| 118 Sn | -0.0009 | ppb | 910.1 | 268.05 | 0.50 | |
| 121 Sb | 0.0131 | ppb | 363.4 | 4.29 | 0.50 | |
| 137 Ba | 0.0419 | ppb | 483.4 | 23.90 | 0.50 | |
| 182 W | -0.0016 | ppb | 472.2 | 100.73 | 1.00 | |
| 201 Hg | 0.0010 | ppb | 17.8 | 769.68 | --- | |
| 205 Tl | -0.0309 | ppb | 525.6 | 3.76 | 0.50 | |
| 208 Pb | 0.0068 | ppb | 2653.6 | 13.51 | 0.50 | |
| 235 U | 0.0000 | ppb | 10.0 | 316.31 | --- | |
| 238 U | 0.0000 | ppb | 317.8 | 3934.30 | 0.50 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3317319.0 | 1.71 | 3394344.30 | 97.7 | 60 - 125 | |
| 45 Sc | 2779050.3 | 2.31 | 2921252.80 | 95.1 | 60 - 125 | |
| 45 Sc | 651982.0 | 1.23 | 704233.19 | 92.6 | 60 - 125 | |
| 45 Sc | 4420558.0 | 1.05 | 4437904.00 | 99.6 | 60 - 125 | |
| 72 Ge | 558108.4 | 2.40 | 595893.06 | 93.7 | 60 - 125 | |
| 72 Ge | 253410.8 | 0.67 | 270821.88 | 93.6 | 60 - 125 | |
| 72 Ge | 788529.4 | 0.83 | 815341.69 | 96.7 | 60 - 125 | |
| 115 In | 5002453.5 | 0.21 | 5098577.00 | 98.1 | 60 - 125 | |
| 159 Tb | 6619195.5 | 0.67 | 6539240.00 | 101.2 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

LCS QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16022.D\F6L16022.D# |
| Date Acquired: | Dec 29 2020 03:08 pm |
| Operator: | THuang |
| Sample Name: | IML011WL |
| Misc Info: | |
| Vial Number: | 2105 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | LCS |
| Final Dil Factor: | 1.00 |

**Analyte Elements**

| Element | CPS Mean | Conc. | | RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 1192206.00 | 29.78 | ppb | 2.11 | 30.00 | 80 - 120 | |
| 9 Be | 312409.19 | 28.56 | ppb | 1.19 | 30.00 | 80 - 120 | |
| 11 B | 266725.59 | 30.72 | ppb | 1.17 | 30.00 | 80 - 120 | |
| 23 Na | 31889420.00 | 3155.00 | ppb | 1.22 | 3000.00 | 80 - 120 | |
| 24 Mg | 82361536.00 | 3321.00 | ppb | 1.41 | 3000.00 | 80 - 120 | |
| 27 Al | 107205000.00 | 3125.00 | ppb | 1.29 | 3000.00 | 80 - 120 | |
| 28 Si | 12997.35 | 1.74 | ppb | 8.77 | 3000.00 | 80 - 120 | Fail |
| 31 P | 40192.23 | 1.70 | ppb | 39.03 | 300.00 | 80 - 120 | Fail |
| 39 K | 5628344.00 | 3075.00 | ppb | 1.55 | 3000.00 | 80 - 120 | |
| 40 Ca | 52240728.00 | 3142.00 | ppb | 1.89 | 3000.00 | 80 - 120 | |
| 47 Ti | 87242.10 | 29.49 | ppb | 1.27 | 30.00 | 80 - 120 | |
| 51 V | 366081.00 | 30.73 | ppb | 0.10 | 30.00 | 80 - 120 | |
| 52 Cr | 428234.81 | 31.08 | ppb | 0.79 | 30.00 | 80 - 120 | |
| 55 Mn | 1349337.00 | 30.22 | ppb | 0.43 | 30.00 | 80 - 120 | |
| 56 Fe | 73004656.00 | 3241.00 | ppb | 1.33 | 3000.00 | 80 - 120 | |
| 59 Co | 1099401.00 | 30.06 | ppb | 1.29 | 30.00 | 80 - 120 | |
| 60 Ni | 145223.30 | 31.40 | ppb | 0.24 | 30.00 | 80 - 120 | |
| 63 Cu | 370670.69 | 32.06 | ppb | 0.79 | 30.00 | 80 - 120 | |
| 66 Zn | 289914.19 | 65.30 | ppb | 0.38 | 60.00 | 80 - 120 | |
| 75 As | 43990.83 | 29.73 | ppb | 0.44 | 30.00 | 80 - 120 | |
| 78 Se | 21155.47 | 31.14 | ppb | 0.58 | 30.00 | 80 - 120 | |
| 88 Sr | 1369501.00 | 31.48 | ppb | 0.63 | 30.00 | 80 - 120 | |
| 90 Zr | 500.03 | 0.01 | ppb | 28.92 | 20.00 | 80 - 120 | Fail |
| 95 Mo | 237874.20 | 28.98 | ppb | 0.71 | 30.00 | 80 - 120 | |
| 107 Ag | 626218.50 | 30.98 | ppb | 1.62 | 30.00 | 80 - 120 | |
| 111 Cd | 131234.70 | 30.43 | ppb | 0.39 | 30.00 | 80 - 120 | |
| 118 Sn | 369603.00 | 30.40 | ppb | 0.37 | 30.00 | 80 - 120 | |
| 121 Sb | 442780.00 | 29.87 | ppb | 1.46 | 30.00 | 80 - 120 | |
| 137 Ba | 183956.00 | 30.07 | ppb | 2.22 | 30.00 | 80 - 120 | |
| 182 W | 594.48 | 0.01 | ppb | 62.63 | 30.00 | 80 - 120 | Fail |
| 201 Hg | 32.22 | 0.01 | ppb | 62.66 | 2.50 | 80 - 120 | Fail |
| 205 Tl | 1051422.00 | 30.20 | ppb | 2.19 | 30.00 | 80 - 120 | |
| 208 Pb | 1458174.00 | 31.01 | ppb | 0.87 | 30.00 | 80 - 120 | |
| 235 U | 4108.57 | 0.20 | ppb | 4.38 | 0.21 | 80 - 120 | |
| 238 U | 1691023.00 | 29.82 | ppb | 2.07 | 29.79 | 80 - 120 | |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3212404.30 | 1.00 | 3394344.30 | 94.6 | 60 - 125 | |
| 45 Sc | 2757896.80 | 1.62 | 2921252.80 | 94.4 | 60 - 125 | |
| 45 Sc | 637843.50 | 0.37 | 704233.19 | 90.6 | 60 - 125 | |
| 45 Sc | 4330550.50 | 0.17 | 4437904.00 | 97.6 | 60 - 125 | |
| 72 Ge | 553537.75 | 1.60 | 595893.06 | 92.9 | 60 - 125 | |
| 72 Ge | 246839.70 | 0.76 | 270821.88 | 91.1 | 60 - 125 | |
| 72 Ge | 769366.75 | 0.70 | 815341.69 | 94.4 | 60 - 125 | |
| 115 In | 4831221.00 | 1.14 | 5098577.00 | 94.8 | 60 - 125 | |
| 159 Tb | 6531229.00 | 1.24 | 6539240.00 | 99.9 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

5 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

**Data Results:**

**Analytes:** Fail
**ISTD:** Pass

LCS QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16023.D\F6L16023.D# |
| Date Acquired: | Dec 29 2020 03:13 pm |
| Operator: | THuang |
| Sample Name: | IML011WC |
| Misc Info: | |
| Vial Number: | 2106 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | LCS |
| Final Dil Factor: | 1.00 |

**Analyte Elements**

| Element | CPS Mean | Conc. | | RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 1196830.00 | 29.88 | ppb | 1.36 | 30.00 | 80 - 120 | |
| 9 Be | 311842.09 | 28.47 | ppb | 0.95 | 30.00 | 80 - 120 | |
| 11 B | 266987.69 | 30.71 | ppb | 1.31 | 30.00 | 80 - 120 | |
| 23 Na | 30831020.00 | 3010.00 | ppb | 0.55 | 3000.00 | 80 - 120 | |
| 24 Mg | 79112080.00 | 3189.00 | ppb | 1.06 | 3000.00 | 80 - 120 | |
| 27 Al | 102518700.00 | 2987.00 | ppb | 1.84 | 3000.00 | 80 - 120 | |
| 28 Si | 14617.68 | 2.29 | ppb | 5.91 | 3000.00 | 80 - 120 | Fail |
| 31 P | 35385.00 | -0.96 | ppb | 100.15 | 300.00 | 80 - 120 | Fail |
| 39 K | 5414940.00 | 2940.00 | ppb | 1.17 | 3000.00 | 80 - 120 | |
| 40 Ca | 50381432.00 | 2990.00 | ppb | 1.39 | 3000.00 | 80 - 120 | |
| 47 Ti | 87003.90 | 29.40 | ppb | 0.77 | 30.00 | 80 - 120 | |
| 51 V | 368368.81 | 30.76 | ppb | 0.43 | 30.00 | 80 - 120 | |
| 52 Cr | 428830.41 | 30.96 | ppb | 1.05 | 30.00 | 80 - 120 | |
| 55 Mn | 1357586.00 | 30.39 | ppb | 1.72 | 30.00 | 80 - 120 | |
| 56 Fe | 69884096.00 | 3062.00 | ppb | 0.36 | 3000.00 | 80 - 120 | |
| 59 Co | 1097432.00 | 30.00 | ppb | 1.20 | 30.00 | 80 - 120 | |
| 60 Ni | 146030.41 | 31.41 | ppb | 0.74 | 30.00 | 80 - 120 | |
| 63 Cu | 373528.81 | 32.13 | ppb | 0.78 | 30.00 | 80 - 120 | |
| 66 Zn | 303475.00 | 68.33 | ppb | 0.34 | 60.00 | 80 - 120 | |
| 75 As | 44278.35 | 29.87 | ppb | 0.26 | 30.00 | 80 - 120 | |
| 78 Se | 21212.22 | 31.39 | ppb | 0.42 | 30.00 | 80 - 120 | |
| 88 Sr | 1373878.00 | 31.54 | ppb | 2.16 | 30.00 | 80 - 120 | |
| 90 Zr | 587.81 | 0.01 | ppb | 21.47 | 20.00 | 80 - 120 | Fail |
| 95 Mo | 238136.20 | 28.90 | ppb | 0.59 | 30.00 | 80 - 120 | |
| 107 Ag | 624337.31 | 30.78 | ppb | 0.66 | 30.00 | 80 - 120 | |
| 111 Cd | 132463.59 | 30.60 | ppb | 0.60 | 30.00 | 80 - 120 | |
| 118 Sn | 371401.81 | 30.43 | ppb | 0.44 | 30.00 | 80 - 120 | |
| 121 Sb | 444397.50 | 29.87 | ppb | 0.78 | 30.00 | 80 - 120 | |
| 137 Ba | 184903.91 | 30.11 | ppb | 0.68 | 30.00 | 80 - 120 | |
| 182 W | 505.58 | 0.00 | ppb | 178.19 | 30.00 | 80 - 120 | Fail |
| 201 Hg | 12.22 | 0.00 | ppb | 52.07 | 2.50 | 80 - 120 | Fail |
| 205 Tl | 1071180.00 | 30.89 | ppb | 1.01 | 30.00 | 80 - 120 | |
| 208 Pb | 1476239.00 | 31.53 | ppb | 0.85 | 30.00 | 80 - 120 | |
| 235 U | 4208.62 | 0.20 | ppb | 3.07 | 0.21 | 80 - 120 | |
| 238 U | 1712258.00 | 30.33 | ppb | 0.67 | 29.79 | 80 - 120 | |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3216854.80 | 2.11 | 3394344.30 | 94.8 | 60 - 125 | |
| 45 Sc | 2794380.50 | 2.40 | 2921252.80 | 95.7 | 60 - 125 | |
| 45 Sc | 641206.81 | 0.55 | 704233.19 | 91.1 | 60 - 125 | |
| 45 Sc | 4332151.00 | 1.16 | 4437904.00 | 97.6 | 60 - 125 | |
| 72 Ge | 550626.44 | 1.82 | 595893.06 | 92.4 | 60 - 125 | |
| 72 Ge | 247296.30 | 0.48 | 270821.88 | 91.3 | 60 - 125 | |
| 72 Ge | 770122.25 | 0.94 | 815341.69 | 94.5 | 60 - 125 | |
| 115 In | 4848663.50 | 0.69 | 5098577.00 | 95.1 | 60 - 125 | |
| 159 Tb | 6503536.00 | 0.84 | 6539240.00 | 99.5 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

| | |
|---|---|
| 5 :Element Failures | 0 :Max. Number of Failures Allowed |
| 0 :ISTD Failures | 0 :Max. Number of ISTD Failures Allowed |

**Data Results:**

| | |
|---|---|
| **Analytes:** | Fail |
| **ISTD:** | Pass |

CCV QC Report

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16028.D\F6L16028.D#
Date Acquired: Dec 29 2020 03:38 pm
Operator: THuang
Sample Name: CCV2
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 03:34 pm
Sample Type: CCV
Total Dil Factor: 1.00

**QC Elements**

| Element | Conc. | RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|
| 7 Li | 26.05 ppb | 1.17 | 25.00 | 90 - 110 | |
| 9 Be | 25.09 ppb | 1.15 | 25.00 | 90 - 110 | |
| 11 B | 52.34 ppb | 1.53 | 50.00 | 90 - 110 | |
| 23 Na | 25060.00 ppb | 1.59 | 25000.00 | 90 - 110 | |
| 24 Mg | 25980.00 ppb | 0.89 | 25000.00 | 90 - 110 | |
| 27 Al | 24360.00 ppb | 0.22 | 25000.00 | 90 - 110 | |
| 28 Si | 2330.00 ppb | 0.42 | 2500.00 | 90 - 110 | |
| 31 P | 255.80 ppb | 1.23 | 250.00 | 90 - 110 | |
| 39 K | 24940.00 ppb | 0.36 | 25000.00 | 90 - 110 | |
| 40 Ca | 25190.00 ppb | 0.40 | 25000.00 | 90 - 110 | |
| 47 Ti | 248.00 ppb | 0.92 | 250.00 | 90 - 110 | |
| 51 V | 250.00 ppb | 0.26 | 250.00 | 90 - 110 | |
| 52 Cr | 245.20 ppb | 0.77 | 250.00 | 90 - 110 | |
| 55 Mn | 1463.00 ppb | 1.72 | 1500.00 | 90 - 110 | |
| 56 Fe | 24880.00 ppb | 0.96 | 25000.00 | 90 - 110 | |
| 59 Co | 239.50 ppb | 0.76 | 250.00 | 90 - 110 | |
| 60 Ni | 237.50 ppb | 0.47 | 250.00 | 90 - 110 | |
| 63 Cu | 233.80 ppb | 0.70 | 250.00 | 90 - 110 | |
| 66 Zn | 259.80 ppb | 1.40 | 250.00 | 90 - 110 | |
| 75 As | 249.30 ppb | 0.29 | 250.00 | 90 - 110 | |
| 78 Se | 255.80 ppb | 0.38 | 250.00 | 90 - 110 | |
| 88 Sr | 258.00 ppb | 0.58 | 250.00 | 90 - 110 | |
| 90 Zr | 0.30 ppb | 1.77 | 25.00 | 90 - 110 | Fail |
| 95 Mo | 253.90 ppb | 0.76 | 250.00 | 90 - 110 | |
| 107 Ag | 25.26 ppb | 0.59 | 25.00 | 90 - 110 | |
| 111 Cd | 255.50 ppb | 0.82 | 250.00 | 90 - 110 | |
| 118 Sn | 255.40 ppb | 0.47 | 250.00 | 90 - 110 | |
| 121 Sb | 51.54 ppb | 1.31 | 50.00 | 90 - 110 | |
| 137 Ba | 516.20 ppb | 1.32 | 500.00 | 90 - 110 | |
| 182 W | 57.42 ppb | 0.49 | 25.00 | 90 - 110 | Fail |
| 201 Hg | 2.60 ppb | 1.70 | 2.50 | 90 - 110 | |
| 205 Tl | 241.10 ppb | 0.51 | 250.00 | 90 - 110 | |
| 208 Pb | 244.00 ppb | 0.82 | 250.00 | 90 - 110 | |
| 235 U | 1.73 ppb | 0.62 | 1.80 | 90 - 110 | |
| 238 U | 244.40 ppb | 0.90 | 250.00 | 90 - 110 | |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3071105.50 | 1.50 | 3394344.30 | 90.5 | 60 - 125 | |
| 45 Sc | 2761322.50 | 2.05 | 2921252.80 | 94.5 | 60 - 125 | |
| 45 Sc | 643635.06 | 0.71 | 704233.19 | 91.4 | 60 - 125 | |
| 45 Sc | 4314159.50 | 0.94 | 4437904.00 | 97.2 | 60 - 125 | |
| 72 Ge | 534400.63 | 2.11 | 595893.06 | 89.7 | 60 - 125 | |
| 72 Ge | 243616.27 | 1.01 | 270821.88 | 90.0 | 60 - 125 | |
| 72 Ge | 762292.06 | 0.87 | 815341.69 | 93.5 | 60 - 125 | |
| 115 In | 4610725.50 | 1.09 | 5098577.00 | 90.4 | 60 - 125 | |
| 159 Tb | 6415381.00 | 0.78 | 6539240.00 | 98.1 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Fail**
**ISTD: Pass**

# CCB QC Report

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16029.D\F6L16029.D#
Date Acquired: Dec 29 2020 03:42 pm
Acq. Method: EM6020Hg.M
Operator: THuang
Sample Name: CCB2
Misc Info:
Vial Number: 1102
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C
Last Cal. Update: Dec 29 2020 03:34 pm
Sample Type: CCB
Dilution Factor: 1.00

QC Elements

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.0837 | ppb | 209683.3 | 34.13 | 0.20 | |
| 9 Be | -0.0046 | ppb | 162.2 | 77.38 | 0.10 | |
| 11 B | 0.2790 | ppb | 15401.5 | 7.08 | 5.00 | |
| 23 Na | 6.5870 | ppb | 336220.5 | 14.15 | 40.00 | |
| 24 Mg | 2.1180 | ppb | 94251.3 | 27.75 | 10.00 | |
| 27 Al | 1.9700 | ppb | 155814.9 | 25.55 | 20.00 | |
| 28 Si | 1.2680 | ppb | 12074.1 | 22.56 | 20.00 | |
| 31 P | -1.0720 | ppb | 36080.6 | 51.85 | 10.00 | |
| 39 K | 2.5290 | ppb | 157497.0 | 89.32 | 20.00 | |
| 40 Ca | 9.8830 | ppb | 404278.3 | 3.67 | 25.00 | |
| 47 Ti | 0.0210 | ppb | 328.9 | 113.50 | 0.50 | |
| 51 V | 0.1029 | ppb | 7572.2 | 11.42 | 0.50 | |
| 52 Cr | 0.0629 | ppb | 2418.0 | 15.40 | 0.20 | |
| 55 Mn | 0.0971 | ppb | 10483.0 | 32.39 | 0.20 | |
| 56 Fe | 10.3800 | ppb | 288644.5 | 6.21 | 10.00 | Fail |
| 59 Co | 0.0099 | ppb | 1404.6 | 68.31 | 0.20 | |
| 60 Ni | 0.0237 | ppb | 824.7 | 52.24 | 0.20 | |
| 63 Cu | -0.0039 | ppb | 1952.1 | 365.60 | 0.40 | |
| 66 Zn | 0.1548 | ppb | 5012.1 | 12.09 | 2.00 | |
| 75 As | 0.0704 | ppb | 255.1 | 17.70 | 0.20 | |
| 78 Se | 0.1415 | ppb | 112.7 | 5.82 | 0.20 | |
| 88 Sr | 0.0195 | ppb | 1888.0 | 36.52 | 0.20 | |
| 90 Zr | -0.0018 | ppb | 264.5 | 50.64 | 2.00 | |
| 95 Mo | 0.0297 | ppb | 484.5 | 34.50 | 0.40 | |
| 107 Ag | 0.0026 | ppb | 145.6 | 40.46 | 0.20 | |
| 111 Cd | 0.0208 | ppb | 211.2 | 52.70 | 0.20 | |
| 118 Sn | 0.0334 | ppb | 1362.3 | 19.50 | 0.20 | |
| 121 Sb | 0.0317 | ppb | 660.0 | 5.48 | 0.40 | |
| 137 Ba | 0.0351 | ppb | 447.8 | 29.94 | 0.20 | |
| 182 W | 0.0328 | ppb | 950.1 | 17.76 | 1.00 | |
| 201 Hg | 0.0042 | ppb | 24.4 | 117.96 | 0.10 | |
| 205 Tl | 0.0115 | ppb | 2049.1 | 57.06 | 0.20 | |
| 208 Pb | 0.0128 | ppb | 2983.6 | 56.16 | 0.10 | |
| 235 U | 0.0002 | ppb | 14.4 | 35.05 | 1.00 | |
| 238 U | 0.0275 | ppb | 1928.0 | 26.64 | 0.10 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3391668.0 | 2.64 | 3394344.30 | 99.9 | 60 - 125 | |
| 45 Sc | 2837153.8 | 2.83 | 2921252.80 | 97.1 | 60 - 125 | |
| 45 Sc | 668982.1 | 0.81 | 704233.19 | 95.0 | 60 - 125 | |
| 45 Sc | 4442731.5 | 1.06 | 4437904.00 | 100.1 | 60 - 125 | |
| 72 Ge | 565872.4 | 2.23 | 595893.06 | 95.0 | 60 - 125 | |
| 72 Ge | 257260.3 | 0.79 | 270821.88 | 95.0 | 60 - 125 | |
| 72 Ge | 799394.0 | 0.34 | 815341.69 | 98.0 | 60 - 125 | |
| 115 In | 5083416.0 | 0.44 | 5098577.00 | 99.7 | 60 - 125 | |
| 159 Tb | 6718338.5 | 0.70 | 6539240.00 | 102.7 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

1 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

**ICS-A QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16054.D\F6L16054.D# |
| Date Acquired: | Dec 29 2020 05:39 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICSA2 |
| Misc Info: | |
| Vial Number: | 1303 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | ICS-A |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.63 | ppb | 184252.7 | 2.29 | --- | |
| 9 Be | -0.01 | ppb | 73.3 | 9.37 | --- | |
| 11 B | 0.40 | ppb | 13266.1 | 8.39 | --- | |
| 23 Na | 99280.00 | ppb | 944073470.0 | 1.29 | 120000.00 | |
| 24 Mg | 98170.00 | ppb | 2207568900.0 | 0.56 | 120000.00 | |
| 27 Al | 94050.00 | ppb | 2924279000.0 | 0.62 | 120000.00 | |
| 28 Si | 2.68 | ppb | 14649.4 | 24.03 | --- | |
| 31 P | 89420.00 | ppb | 146750900.0 | 0.20 | --- | |
| 39 K | 100200.00 | ppb | 164878210.0 | 0.66 | 120000.00 | |
| 40 Ca | 102300.00 | ppb | 1606342000.0 | 0.91 | 120000.00 | |
| 47 Ti | 2076.00 | ppb | 5555892.0 | 0.62 | 2400.00 | |
| 51 V | 0.12 | ppb | 6791.4 | 5.33 | --- | |
| 52 Cr | 0.93 | ppb | 13061.3 | 0.94 | --- | |
| 55 Mn | 0.28 | ppb | 16703.8 | 4.63 | --- | |
| 56 Fe | 99240.00 | ppb | 2118829100.0 | 0.55 | 120000.00 | |
| 59 Co | 0.43 | ppb | 15271.7 | 2.29 | --- | |
| 60 Ni | 0.18 | ppb | 1400.7 | 4.17 | --- | |
| 63 Cu | 0.14 | ppb | 3272.4 | 3.13 | --- | |
| 66 Zn | 2.92 | ppb | 16270.6 | 2.64 | --- | |
| 75 As | 0.25 | ppb | 471.1 | 5.96 | --- | |
| 78 Se | 0.13 | ppb | 92.7 | 19.22 | --- | |
| 88 Sr | 0.94 | ppb | 40298.8 | 0.44 | --- | |
| 90 Zr | 0.08 | ppb | 2475.9 | 2.59 | --- | |
| 95 Mo | 1998.00 | ppb | 14252320.0 | 0.63 | 2400.00 | |
| 107 Ag | 0.01 | ppb | 266.7 | 14.79 | --- | |
| 111 Cd | 0.20 | ppb | 848.3 | 6.91 | --- | |
| 118 Sn | 0.04 | ppb | 1161.2 | 11.67 | --- | |
| 121 Sb | 0.03 | ppb | 495.6 | 23.83 | --- | |
| 137 Ba | 0.06 | ppb | 493.4 | 9.18 | --- | |
| 182 W | 0.17 | ppb | 2445.9 | 3.32 | --- | |
| 201 Hg | 0.01 | ppb | 23.3 | 3.22 | --- | |
| 205 Tl | -0.02 | ppb | 682.3 | 11.37 | --- | |
| 208 Pb | 0.01 | ppb | 2510.2 | 14.95 | --- | |
| 235 U | 0.00 | ppb | 18.9 | 44.50 | --- | |
| 238 U | 0.00 | ppb | 372.2 | 26.77 | --- | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2729031.8 | 0.96 | 3394344.30 | 80.4 | 60 - 125 | |
| 45 Sc | 2616054.3 | 2.89 | 2921252.80 | 89.6 | 60 - 125 | |
| 45 Sc | 588478.1 | 0.82 | 704233.19 | 83.6 | 60 - 125 | |
| 45 Sc | 3928181.3 | 0.39 | 4437904.00 | 88.5 | 60 - 125 | |
| 72 Ge | 502491.9 | 1.90 | 595893.06 | 84.3 | 60 - 125 | |
| 72 Ge | 227315.2 | 1.03 | 270821.88 | 83.9 | 60 - 125 | |
| 72 Ge | 739840.6 | 0.84 | 815341.69 | 90.7 | 60 - 125 | |
| 115 In | 4200981.5 | 0.69 | 5098577.00 | 82.4 | 60 - 125 | |
| 159 Tb | 5742159.5 | 1.30 | 6539240.00 | 87.8 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

**Data Results:**

Analytes: Pass

ISTD: Pass

ICS-AB QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16055.D\F6L16055.D# |
| Date Acquired: | Dec 29 2020 05:43 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICSAB2 |
| Misc Info: | |
| Vial Number: | 1304 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | ICS-AB |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 20.64 | ppb | 749245.8 | 3.25 | 20.00 | 80 - 120 | |
| 9 Be | 19.03 | ppb | 175996.2 | 0.39 | 20.00 | 80 - 120 | |
| 11 B | 19.44 | ppb | 146503.1 | 2.56 | 20.00 | 80 - 120 | |
| 23 Na | 97800.00 | ppb | 935963780.0 | 1.63 | 100000.00 | 80 - 120 | |
| 24 Mg | 97770.00 | ppb | 2218961900.0 | 0.69 | 100000.00 | 80 - 120 | |
| 27 Al | 93110.00 | ppb | 2922252000.0 | 0.30 | 100000.00 | 80 - 120 | |
| 28 Si | 228.70 | ppb | 581488.3 | 0.34 | 200.00 | 80 - 120 | |
| 31 P | 87960.00 | ppb | 145704000.0 | 0.10 | 100000.00 | 80 - 120 | |
| 39 K | 99780.00 | ppb | 161568990.0 | 0.05 | 100000.00 | 80 - 120 | |
| 40 Ca | 101000.00 | ppb | 1596972000.0 | 0.50 | 100000.00 | 80 - 120 | |
| 47 Ti | 2067.00 | ppb | 5583564.0 | 0.55 | 2000.00 | 80 - 120 | |
| 51 V | 20.45 | ppb | 222880.9 | 0.23 | 20.00 | 80 - 120 | |
| 52 Cr | 20.61 | ppb | 258090.9 | 0.68 | 20.00 | 80 - 120 | |
| 55 Mn | 19.67 | ppb | 806039.9 | 0.21 | 20.00 | 80 - 120 | |
| 56 Fe | 97720.00 | ppb | 2100114900.0 | 0.94 | 100000.00 | 80 - 120 | |
| 59 Co | 19.36 | ppb | 648314.3 | 0.40 | 20.00 | 80 - 120 | |
| 60 Ni | 18.80 | ppb | 79167.1 | 0.44 | 20.00 | 80 - 120 | |
| 63 Cu | 17.83 | ppb | 187907.1 | 0.11 | 20.00 | 80 - 120 | |
| 66 Zn | 22.88 | ppb | 98863.4 | 1.16 | 20.00 | 80 - 120 | |
| 75 As | 19.80 | ppb | 26746.9 | 0.13 | 20.00 | 80 - 120 | |
| 78 Se | 21.74 | ppb | 13363.7 | 0.81 | 20.00 | 80 - 120 | |
| 88 Sr | 21.07 | ppb | 869174.7 | 0.96 | 20.00 | 80 - 120 | |
| 90 Zr | 5.70 | ppb | 163337.9 | 1.13 | 20.00 | 80 - 120 | Fail |
| 95 Mo | 2014.00 | ppb | 14430990.0 | 2.03 | 2000.00 | 80 - 120 | |
| 107 Ag | 18.33 | ppb | 323763.6 | 1.33 | 20.00 | 80 - 120 | |
| 111 Cd | 19.30 | ppb | 72786.4 | 0.58 | 20.00 | 80 - 120 | |
| 118 Sn | 20.21 | ppb | 215045.9 | 0.87 | 20.00 | 80 - 120 | |
| 121 Sb | 20.35 | ppb | 263656.5 | 1.26 | 20.00 | 80 - 120 | |
| 137 Ba | 21.22 | ppb | 113507.0 | 1.89 | 20.00 | 80 - 120 | |
| 182 W | 22.29 | ppb | 265127.6 | 1.38 | 20.00 | 80 - 120 | |
| 201 Hg | 1.95 | ppb | 3317.2 | 0.78 | 2.00 | 80 - 120 | |
| 205 Tl | 19.34 | ppb | 602725.5 | 0.96 | 20.00 | 80 - 120 | |
| 208 Pb | 19.37 | ppb | 815176.2 | 0.43 | 20.00 | 80 - 120 | |
| 235 U | 0.14 | ppb | 2649.2 | 1.40 | 0.14 | 80 - 120 | |
| 238 U | 19.66 | ppb | 996652.9 | 0.87 | 19.86 | 80 - 120 | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2716215.3 | 1.44 | 3394344.30 | 80.0 | 60 - 125 | |
| 45 Sc | 2633086.5 | 2.69 | 2921252.80 | 90.1 | 60 - 125 | |
| 45 Sc | 578865.1 | 1.25 | 704233.19 | 82.2 | 60 - 125 | |
| 45 Sc | 3964813.8 | 0.81 | 4437904.00 | 89.3 | 60 - 125 | |
| 72 Ge | 500528.3 | 1.56 | 595893.06 | 84.0 | 60 - 125 | |
| 72 Ge | 225014.2 | 0.93 | 270821.88 | 83.1 | 60 - 125 | |
| 72 Ge | 729415.4 | 1.52 | 815341.69 | 89.5 | 60 - 125 | |
| 115 In | 4222038.0 | 1.13 | 5098577.00 | 82.8 | 60 - 125 | |
| 159 Tb | 5839583.5 | 1.01 | 6539240.00 | 89.3 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

**Data Results:**

| | |
|---|---|
| Analytes: | Fail |
| ISTD: | Pass |

EMAX LABORATORIES

DIGESTION LOG FOR METALS

| PrepBatchID | LabSampleID | Aliquot | Unit | DateTime | Vd(ml) | ExpAmt | ExpVd(ml) | PrepFctr | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 20IML011W01 | IML011WB | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | |
| 20IML011W02 | IML011WL | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | |
| 20IML011W03 | IML011WC | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | |
| 20IML011W04 | L101-02 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W05 | L101-02M | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W06 | L101-02S | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W07 | L101-04 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W08 | L101-06 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W09 | L101-08 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W10 | L101-09 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W11 | L101-10 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W12 | L101-11 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W13 | L101-12 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W14 | L101-13 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W15 | L110-04 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W16 | L110-07 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W17 | L110-16 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |

CK 12-15-20

Vd=digestate volume PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 12/15/20 11:22

☑ Digestion Ended @ 12/15/20 13:57

Prepared By: CKaing

Checked By: CK

Comments:

Date 12-15-20

SOP EMAX-6020 Rev. 13

EMAX LABORATORIES, INC.

# DIGESTION LOG
*for*
# ICP-MS METALS

**Note:** For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

**Comments:**

Digestion Vessel Lot # SM5A-04-05-06

ALL SAMPLES PH<2

Book #: EIM-083
Batch: IM1011W
Matrix: WATER
Digestor ID: E

| SOP # | Rev. # |
|---|---|
| ☐ EMAX-200.8 | 6 |
| ☑ EMAX-6020 | 13 |
| ☐ EMAX-6020CA | 2 |
| ☐ EMAX- | |

| Start | Temp | End | Temp |
|---|---|---|---|
| | 92.1 °C | | 91.4 °C |

| Standards | ID | Amount Added (ml/g) |
|---|---|---|
| LCS-1 | SM6A-007-06-29 | .15 |
| LCS-2 | ↓ -06-30 | .15 |
| MS | SAME SPIKE SOLN AS LCS | LCS 1,2 |
| Blank Soil (Bead) | N/A | N/A |
| **Reagent** | **Lot# / ID** | **Amount Added (ml)** |
| $HNO_3$ | SW1A-009-09-01 | .5+1.0 |
| HCl | ↓ -09-06 | .25+.25 |
| $H_2O_2$ | N/A | N/A |
| $HNO_3$(1:1) | ↓ | ↓ |
| Au | SM5A-04-05-07 | .1 |
| pH Strip (0-14) | HC857466 | N/A |
| Digestate Location | METALS | |
| Extract Location | N/A | |
| ☑ Reagent Water ID: | SW1A-009-10-04 | |
| ☑ Thermometer ID: | 200450144/E32 | |
| ☑ Pipette ID: | 742766331 | |
| ☐ Pipette ID: | | |
| ☐ Pipette ID: | | |
| ☐ $HNO_3$ dispenser checked @ 5.0 ml with Class A volumetric flask | | |
| ☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask | | |

Prepared By: CK
Standard Added By: CK Witnessed By: LY
Extract Rcvd By: LY Checked By: CK

MRL ID: _____

| Analytes | True Values |
|---|---|
| | Water (µg/L) |
| Aluminum | 100 |
| Antimony | 1.0 |
| Arsenic | 1.0 |
| Barium | 1.0 |
| Beryllium | 1.0 |
| Boron | 10 |
| Cadmium | 1.0 |
| Calcium | 100 |
| Chromium | 1.0 |
| Cobalt | 1.0 |
| Copper | 1.0 |
| Iron | 100 |
| Lead | 1.0 |
| Magnesium | 100 |
| Manganese | 1.0 |
| Molybdenum | 1.0 |
| Nickel | 1.0 |
| Potassium | 100 |
| Selenium | 1.0 |
| Silver | 1.0 |
| Sodium | 100 |
| Strontium | 2.0 |
| Thallium | 1.0 |
| Tin | 1.0 |
| Titanium | 1.0 |
| Vanadium | 1.0 |
| Zinc | 10 |
| Lithium | 1.0 |
| Phosphorus | 50 |
| Zirconium | 5.0 |

CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

A total of six(6) water samples were received on 12/10/20 to be analyzed for Dissolved Metals by ICP-MS in accordance with Method SW6020A (DISSOLVED) and project specific requirements.

Holding Time
Samples were digested and analyzed within the prescribed holding time.

Calibration
Initial Calibration was established as prescribed by the method and was verified using a secondary source(ICV). Interference checks were performed and results were within required limits. Continuing calibration verifications and continuing calibration blanks were carried out at the frequency specified by the project. All calibration requirements were satisfied.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. IML011WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. IML011WL/IML011WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples were reported from dilution due to suspected matrix interference. An attempt to analyze at 1X DF resulted in internal-standard deficiency most likely caused by high Sodium concentrations.

LAB CHRONICLE
DISSOLVED METALS BY ICP-MS

Client : ARCADIS
Project : PG&E TOPOCK-GMP

SDG NO. : 20L101
Instrument ID : H6

WATER

| Client Sample ID | Laboratory Sample ID | Dilution Factor | % Moist | Analysis DateTime | Extraction DateTime | Sample Data FN | Calibration Data FN | Prep. Batch | Notes |
|---|---|---|---|---|---|---|---|---|---|
| MBLK1W | IML011WB | 1.00 | NA | 12/29/2015:04 | 12/15/2011:22 | F6L16021 | F6L16016 | IML011W | Method Blank |
| LCS1W | IML011WL | 1.00 | NA | 12/29/2015:08 | 12/15/2011:22 | F6L16022 | F6L16016 | IML011W | Lab Control Sample (LCS) |
| LCD1W | IML011WC | 1.00 | NA | 12/29/2015:13 | 12/15/2011:22 | F6L16023 | F6L16016 | IML011W | LCS Duplicate |
| MW-55-045-Q420 | L101-08I | 10 | NA | 12/22/2014:13 | 12/15/2011:22 | H6L09029 | H6L09027 | IML011W | Diluted Sample |
| MW-55-120-Q420 | L101-09I | 10 | NA | 12/22/2014:15 | 12/15/2011:22 | H6L09030 | H6L09027 | IML011W | Diluted Sample |
| MW-56D-Q420 | L101-10I | 10 | NA | 12/22/2014:18 | 12/15/2011:22 | H6L09031 | H6L09027 | IML011W | Diluted Sample |
| MW-56S-Q420 | L101-12I | 10 | NA | 12/22/2014:23 | 12/15/2011:22 | H6L09033 | H6L09027 | IML011W | Diluted Sample |
| MW-924-Q420 | L101-13I | 10 | NA | 12/22/2014:26 | 12/15/2011:22 | H6L09034 | H6L09027 | IML011W | Diluted Sample |
| MW-56M-Q420 | L101-11I | 10 | NA | 12/22/2014:28 | 12/15/2011:22 | H6L09035 | H6L09027 | IML011W | Diluted Sample |

FN - Filename
% Moist - Percent Moisture

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 09:23 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-55-045-Q420 | Date Analyzed: | 12/22/20 14:13 |
| Lab Samp ID: | L101-08I | Dilution Factor: | 10 |
| Lab File ID: | H6L09029 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09027 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 7400 | 1000 | 200 |
| Manganese | 789 | 100 | 5.00 |
| Molybdenum | ND | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 08:42 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-55-120-Q420 | Date Analyzed: | 12/22/20 14:15 |
| Lab Samp ID: | L101-09I | Dilution Factor: | 10 |
| Lab File ID: | H6L09030 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09027 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 1330 | 1000 | 200 |
| Manganese | ND | 100 | 5.00 |
| Molybdenum | ND | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 11:11 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-56D-Q420 | Date Analyzed: | 12/22/20 14:18 |
| Lab Samp ID: | L101-10I | Dilution Factor: | 10 |
| Lab File ID: | H6L09031 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09027 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 82400 | 1000 | 200 |
| Manganese | 812 | 100 | 5.00 |
| Molybdenum | ND | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 10:29 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-56M-Q420 | Date Analyzed: | 12/22/20 14:28 |
| Lab Samp ID: | L101-11I | Dilution Factor: | 10 |
| Lab File ID: | H6L09035 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09027 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 99600 | 1000 | 200 |
| Manganese | 675 | 100 | 5.00 |
| Molybdenum | ND | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 11:41 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-56S-Q420 | Date Analyzed: | 12/22/20 14:23 |
| Lab Samp ID: | L101-12I | Dilution Factor: | 10 |
| Lab File ID: | H6L09033 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09027 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 50300 | 1000 | 200 |
| Manganese | 754 | 100 | 5.00 |
| Molybdenum | ND | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | 12/09/20 10:39 |
| Project | : PG&E TOPOCK-GMP | Date Received: | 12/10/20 |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MW-924-Q420 | Date Analyzed: | 12/22/20 14:26 |
| Lab Samp ID: | L101-13I | Dilution Factor: | 10 |
| Lab File ID: | H6L09034 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | H6L09027 | Instrument ID: | H6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Chromium | ND | 10.0 | 2.50 |
| Magnesium | 96700 | 1000 | 200 |
| Manganese | 654 | 100 | 5.00 |
| Molybdenum | ND | 100 | 5.00 |
| Selenium | ND | 100 | 3.00 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | LYaman |

METHOD SW6020A (DISSOLVED)
DISSOLVED METALS BY ICP-MS

| | | | |
|---|---|---|---|
| Client | : ARCADIS | Date Collected: | NA |
| Project | : PG&E TOPOCK-GMP | Date Received: | NA |
| SDG NO. | : 20L101 | Date Extracted: | 12/15/20 11:22 |
| Sample ID: | MBLK1W | Date Analyzed: | 12/29/20 15:04 |
| Lab Samp ID: | IML011WB | Dilution Factor: | 1 |
| Lab File ID: | F6L16021 | Matrix: | WATER |
| Ext Btch ID: | IML011W | % Moisture: | NA |
| Calib. Ref.: | F6L16016 | Instrument ID: | F6 |

| PARAMETERS | Result (ug/L) | RL (ug/L) | MDL (ug/L) |
|---|---|---|---|
| Chromium | ND | 1.00 | 0.250 |
| Magnesium | ND | 100 | 20.0 |
| Manganese | ND | 10.0 | 0.500 |
| Molybdenum | ND | 10.0 | 0.500 |
| Selenium | ND | 10.0 | 0.300 |

Note: Detection limits are reported relative to sample result significant figures.

| | | | |
|---|---|---|---|
| Sample Amount | : 50ml | Final Volume: | 50ml |
| Prepared by | : CKaing | Analyzed by: | THuang |

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SW6020A (DISSOLVED)

| | | | |
|---|---|---|---|
| MATRIX | : WATER | | % MOISTURE:NA |
| DILUTION FACTOR | : 1.00 | 1.00 | 1.00 |
| SAMPLE ID | : MBLK1W | LCS1W | LCD1W |
| LAB SAMPLE ID | : IML011WB | IML011WL | IML011WC |
| LAB FILE ID | : F6L16021 | F6L16022 | F6L16023 |
| DATE PREPARED | : 12/15/20 11:22 | 12/15/20 11:22 | 12/15/20 11:22 |
| DATE ANALYZED | : 12/29/20 15:04 | 12/29/20 15:08 | 12/29/20 15:13 |
| PREP BATCH | : IML011W | IML011W | IML011W |
| CALIBRATION REF | : F6L16016 | F6L16016 | F6L16016 |

ACCESSION:

| PARAMETERS | MBResult (ug/L) | SpikeAmt (ug/L) | LCSResult (ug/L) | LCSRec (%) | SpikeAmt (ug/L) | LCDResult (ug/L) | LCDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 30 | 31.1 | 104 | 30 | 31.0 | 103 | 0 | 85-115 | 20 |
| Magnesium | ND | 3000 | 3320 | 111 | 3000 | 3190 | 106 | 4 | 85-115 | 20 |
| Manganese | ND | 30 | 30.2 | 101 | 30 | 30.4 | 101 | 1 | 85-115 | 20 |
| Molybdenum | ND | 30 | 29.0 | 97 | 30 | 28.9 | 96 | 0 | 85-115 | 20 |
| Selenium | ND | 30 | 31.1 | 104 | 30 | 31.4 | 105 | 1 | 85-115 | 20 |

# ICP-MS QC CHECK TABLE

| QC | HIGH STD | ICV | CCV | ICSAB | ICSA |
|---|---|---|---|---|---|
| Limit% | | 90-110 | 90-110 | 80-120 | 80-120 |
| Comp | ug/L | ug/L | ug/L | ug/L | ug/L |
| Al | 50000 | 30000 | 25000 | 100000 | 100000 |
| Sb | 100 | 60 | 50 | 20 | 0 |
| As | 500 | 300 | 250 | 20 | 0 |
| Ba | 1000 | 300 | 500 | 20 | 0 |
| Be | 50 | 30 | 25 | 20 | 0 |
| B | 100 | 30 | 50 | 20 | 0 |
| Cd | 500 | 300 | 250 | 20 | 0 |
| Ca | 50000 | 30000 | 25000 | 100000 | 100000 |
| Cr | 500 | 300 | 250 | 20 | 0 |
| Co | 500 | 300 | 250 | 20 | 0 |
| Cu | 500 | 300 | 250 | 20 | 0 |
| Fe | 50000 | 30000 | 25000 | 100000 | 100000 |
| Li | 50 | 30 | 25 | 20 | 0 |
| Pb | 500 | 300 | 250 | 20 | 0 |
| Mg | 50000 | 30000 | 25000 | 100000 | 100000 |
| Mn | 3000 | 2000 | 1500 | 20 | 0 |
| Mo | 500 | 300 | 250 | 2000 | 2000 |
| Ni | 500 | 300 | 250 | 20 | 0 |
| P | 500 | 300 | 250 | 100000 | 100000 |
| K | 50000 | 30000 | 25000 | 100000 | 100000 |
| Se | 500 | 300 | 250 | 20 | 0 |
| Si | 5000 | 3000 | 2500 | 200 | 0 |
| Ag | 50 | 30 | 25 | 20 | 0 |
| Na | 50000 | 30000 | 25000 | 100000 | 100000 |
| Sr | 500 | 300 | 250 | 20 | 0 |
| Tl | 500 | 300 | 250 | 20 | 0 |
| Sn | 500 | 300 | 250 | 20 | 0 |
| Ti | 500 | 300 | 250 | 2000 | 2000 |
| W | 50 | 30 | 25 | 20 | 0 |
| V | 500 | 300 | 250 | 20 | 0 |
| U | 500 | 300 | 250 | 20 | 0 |
| Zn | 500 | 300 | 250 | 20 | 0 |
| Zr | 50 | 30 | 25 | 20 | 0 |

EMAX LABORATORIES, INC.

# ANALYSIS RUN LOG
*for*
## ICP-MS

**Note:** For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12|22|20 12:58

End Date: 12|22|20 15:45

**Comments:**

All soil/solid samples are diluted at 10x dilution prior to analysis.

Filter Lot #: NA

L101, L425, L430
10X: 0.5mL sample vol to 5mL

CCV 4 Ag fail
CCV 5 ↓
CCV 6 ↓

Book #: AH6-006
Instrument No.: H6
Analytical Batch: IH6L09
Analytical Sequence: H6L09
Method File: E6020H63
Micropipette ID: ☐ 142781004
Micropipette ID: ☑ ICP-06
Micropipette ID: ☑ 339362028
Micropipette ID: ☑ GFAA-07
Micropipette ID: ☐ 339342032
Micropipette ID: ☑ 542780515
Micropipette ID: ☐ 542761827
Micropipette ID: ☐

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-200.8 | 6 |
| ☑ EMAX-6020 | 13 |
| ☐ EMAX-6020CA | 2 |
| ☐ EMAX- | |
| ☐ EMAX- | |

| STANDARDS ID | | STANDARDS ID | |
|---|---|---|---|
| S0 | SM6B-20-65-01 | MRL1(1) | SM6B-20-39-01 |
| S1 | 65-02 | MRL2(0.4) | ↓ 71-02 |
| S2 | 66-01 | MRL3(CAT) | ↓ 72-01 |
| S3 | 66-02 | MRL4 | NA |
| S4 | ↓ 67-01 | MRL5 | ↓ |
| S5 | NA | MRL6 | ↓ |
| S6 | ↓ | Internal Standard | SM6B-20-53-02 |
| S7 | ↓ | Post-Spike 1 | SM6A-007-06-29 |
| ICV | SM6B-20-37-01 | Post-Spike 2 | ↓ 06-30 |
| CCV | 67-02 | Post-Spike 3 | NA |
| ICSA | 64-01 | Post-Spike 4 | ↓ |
| ICSAB | ↓ 64-02 | | |
| 6020 TUNE SOLN. | NA | | |
| 200.8 TUNE SOLN. | SM6B-20-53-01 | | |

Analyzed By: LY

Date: 12|22|20

INITIAL CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW6020A (DISSOLVED)
Sequence : IH6L09
InstrumentID: H6

| | | ICV | | | | ICSA | | | ICSAB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Samp ID : | | ICV | | | | ICSA | | | ICSAB | | |
| QC Limit : | | %R:90-110/RSD:<5 | | | | %R:80-120/<LOD | | | %R:80-120 | | |
| Lab File ID : | | H6L09008 | | | | H6L09012 | | | H6L09013 | | |
| DateAnalyed : | | 12/22/2013:15 | | | | 12/22/2013:26 | | | 12/22/2013:28 | | |
| Parameter | | Result | ICV EV | RSD | %Recovery | Result | ICSA EV | %Rec/LOD | Result | ICSAB EV | %Recovery |
| Lithium | | 28.97 | 30 | 4.7 | 97 | 0.43379 | 0 | >0 | 18.078 | 20 | 90 |
| Beryllium | | 29.26 | 30 | 2.9 | 98 | 0.0025401 | 0 | <0.1 | 18.081 | 20 | 90 |
| Boron | | 30.01 | 30 | 2.3 | 100 | 0.61990 | 0 | <5.0 | 18.196 | 20 | 91 |
| Sodium | | 28910 | 30000 | 4.9 | 96 | 104890 | 100000 | 105 | 93443 | 100000 | 93 |
| Magnesium | T | 28870 | 30000 | 1.5 | 96 | 102470 | 100000 | 102 | 93036 | 100000 | 93 |
| Aluminum | | 28820 | 30000 | 3.7 | 96 | 102690 | 100000 | 103 | 95314 | 100000 | 95 |
| Silicon | | 3133 | 3000 | 2.3 | 104 | 5.6254 | 0 | <20 | 173.47 | 200 | 87 |
| Phosphorus | | 280.0 | 300 | 2.2 | 93 | 103480 | 100000 | 103 | 95236 | 100000 | 95 |
| Potassium | | 30050 | 30000 | 7.4 | 100 | 100110 | 100000 | 100 | 100690 | 100000 | 101 |
| Calcium | | 28460 | 30000 | 1.5 | 95 | 104030 | 100000 | 104 | 94612 | 100000 | 95 |
| Titanium | | 267.6 | 300 | 1.2 | 89* | 2123.5 | 2000 | 106 | 1973.3 | 2000 | 99 |
| Vanadium | | 297.5 | 300 | 7.6 | 99 | 0.028170 | 0 | <0.5 | 19.246 | 20 | 96 |
| Chromium | T | 306.2 | 300 | 5.4 | 102 | 0.84695 | 0 | >0.25 | 20.546 | 20 | 103 |
| Manganese | T | 1911 | 2000 | 2.5 | 96 | 0.092464 | 0 | <0.5 | 18.468 | 20 | 92 |
| Iron | | 28150 | 30000 | 1.1 | 94 | 104810 | 100000 | 105 | 94836 | 100000 | 95 |
| Cobalt | | 294.9 | 300 | 0.7 | 98 | 0.24384 | 0 | >0.2 | 17.881 | 20 | 89 |
| Nickel | | 307.3 | 300 | 6.1 | 102 | 0.21208 | 0 | >0.2 | 19.152 | 20 | 96 |
| Copper | | 305.1 | 300 | 4.0 | 102 | 0.32703 | 0 | <0.5 | 19.481 | 20 | 97 |
| Zinc | | 307.5 | 300 | 5.0 | 102 | 1.3694 | 0 | <10 | 19.443 | 20 | 97 |
| Arsenic | | 293.7 | 300 | 6.0 | 98 | 0.10412 | 0 | <0.2 | 19.948 | 20 | 100 |
| Selenium | T | 295.9 | 300 | 3.5 | 99 | 0.19663 | 0 | <0.3 | 17.580 | 20 | 88 |
| Strontium | | 300.5 | 300 | 5.2 | 100 | 0.89194 | 0 | <1.0 | 20.076 | 20 | 100 |
| Zirconium | | 30.41 | 30 | 7.9 | 101 | 0.13094 | 0 | <2.0 | 6.2218 | 20 | 31* |
| Molybdenum | T | 301.9 | 300 | 3.3 | 101 | 2056.0 | 2000 | 103 | 1955.5 | 2000 | 98 |
| Silver | | 27.59 | 30 | 3.4 | 92 | 0.016817 | 0 | <0.2 | 16.697 | 20 | 83 |
| Cadmium | | 305.7 | 300 | 1.8 | 102 | 0.093807 | 0 | <0.2 | 17.623 | 20 | 88 |
| Tin | | 297.9 | 300 | 2.0 | 99 | 0.18070 | 0 | <0.2 | 17.575 | 20 | 88 |
| Antimony | | 54.70 | 60 | 2.6 | 91 | 0.032246 | 0 | <0.5 | 17.711 | 20 | 89 |
| Barium | | 308.1 | 300 | 0.9 | 103 | 0.055927 | 0 | <0.5 | 17.750 | 20 | 89 |
| Tungsten | | 30.08 | 30 | 2.6 | 100 | 0.17207 | 0 | <1.0 | 17.886 | 20 | 89 |
| Mercury | | 2.939 | 3 | 1.6 | 98 | 0.00075199 | 0 | <0.1 | 1.8765 | 2 | 94 |
| Thallium | | 305.8 | 300 | 2.1 | 102 | 0.0046937 | 0 | <0.2 | 17.581 | 20 | 88 |
| Lead | | 302.0 | 300 | 2.1 | 101 | 0.037478 | 0 | <0.1 | 17.591 | 20 | 88 |
| Uranium | | 299.2 | 300 | 1.3 | 100 | 0.0053806 | 0 | <0.1 | 18.373 | 20 | 92 |

Unit: ug/L
T: Target analyte
EV: Expected Value
Comment: * Out of QC limit

CONTINUING CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW6020A (DISSOLVED)
Sequence : IH6L09
Instrument ID: H6

| CCV SampleID | | : CCV2 | | | CCV3 | | |
|---|---|---|---|---|---|---|---|
| CCV DataFileID | | : H6L09027 | | | H6L09036 | | |
| CCV DateTime | | : 12/22/20 14:08 | | | 12/22/20 14:31 | | |
| PARAMETER | | CCV EV | RESULT | %REC | RSD | RESULT | %REC | RSD |
| Lithium | | 25 | 24.1 | 96 | 2.7 | 23.5 | 94 | 2.1 |
| Beryllium | | 25 | 24.1 | 96 | 1.8 | 23.2 | 93 | 0.5 |
| Boron | | 50 | 50.5 | 101 | 2.1 | 49.0 | 98 | 1.9 |
| Sodium | | 25000 | 24700 | 99 | 5.2 | 24600 | 98 | 1.0 |
| Magnesium | T | 25000 | 24900 | 100 | 3.0 | 24500 | 98 | 1.0 |
| Aluminum | | 25000 | 24700 | 99 | 2.4 | 23900 | 96 | 1.8 |
| Silicon | | 2500 | 2460 | 98 | 7.0 | 2450 | 98 | 1.1 |
| Phosphorus | | 250 | 244 | 98 | 5.0 | 241 | 97 | 1.7 |
| Potassium | | 25000 | 25300 | 101 | 0.9 | 24500 | 98 | 9.4 |
| Calcium | | 25000 | 24500 | 98 | 4.3 | 24200 | 97 | 0.5 |
| Titanium | | 250 | 227 | 91 | 3.7 | 222 | 89* | 0.8 |
| Vanadium | | 250 | 250 | 100 | 2.7 | 243 | 97 | 8.7 |
| Chromium | T | 250 | 250 | 100 | 1.2 | 242 | 97 | 8.5 |
| Manganese | T | 1500 | 1470 | 98 | 2.5 | 1450 | 97 | 1.0 |
| Iron | | 25000 | 24300 | 97 | 4.6 | 24500 | 98 | 2.0 |
| Cobalt | | 250 | 248 | 99 | 3.1 | 241 | 96 | 1.0 |
| Nickel | | 250 | 247 | 99 | 2.3 | 242 | 97 | 9.0 |
| Copper | | 250 | 255 | 102 | 0.5 | 251 | 100 | 9.5 |
| Zinc | | 250 | 249 | 100 | 1.7 | 245 | 98 | 1.9 |
| Arsenic | | 250 | 250 | 100 | 3.5 | 238 | 95 | 5.4 |
| Selenium | T | 250 | 237 | 95 | 10.5 | 235 | 94 | 4.2 |
| Strontium | | 250 | 245 | 98 | 2.2 | 242 | 97 | 0.4 |
| Zirconium | | 25 | 23.2 | 93 | 4.7 | 22.9 | 91 | 1.2 |
| Molybdenum | T | 250 | 238 | 95 | 2.0 | 236 | 94 | 1.7 |
| Silver | | 25 | 22.7 | 91 | 2.4 | 22.4 | 90 | 1.5 |
| Cadmium | | 250 | 244 | 98 | 2.1 | 240 | 96 | 2.0 |
| Tin | | 250 | 239 | 96 | 2.3 | 236 | 94 | 1.8 |
| Antimony | | 50 | 45.6 | 91 | 2.5 | 45.3 | 91 | 1.9 |
| Barium | | 500 | 486 | 97 | 2.2 | 480 | 96 | 3.1 |
| Tungsten | | 25 | 24.1 | 96 | 4.8 | 24.5 | 98 | 1.0 |
| Mercury | | 2.5 | 2.46 | 98 | 2.8 | 2.40 | 96 | 1.5 |
| Thallium | | 250 | 248 | 99 | 2.3 | 246 | 98 | 1.7 |
| Lead | | 250 | 248 | 99 | 3.3 | 244 | 97 | 2.6 |
| Uranium | | 250 | 245 | 98 | 3.7 | 239 | 95 | 2.8 |

Unit: ug/L
T: Target analyte
%Rec QC Limit: 90-110
RSD QC Limit: <5
CCV EV: CCV Expected Value ug/L
Comment: * Out of QC limit

CONTINUING CALIBRATION BLANK SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : SW6020A (DISSOLVED)
Sequence : IH6L09
Instrument ID: H6

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| CB SampleID | | | : ICB | | CCB2 | | CCB3 | |
| CB DataFileID | | | : H6L09009 | | H6L09028 | | H6L09037 | |
| CB DateTime | | | : 12/22/2013:18 | | 12/22/2014:10 | | 12/22/2014:34 | |
| PARAMETER | | LOD | RESULT | < LOD > | RESULT | < LOD > | RESULT | < LOD > |
| Lithium | | 0 | 0.3 | >0 | 0.02 | >0 | 0.05 | >0 |
| Beryllium | | 0.1 | 0.02 | <0.1 | 0.02 | <0.1 | 0.02 | <0.1 |
| Boron | | 5.0 | 0.5 | <5.0 | 2 | <5.0 | 2 | <5.0 |
| Sodium | | 50 | 0.5 | <50 | 50 | <50 | 50 | >50 |
| Magnesium | T | 20 | 9 | <20 | 10 | <20 | 10 | <20 |
| Aluminum | | 20 | 9 | <20 | 10 | <20 | 10 | <20 |
| Silicon | | 20 | 3 | <20 | 1 | <20 | 1 | <20 |
| Phosphorus | | 25 | 0.5 | <25 | 0.9 | <25 | 0.4 | <25 |
| Potassium | | 20 | 0.1 | <20 | 10 | <20 | 7 | <20 |
| Calcium | | 25 | 3 | <25 | 6 | <25 | 9 | <25 |
| Titanium | | 0.5 | 0.10 | <0.5 | 0.1 | <0.5 | 0.2 | <0.5 |
| Vanadium | | 0.5 | 0.03 | <0.5 | 0.03 | <0.5 | 0.009 | <0.5 |
| Chromium | T | 0.25 | 0.004 | <0.25 | 0.03 | <0.25 | 0.04 | <0.25 |
| Manganese | T | 0.5 | 0.7 | >0.5 | 0.7 | >0.5 | 0.9 | >0.5 |
| Iron | | 10 | 3 | <10 | 6 | <10 | 8 | <10 |
| Cobalt | | 0.2 | 0.09 | <0.2 | 0.1 | <0.2 | 0.1 | <0.2 |
| Nickel | | 0.2 | 0.03 | <0.2 | 0.05 | <0.2 | 0.06 | <0.2 |
| Copper | | 0.5 | 0.07 | <0.5 | 0.2 | <0.5 | 0.1 | <0.5 |
| Zinc | | 10 | 0.2 | <10 | 0.1 | <10 | 0.2 | <10 |
| Arsenic | | 0.2 | 0.05 | <0.2 | 0.07 | <0.2 | 0.06 | <0.2 |
| Selenium | T | 0.3 | 0.08 | <0.3 | 0.05 | <0.3 | 0.09 | <0.3 |
| Strontium | | 1.0 | 0.09 | <1.0 | 0.1 | <1.0 | 0.2 | <1.0 |
| Zirconium | | 2.0 | 0.009 | <2.0 | 0.009 | <2.0 | 0.01 | <2.0 |
| Molybdenum | T | 0.5 | 0.1 | <0.5 | 0.1 | <0.5 | 0.1 | <0.5 |
| Silver | | 0.2 | 0.01 | <0.2 | 0.01 | <0.2 | 0.01 | <0.2 |
| Cadmium | | 0.2 | 0.1 | <0.2 | 0.1 | <0.2 | 0.1 | <0.2 |
| Tin | | 0.2 | 0.3 | >0.2 | 0.10 | <0.2 | 0.1 | <0.2 |
| Antimony | | 0.5 | 0.02 | <0.5 | 0.02 | <0.5 | 0.02 | <0.5 |
| Barium | | 0.5 | 0.09 | <0.5 | 0.2 | <0.5 | 0.2 | <0.5 |
| Tungsten | | 1.0 | 0.03 | <1.0 | 0.02 | <1.0 | 0.02 | <1.0 |
| Mercury | | 0.1 | 0.01 | <0.1 | 0.0002 | <0.1 | 0.0001 | <0.1 |
| Thallium | | 0.2 | 0.2 | <0.2 | 0.2 | <0.2 | 0.2 | <0.2 |
| Lead | | 0.1 | 0.2 | >0.1 | 0.1 | >0.1 | 0.1 | >0.1 |
| Uranium | | 0.1 | 0.09 | <0.1 | 0.1 | >0.1 | 0.1 | >0.1 |

Unit: ug/L
CB: Calibration Blank
T: Target analyte
Acceptance Criteria: CCB Result <LOD
Comment:

# Sample List

**Acq/Data Batch** D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b

## Block List

### Acquisition Order

| Sequence Order | Block Name |
|---|---|
| 1 | Calibration Standards |
| 2 | Unknown Samples |

## Blocks

### Calibration Standards

| # | Skip | Sample Type | Sample Name | Comment | Vial# | File Name | Replicates | Level | Total Dil. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | CalBlk | BLANK | | 1101 | H6L09001.d | | 1 | |
| 2 | | CalBlk | BLANK | | 1101 | H6L09002.d | | 1 | |
| 3 | | CalStd | S0 | | 1102 | H6L09003.d | | 1 | |
| 4 | | CalStd | S1 | | 1104 | H6L09004.d | | 2 | |
| 5 | | CalStd | S2 | | 1105 | H6L09005.d | | 3 | |
| 6 | | CalStd | S3 | | 1106 | H6L09006.d | | 4 | |
| 7 | | CalStd | S4 | | 1107 | H6L09007.d | | 5 | |
| 8 | | ICV | ICV | | 1204 | H6L09008.d | | | 1 |
| 9 | | ICB | ICB | | 1102 | H6L09009.d | | | 1 |
| 10 | | LLCCV | MRLL2201 ✓ | 1/100/10 ppb | 1306 | H6L09010.d | | | 1 |
| 11 | | LLCCV2 | MRLL2202 | 0.4/40/4 ppb | 1307 | H6L09011.d | | | 1 |
| 12 | | ICS-A | ICSA | | 1304 | H6L09012.d | | | 1 |
| 13 | | ICSB | ICSAB | | 1305 | H6L09013.d | | | 1 |
| 14 | | Sample | MRLL2203 | 500 ppb CAT | 1207 | H6L09014.d | | | 1 |
| 15 | | CCV | CCV1 | | 1206 | H6L09015.d | | | 1 |
| 16 | | CCB | CCB1 | | 1102 | H6L09016.d | | | 1 |

### Unknown Samples

| # | Skip | Sample Type | Sample Name | Comment | Vial# | File Name | Replicates | Level | Total Dil. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | Blank | IML011WB | | 2101 | H6L09017.d | | | 1 |
| 2 | | LCSW | IML011WL | Cr 116% | 2102 | H6L09018.d | | | 1 |
| 3 | | LCSW | IML011WC | | 2103 | H6L09019.d | | | 1 |
| 4 | | Sample | L101-02M | | 2104 | H6L09020.d | | | 10 |
| 5 | | Sample | L101-02S | | 2105 | H6L09021.d | | | 10 |
| 6 | | Sample | L101-02A ✓ | | 2106 | H6L09022.d | | | 10 |
| 7 | | Sample | L101-02I | | 2107 | H6L09023.d | | | 10 |
| 8 | | Sample | L101-02J | | 2108 | H6L09024.d | | | 50 |
| 9 | | Sample | L101-04I | | 2109 | H6L09025.d | | | 10 |
| 10 | | Sample | L101-06I | | 2110 | H6L09026.d | | | 10 |
| 11 | | CCV | CCV2 | | 1206 | H6L09027.d | | | 1 |
| 12 | | CCB | CCB2 | | 1102 | H6L09028.d | | | 1 |
| 13 | | Sample | L101-08I | | 2111 | H6L09029.d | | | 10 |
| 14 | | Sample | L101-09I | | 2112 | H6L09030.d | | | 10 |
| 15 | | Sample | L101-10I | | 2201 | H6L09031.d | | | 10 |
| 16 | | Sample | L101-11I | 15%120% — reprep | 2202 | H6L09032.d | | | 10 |
| 17 | | Sample | L101-12I | | 2203 | H6L09033.d | | | 10 |
| 18 | | Sample | L101-13I | | 2204 | H6L09034.d | | | 10 |
| 19 | | Sample | L101-11I | | 2202 | H6L09035.d | | | 10 |
| 20 | | CCV | CCV3 | | 1206 | H6L09036.d | | | 1 |

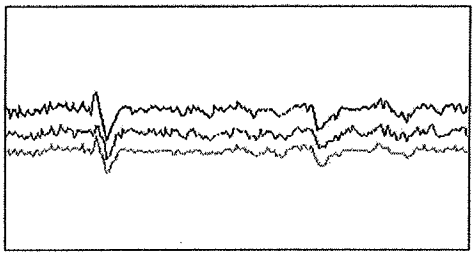
# Sample List

| # | Skip | Sample Type | Sample Name | Comment | Vial# | File Name | Replicates | Level | Total Dil. |
|---|---|---|---|---|---|---|---|---|---|
| 21 | | CCB | CCB3 | | 1102 | H6L09037.d | | | 1 |
| 22 | | ICS-A | ICSA2 | | 1304 | H6L09038.d | | | 1 |
| 23 | | ICSB | ICSAB2 | | 1305 | H6L09039.d | | | 1 |
| 24 | | Blank | IML015WB X reprep | | 2205 | H6L09040.d | | | 1 |
| 25 | | LCSW | IML015WL | | 2206 | H6L09041.d | | | 1 |
| 26 | | LCSW | IML015WC | | 2207 | H6L09042.d | | | 1 |
| 27 | | Blank | IML015WB | | 2205 | H6L09043.d | | | 1 |
| 28 | | Sample | L425-01I | | 2208 | H6L09044.d | | | 10 |
| 29 | | Sample | L430-01I | | 2209 | H6L09045.d | | | 10 |
| 30 | | Sample | L123-01 IS fail | | 2210 | H6L09046.d | | | 1 |
| 31 | | CCV | CCV4 Ag fail | | 1206 | H6L09047.d | | | 1 |
| 32 | | CCB | CCB4 | | 1102 | H6L09048.d | | | 1 |
| 33 | | Sample | L123-02 | | 2211 | H6L09049.d | | | 1 |
| 34 | | Sample | L123-03 Cr Cd f | | 2212 | H6L09050.d | | | 1 |
| 35 | | Sample | L123-04 | | 2301 | H6L09051.d | | | 1 |
| 36 | | Sample | L123-05 | | 2302 | H6L09052.d | | | 1 |
| 37 | | Sample | L123-06 | | 2303 | H6L09053.d | | | 1 |
| 38 | | Sample | L123-07 | | 2304 | H6L09054.d | | | 1 |
| 39 | | Sample | L123-08 Ni f | | 2305 | H6L09055.d | | | 1 |
| 40 | | Sample | L123-09 | | 2306 | H6L09056.d | | | 1 |
| 41 | | Sample | L123-10 Zn f | | 2307 | H6L09057.d | | | 1 |
| 42 | | Sample | L123-11 | | 2308 | H6L09058.d | | | 1 |
| 43 | | CCV | CCV5 Ag fail | | 1206 | H6L09059.d | | | 1 |
| 44 | | CCB | CCB5 | | 1102 | H6L09060.d | | | 1 |
| 45 | | Sample | L123-01N | | 2210 | H6L09061.d | | | 1 |
| 46 | | CCV | CCV6 Ag fail | | 1206 | H6L09062.d | | | 1 |
| 47 | | CCB | CCB6 | | 1102 | H6L09063.d | | | 1 |

# Performance Report

| | |
|---|---|
| **Operator Name** | LYaman |
| **Acq. Date-Time** | 2020-12-22 10:24:52 |
| **Instrument Name** | G8421A SG19253823 |
| **Sample Introduction** | ISIS |
| **Nebulizer Type** | MicroMist |
| **Ion Lens Model** | x-Lens |
| **Tune Parameters** | Standard Tune |

**Sensitivity**



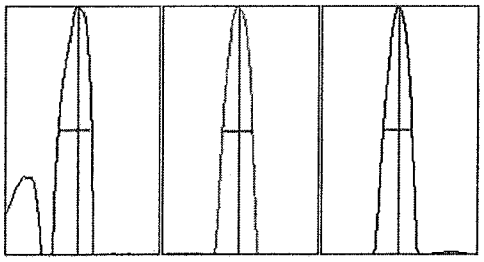
| Mass | Range | Count | RSD% | Background |
|---|---|---|---|---|
| 7 | 10000 | 4778 | 4.386 | 0.500 |
| 89 | 50000 | 20215 | 4.605 | 1.200 |
| 205 | 20000 | 11498 | 4.368 | 3.450 |

Sampling Period [sec] 0.311
Integration Time [sec] 0.1

**Oxide/Doubly Charged Ratio**

| | |
|---|---|
| Oxide | 156 / 140 1.118 % |
| Doubly Charged | 70 / 140 1.643 % |

**Resolution/Axis**



| Mass | Peak Height | Axis | W-50% | W-10% |
|---|---|---|---|---|
| 7 | 2092.82 | 6.95 | 0.62 | 0.77 |
| 89 | 8785.44 | 89.00 | 0.58 | 0.75 |
| 205 | 4963.22 | 205.00 | 0.56 | 0.75 |

Integration Time [sec] 0.1
Acquisition Time [sec] 22.74

**Tune Parameters**

**Plasma Parameters**

| | | | | | |
|---|---|---|---|---|---|
| RF Power | 1550 W | Option Gas | --- | Makeup Gas | 0.00 L/min |
| RF Matching | 1.20 V | Nebulizer Pump | 0.10 rps | Auxiliary Gas | 0.90 L/min |
| Sample Depth | 8.0 mm | S/C Temp | 2 °C | Plasma Gas | 15.0 L/min |
| Nebulizer Gas | 1.08 L/min | | | | |

**Lens Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Extract 1 | 0.0 V | Omega Lens | 9.2 V | Deflect | 14.6 V |
| Extract 2 | -195.0 V | Cell Entrance | -30 V | Plate Bias | -35 V |
| Omega Bias | -80 V | Cell Exit | -50 V | | |

# Performance Report

**Cell Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Use Gas | No | 3rd Gas Flow | --- | Energy Discrimination | 5.0 V |
| He Flow | 0.0 mL/min | OctP Bias | -8.0 V | | |
| H2 Flow | 0.0 mL/min | OctP RF | 200 V | | |

**QP Parameters**

| | |
|---|---|
| QP Bias | -3.0 V |

**Hardware Settings**

**Torch**

| | | | | | |
|---|---|---|---|---|---|
| Torch H | 0.6 mm | Torch H (Hot) | --- | Torch H (Cool) | --- |
| Torch V | -0.1 mm | Torch V (Hot) | --- | Torch V (Cool) | --- |

**Plasma Correction**

| | | | | | |
|---|---|---|---|---|---|
| Nebulizer Gas Offset | 0.03 L/min | Makeup Gas (Hot) | --- | Makeup Gas (Cool) | --- |
| | | Sample Depth (Hot) | --- | | |

**Resolution/Axis**

| | | | | | |
|---|---|---|---|---|---|
| Mass Gain | 122 | Axis Gain | 0.9995 | | |
| Mass Offset | 124 | Axis Offset | -0.07 | | |

**EM**

| | | | | | |
|---|---|---|---|---|---|
| Discriminator | 4.1 mV | Analog HV | 2167 V | Pulse HV | 965 V |

# Performance Report

**Meter**

| Name | Value | Unit |
|---|---|---|
| Nebulizer Gas | 1.08 | L/min |
| MU./Dil. Gas | 0.00 | L/min |
| Plasma Gas | 15.01 | L/min |
| Aux Gas | 0.90 | L/min |
| Ar Gas Tank Press | 7.55E+2 | kPa |
| +5V (Press Gage) | 5.0 | V |
| Ar AMFC Temp | 32.8 | °C |
| Nebulizer Gas(DP) | 3.81E+0 | kPa |
| MU./Dil. Gas(DP) | -1.85E-1 | kPa |
| Aux Gas(DP) | 1.23E+1 | kPa |
| Plasma Gas(DP) | 1.11E+1 | kPa |
| Nebulizer Gas(BP) | 5.89E+2 | kPa |
| MU./Dil. Gas(BP) | -2.16E+0 | kPa |
| Aux Gas(BP) | 5.93E+1 | kPa |
| Plasma Gas(BP) | 4.03E+1 | kPa |
| S/C Temp (H) | 16.1 | °C |
| S/C Temp (L) | 2.0 | °C |
| Peltier Voltage | 2.6 | V |
| IF/BK Press | 2.35E+2 | Pa |
| Analyzer Press | 7.40E-5 | Pa |
| IG HV | 178 | V |
| IG Emission | 4.98 | µA |
| TMP Revolution | 100.0 | % |
| TMP Rev (RAW) | 100.3 | % |
| TMP Current | 2.71 | A |
| PWR AMP Drain I | 0.2 | A |
| PWR AMP Bias | 4.16 | V |
| OctP RF (Avg) | 203.9 | V |
| OctP RF Set | 4.0 | V |
| OctP FET Bias Set | 3.96 | V |
| OctP RF(+) | 176.2 | V |
| OctP RF(-) | 231.5 | V |
| OctP Bias | -8.0 | V |
| Cell Temp. | 65.0 | °C |
| Cell Heater Volt. | 3.7 | V |
| +U Voltage | 6.8 | V |

| Name | Value | Unit |
|---|---|---|
| -U Voltage | -13.8 | V |
| V Voltage | 35.1 | V |
| QPRF Fader | 0.0 | V |
| Pickup Temp | 55.0 | °C |
| PWR Amp Temp | 0.1 | V |
| +600V | 608.2 | V |
| -120V | -133.8 | V |
| -720V | -738.1 | V |
| Prefilter Bias | -5.09 | V |
| Pickup Heater I | 0.06 | A |
| QP PS +48V | 47.5 | V |
| QP PS +48V I | 0.00 | A |
| Analog HV | -2171 | V |
| Pulse HV | 974 | V |
| EM Gate | -42.6 | V |
| Pulse Gate | 206.3 | V |
| EM Entrance | 0.2 | V |
| EM HV Gain | -804.2 | V |
| Inner Pole | -300.3 | V |
| Outer Pole | 20.1 | V |
| Analog -5V | -5.1 | V |
| Analog +15V | 14.5 | V |
| Analog -15V | -14.4 | V |
| Analog +5V | 5.2 | V |
| Shunt C Pos | 1.2 | V |
| Drain Volt.(max) | 63.3 | V |
| RF PS +48V | 47.7 | V |
| Forward Power | 1548 | W |
| Reflected Power | 2 | W |
| Plasma Freq. | 26.75 | MHz |
| Drain I 1 | 11.49 | A |
| Drain I 2 | 10.99 | A |
| Drain I 3 | 10.91 | A |
| Drain I 4 | 10.24 | A |
| Temp Sensor | 2.8 | V |
| Driver I | 5.59 | A |

| Name | Value | Unit |
|---|---|---|
| Igniter | 0.0 | V |
| Driver Voltage Set | 6.5 | V |
| Unbalance Current | 0.44 | A |
| PWM Threshold Set | 0.2 | V |
| Driver Voltage | 5.1 | V |
| PWM Threshold | 0.2 | V |
| Phase Detector | 0.0 | mV |
| H2 Gas | 0.00 | mL/min |
| He Gas | 0.00 | mL/min |
| H2 Gas Press | 1.70E+2 | kPa |
| He Gas Press | 1.06E+0 | kPa |
| ORS AMFC Temp | 32.8 | °C |
| Atmospheric Press | 1.02E+2 | kPa |
| Extract 1 | -0.1 | V |
| Extract 2 | -195.3 | V |
| Omega Bias | -80.0 | V |
| Omega Lens | 9.1 | V |
| Cell Entrance | -30.0 | V |
| Cell Exit | -50.2 | V |
| Deflect | 14.5 | V |
| Plate Bias | -35.0 | V |
| HV+530V | 524 | V |
| HV+240V | 237 | V |
| HV-360V | -357 | V |
| Inlet Temp | 29.7 | °C |
| Internal Temp | 35.9 | °C |
| +24V | 23.6 | V |
| Water Temp | 18.7 | °C |
| Water RF/WC/IF | 1.46 | L/min |
| ISIS 3 Pump Speed | 0.0 | % |
| Valve Position | | |
| Tune/ISTD Valve | | |

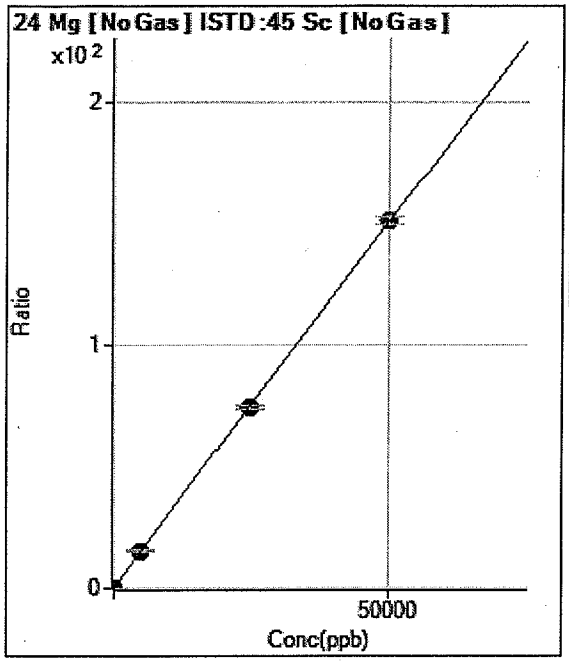
**Performance Report History**

**Sensitivity**

Calibration for H6L09063.d

Batch Folder: D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b\
Analysis File: IH6L09.batch.bin
DA Date-Time: 2020-12-22 15:47:27
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

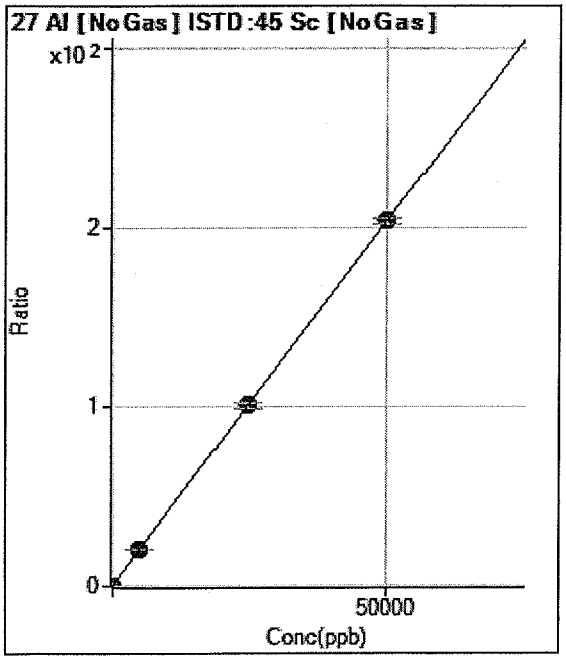
| Level | Standard Data File | Sample Name | Acq. Date-Time |
|---|---|---|---|
| 1 | H6L09003.d | S0 | 2020-12-22 13:01:29 |
| 2 | H6L09004.d | S1 | 2020-12-22 13:04:20 |
| 3 | H6L09005.d | S2 | 2020-12-22 13:07:11 |
| 4 | H6L09006.d | S3 | 2020-12-22 13:10:19 |
| 5 | H6L09007.d | S4 | 2020-12-22 13:13:07 |




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 31658.53 | 0.0070 | P | 4.2 |
| 2 | ☐ | 50.000 | 47.982 | 689377.92 | 0.1513 | P | 1.0 |
| 3 | ☐ | 5000.000 | 5153.237 | 69950176.00 | 15.5076 | A | 2.6 |
| 4 | ☐ | 25000.000 | 24723.229 | 356608512.00 | 74.3732 | A | 2.5 |
| 5 | ☐ | 50000.000 | 50123.064 | 741563690.67 | 150.7746 | A | 2.0 |

y = 0.0030 * x + 0.0070
R = 1.0000
DL = 0.2883
BEC = 2.316

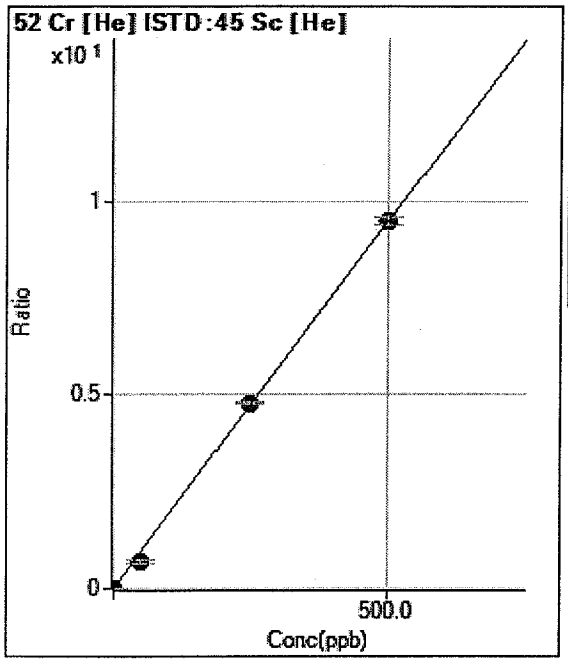
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 29932.36 | 0.0066 | P | 5.0 |
| 2 | ☐ | 50.000 | 51.046 | 977207.72 | 0.2145 | A | 2.4 |
| 3 | ☐ | 5000.000 | 5056.087 | 92886681.95 | 20.5957 | A | 3.8 |
| 4 | ☐ | 25000.000 | 24826.302 | 484799659.44 | 101.1027 | A | 2.2 |
| 5 | ☐ | 50000.000 | 50081.239 | 1003196465.05 | 203.9443 | A | 1.7 |

y = 0.0041 * x + 0.0066
R = 1.0000
DL = 0.2445
BEC = 1.617

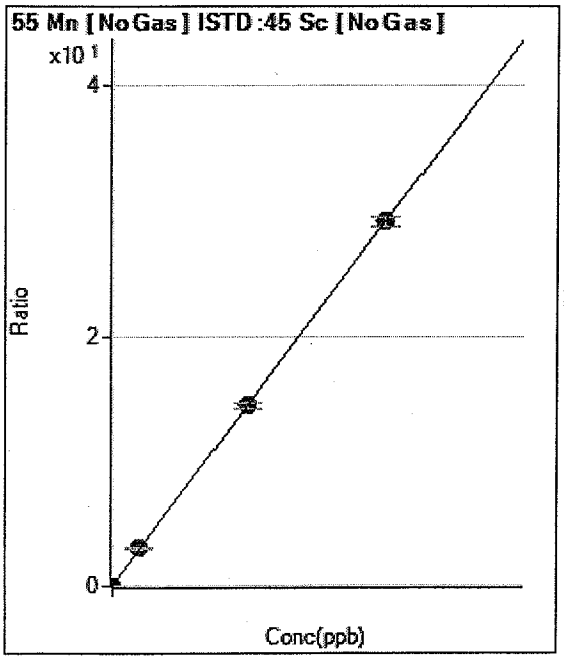
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 3024.33 | 0.0056 | P | 1.1 |
| 2 | ☐ | 0.500 | 0.493 | 8019.02 | 0.0149 | P | 6.3 |
| 3 | ☐ | 50.000 | 37.488 | 397593.30 | 0.7151 | P | 11.5 |
| 4 | ☐ | 250.000 | 252.554 | 2734932.75 | 4.7855 | A | 1.5 |
| 5 | ☐ | 500.000 | 499.974 | 5434731.67 | 9.4683 | A | 2.2 |

y = 0.0189 * x + 0.0056
R = 0.9997
DL = 0.009279
BEC = 0.2942

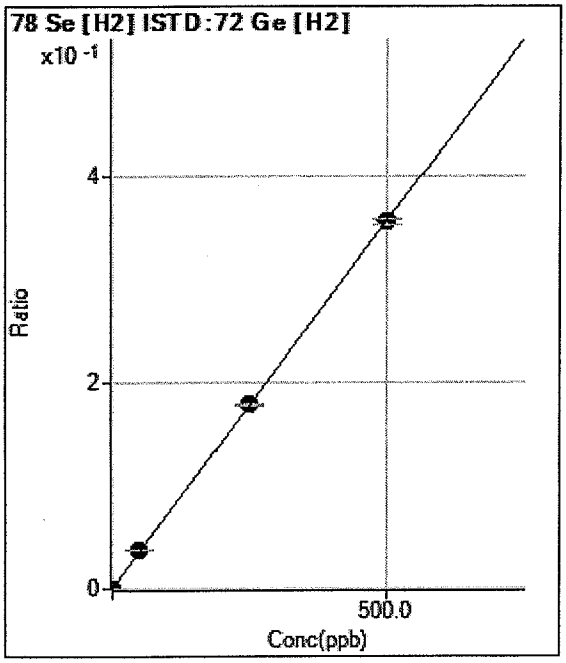
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 12426.98 | 0.0027 | P | 3.6 |
| 2 | ☐ | 0.500 | 0.477 | 33555.09 | 0.0074 | P | 1.2 |
| 3 | ☐ | 300.000 | 311.438 | 13658992.00 | 3.0284 | A | 3.3 |
| 4 | ☐ | 1500.000 | 1491.226 | 69466461.33 | 14.4903 | A | 3.4 |
| 5 | ☐ | 3000.000 | 3003.243 | 143502522.67 | 29.1799 | A | 2.6 |

y = 0.0097 * x + 0.0027
R = 1.0000
DL = 0.03078
BEC = 0.2814

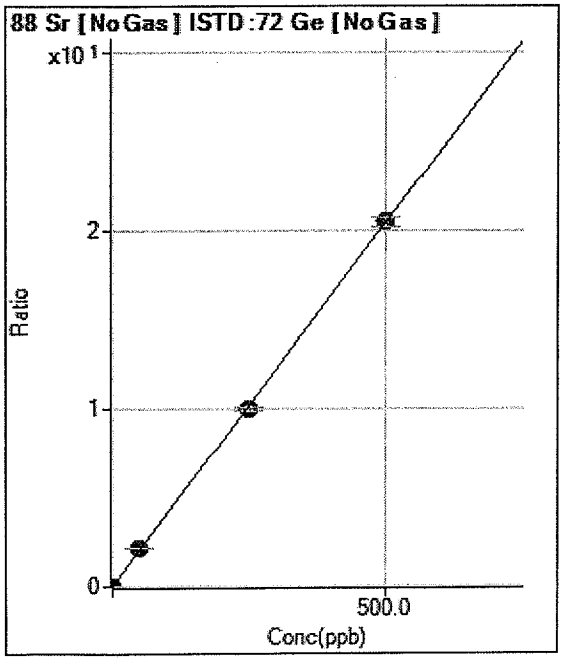
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 77.00 | 0.0001 | P | 5.9 |
| 2 | ☐ | 0.500 | 0.473 | 428.68 | 0.0004 | P | 4.0 |
| 3 | ☐ | 50.000 | 52.441 | 36335.53 | 0.0375 | P | 1.7 |
| 4 | ☐ | 250.000 | 250.421 | 175297.58 | 0.1787 | P | 0.8 |
| 5 | ☐ | 500.000 | 499.545 | 345675.68 | 0.3564 | P | 1.6 |

y = 7.1336E-004 * x + 8.3651E-005
R = 1.0000
DL = 0.0206
BEC = 0.1173

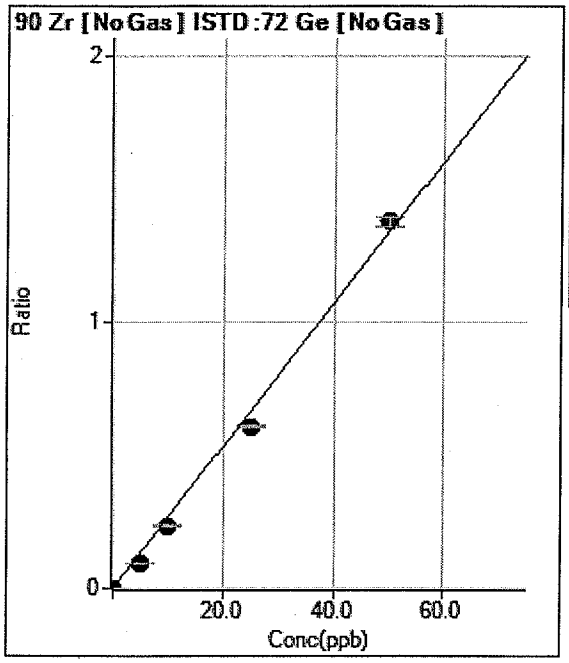
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 1947.92 | 0.0015 | P | 4.5 |
| 2 | ☐ | 0.500 | 0.507 | 30536.98 | 0.0222 | P | 1.4 |
| 3 | ☐ | 50.000 | 52.467 | 2913999.26 | 2.1444 | A | 1.3 |
| 4 | ☐ | 250.000 | 244.853 | 14196267.77 | 10.0022 | A | 3.0 |
| 5 | ☐ | 500.000 | 502.327 | 28921756.63 | 20.5183 | A | 2.5 |

y = 0.0408 * x + 0.0015
R = 0.9999
DL = 0.005035
BEC = 0.03746

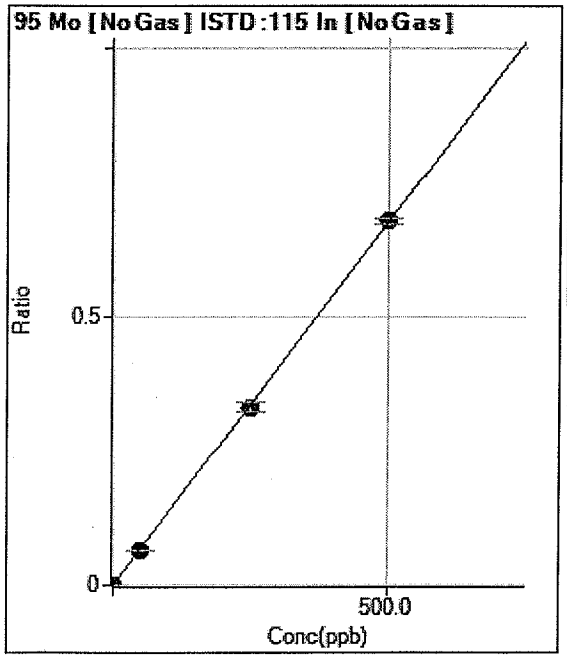
Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 256.67 | 0.0002 | P | 12.8 |
| 2 | ☐ | 5.000 | 3.634 | 133608.20 | 0.0973 | P | 0.8 |
| 3 | ☐ | 10.000 | 8.846 | 321267.03 | 0.2364 | P | 2.2 |
| 4 | ☐ | 25.000 | 22.767 | 863259.96 | 0.6082 | P | 2.2 |
| 5 | ☐ | 50.000 | 51.484 | 1938279.82 | 1.3751 | A | 2.9 |

y = 0.0267 * x + 2.0118E-004
R = 0.9983
DL = 0.002893
BEC = 0.007533

Weight: <None>
Min Conc: 0




| | Rjct | Conc. | Calc Conc. | CPS | Ratio | Det. | RSD |
|---|---|---|---|---|---|---|---|
| 1 | ☐ | 0.000 | 0.000 | 210.00 | 0.0000 | P | 10.6 |
| 2 | ☐ | 0.500 | 0.442 | 5495.58 | 0.0006 | P | 1.5 |
| 3 | ☐ | 50.000 | 47.782 | 547216.07 | 0.0647 | P | 1.7 |
| 4 | ☐ | 250.000 | 246.111 | 2827162.67 | 0.3330 | A | 4.6 |
| 5 | ☐ | 500.000 | 502.167 | 5659083.25 | 0.6795 | A | 1.3 |

y = 0.0014 * x + 2.4191E-005
R = 0.9999
DL = 0.005681
BEC = 0.01788

Weight: <None>
Min Conc: 0

# US EPA Tune Check Report

| | |
|---|---|
| **Operator Name** | LYaman |
| **Acq/Data Batch** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq. Date-Time** | 2020-12-22 10:59:41 |
| **Report Comment** | --- |
| **Instrument Name** | G8421A SG19253823 |

**[No Gas]**

**Sensitivity**

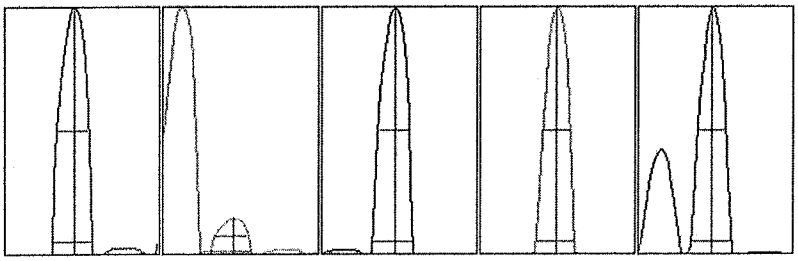
| Mass | Conc. [ug/l] | Count | CPS | Resp (Required) [cps/ug/l] | Resp (Flag) | RSD% | RSD% (Required) |
|---|---|---|---|---|---|---|---|
| 9 | 10.00 | 1623 | 16232.70 | | | 2.136 | 5.000 |
| 24 | 10.00 | 7211 | 72114.08 | | | 1.441 | 5.000 |
| 59 | 10.00 | 18566 | 185661.89 | | | 2.149 | 5.000 |
| 115 | 10.00 | 23688 | 236879.55 | | | 2.383 | 5.000 |
| 208 | 10.00 | 9275 | 92752.66 | | | 2.367 | 5.000 |

| Mass | RSD% (Flag) |
|---|---|
| 9 | |
| 24 | |
| 59 | |
| 115 | |
| 208 | |

| Mass | Rep#1 Count | Rep#2 Count | Rep#3 Count | Rep#4 Count | Rep#5 Count |
|---|---|---|---|---|---|
| 9 | 1666 | 1636 | 1573 | 1609 | 1632 |
| 24 | 7388 | 7210 | 7117 | 7172 | 7171 |
| 59 | 18754 | 18966 | 17904 | 18601 | 18606 |
| 115 | 23672 | 24201 | 22744 | 24011 | 23812 |
| 208 | 9541 | 9343 | 8945 | 9340 | 9207 |

Integration Time [sec] 0.1

**Resolution/Axis**



| Mass | Peak Height | Axis | Axis (Required) | Axis (Flag) |
|---|---|---|---|---|
| 9 | 2900.25 | 8.90 | 8.90 - 9.10 | |
| 24 | 12409.54 | 23.90 | 23.90 - 24.10 | |
| 59 | 32641.73 | 58.95 | 58.90 - 59.10 | |
| 115 | 46747.49 | 115.00 | 114.90 - 115.10 | |
| 208 | 17757.20 | 207.95 | 207.90 - 208.10 | |

# US EPA Tune Check Report

| Mass | W-50% | W-5% | W-5% (Required) | W-5% (Flag) |
|---|---|---|---|---|
| 9 | 0.61 | 0.783 | 0.900 | |
| 24 | 0.63 | 0.786 | 0.900 | |
| 59 | 0.61 | 0.782 | 0.900 | |
| 115 | 0.53 | 0.729 | 0.900 | |
| 208 | 0.55 | 0.781 | 0.900 | |

| | |
|---|---|
| Integration Time [sec] | 0.1 |
| Acquisition Time [sec] | 153.699999999999 |
| Y Axis | Linear |

**Tune Parameters**

**Plasma Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Plasma Mode | HMI | Nebulizer Gas | 0.62 L/min | Dilution Gas | 0.36 L/min |
| RF Power | 1600 W | Option Gas | --- | Auxiliary Gas | 0.90 L/min |
| RF Matching | 1.10 V | Nebulizer Pump | 0.10 rps | Plasma Gas | 15.0 L/min |
| Sample Depth | 10.0 mm | S/C Temp | 2 °C | | |

**Lens Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Extract 1 | 0.0 V | Omega Lens | 8.9 V | Deflect | 14.0 V |
| Extract 2 | -200.0 V | Cell Entrance | -30 V | Plate Bias | -35 V |
| Omega Bias | -80 V | Cell Exit | -50 V | | |

**Cell Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Use Gas | No | 3rd Gas Flow | --- | Energy Discrimination | 5.0 V |
| He Flow | 0.0 mL/min | OctP Bias | -8.0 V | | |
| H2 Flow | 0.0 mL/min | OctP RF | 200 V | | |

**QP Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Mass Gain | 122 | Axis Gain | 0.9995 | QP Bias | -3.0 V |
| Mass Offset | 124 | Axis Offset | -0.07 | | |

**Hardware Settings**

**Torch**

| | | | | | |
|---|---|---|---|---|---|
| Torch H | 0.6 mm | Torch V | -0.1 mm | | |

**EM**

| | | | | | |
|---|---|---|---|---|---|
| Discriminator | 4.1 mV | Analog HV | 2167 V | Pulse HV | 965 V |

# Calibration Blank Report

| | |
|---|---|
| **Sample Name** | BLANK |
| **File Name** | H6L09002.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 12:58:05 |
| **Sample Type** | CalBlk |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 66956.24 | 0.8 |
| Be | 9 | 6 | No Gas | 31.11 | 6.2 |
| B | 11 | 6 | No Gas | 3150.36 | 2.9 |
| Na | 23 | 45 | H2 | 743805.10 | 0.7 |
| Mg | 24 | 45 | No Gas | 26334.93 | 3.0 |
| Al | 27 | 45 | No Gas | 21810.73 | 5.5 |
| Si | 28 | 45 | H2 | 6155.36 | 2.5 |
| P | 31 | 45 | No Gas | 34471.38 | 0.4 |
| K | 39 | 45 | He | 126592.70 | 2.5 |
| Ca | 40 | 45 | H2 | 88028.18 | 1.3 |
| Ti | 47 | 45 | No Gas | 219.33 | 7.1 |
| V | 51 | 45 | He | 2490.23 | 4.4 |
| Cr | 52 | 45 | He | 2854.30 | 3.5 |
| Mn | 55 | 45 | No Gas | 12015.28 | 1.0 |
| Fe | 56 | 45 | H2 | 35536.78 | 2.3 |
| Co | 59 | 45 | No Gas | 467.34 | 11.6 |
| Ni | 60 | 45 | He | 177.33 | 13.2 |
| Cu | 63 | 45 | He | 1865.46 | 4.1 |
| Zn | 66 | 72 | No Gas | 1646.10 | 6.7 |
| As | 75 | 72 | He | 189.67 | 17.9 |
| Se | 78 | 72 | H2 | 79.33 | 5.7 |
| Sr | 88 | 72 | No Gas | 1687.89 | 1.0 |
| Zr | 90 | 72 | No Gas | 206.67 | 22.3 |
| Mo | 95 | 115 | No Gas | 251.11 | 3.8 |
| Mo | 98 | 115 | No Gas | 435.56 | 8.4 |
| [Cd] | 106 | 115 | No Gas | 25.67 | 8.1 |
| Ag | 107 | 115 | No Gas | 204.45 | 22.8 |
| [Cd] | 108 | 115 | No Gas | 18.33 | 20.7 |
| Cd | 111 | 115 | No Gas | 249.61 | 1.2 |
| Sn | 118 | 115 | No Gas | 4812.00 | 3.3 |
| Sn | 118 | 115 | H2 | 4075.08 | 3.7 |
| Sb | 123 | 115 | No Gas | 1224.50 | 4.8 |
| Ba | 137 | 115 | No Gas | 176.67 | 6.8 |
| W | 182 | 159 | No Gas | 376.68 | 18.1 |
| Hg | 201 | 159 | No Gas | 43.50 | 13.3 |

# Calibration Blank Report

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Hg | 201 | 159 | He | 26.33 | 8.6 |
| Tl | 205 | 159 | No Gas | 1021.16 | 9.3 |
| Pb | 206 | 159 | No Gas | 1533.44 | 12.1 |
| Pb | 207 | 159 | No Gas | 1296.74 | 8.5 |
| Pb | 208 | 159 | No Gas | 6115.06 | 3.6 |
| Th | 232 | 159 | No Gas | 45.56 | 11.2 |
| U | 238 | 159 | No Gas | 431.12 | 20.9 |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD |
|---|---|---|---|---|
| Li | 6 | No Gas | 1141329.81 | 0.7 |
| Sc | 45 | No Gas | 4615577.50 | 1.9 |
| Sc | 45 | H2 | 3170333.75 | 0.2 |
| Sc | 45 | He | 539902.19 | 0.2 |
| Ge | 72 | No Gas | 1308491.96 | 1.7 |
| Ge | 72 | H2 | 930488.13 | 0.8 |
| Ge | 72 | He | 336689.17 | 1.4 |
| In | 115 | No Gas | 8658209.05 | 1.7 |
| Tb | 159 | No Gas | 10130338.49 | 1.9 |
| Tb | 159 | He | 5158319.33 | 0.7 |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S0 |
| **File Name** | H6L09003.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:01:29 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 66413.84 | 1.7 |
| Be | 9 | 6 | No Gas | 18.89 | 20.4 |
| B | 11 | 6 | No Gas | 2971.43 | 4.2 |
| Na | 23 | 45 | H2 | 743973.92 | 0.6 |
| Mg | 24 | 45 | No Gas | 31658.53 | 2.6 |
| Al | 27 | 45 | No Gas | 29932.36 | 3.7 |
| Si | 28 | 45 | H2 | 5193.64 | 1.9 |
| P | 31 | 45 | No Gas | 34116.51 | 0.7 |
| K | 39 | 45 | He | 125136.14 | 2.2 |
| Ca | 40 | 45 | H2 | 91956.16 | 0.8 |
| Tl | 47 | 45 | No Gas | 238.00 | 5.0 |
| V | 51 | 45 | He | 2566.91 | 3.3 |
| Cr | 52 | 45 | He | 3024.33 | 2.2 |
| Mn | 55 | 45 | No Gas | 12426.98 | 2.0 |
| Fe | 56 | 45 | H2 | 45273.47 | 1.3 |
| Co | 59 | 45 | No Gas | 667.35 | 2.1 |
| Ni | 60 | 45 | He | 166.67 | 13.2 |
| Cu | 63 | 45 | He | 1857.46 | 4.4 |
| Zn | 66 | 72 | No Gas | 1637.44 | 6.1 |
| As | 75 | 72 | He | 181.67 | 8.5 |
| Se | 78 | 72 | H2 | 77.00 | 6.0 |
| Sr | 88 | 72 | No Gas | 1947.92 | 1.3 |
| Zr | 90 | 72 | No Gas | 256.67 | 14.8 |
| Mo | 95 | 115 | No Gas | 210.00 | 12.4 |
| Ag | 107 | 115 | No Gas | 213.34 | 12.4 |
| Cd | 111 | 115 | No Gas | 168.67 | 3.2 |
| Sn | 118 | 115 | No Gas | 4051.74 | 5.3 |
| Sb | 123 | 115 | No Gas | 1188.94 | 7.6 |
| Ba | 137 | 115 | No Gas | 268.89 | 6.2 |
| W | 182 | 159 | No Gas | 293.34 | 16.1 |
| Hg | 201 | 159 | He | 25.83 | 11.3 |
| Tl | 205 | 159 | No Gas | 804.47 | 8.8 |
| Pb | 208 | 159 | No Gas | 4958.18 | 3.2 |
| U | 238 | 159 | No Gas | 544.46 | 3.1 |

# Calibration Standard Report

QC ISTD Table

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1129983.08 | 1.7 | 1141329.81 | 99.01 | 60 | 120 | |
| Sc | 45 | No Gas | 4547335.50 | 1.7 | 4615577.5 | 98.52 | 60 | 120 | |
| Sc | 45 | H2 | 3144596.25 | 0.2 | 3170333.75 | 99.19 | 60 | 120 | |
| Sc | 45 | He | 543225.81 | 2.0 | 539902.19 | 100.62 | 60 | 120 | |
| Ge | 72 | No Gas | 1274188.88 | 3.1 | 1308491.96 | 97.38 | 60 | 120 | |
| Ge | 72 | H2 | 920473.83 | 0.6 | 930488.13 | 98.92 | 60 | 120 | |
| Ge | 72 | He | 339706.84 | 1.0 | 336689.17 | 100.9 | 60 | 120 | |
| In | 115 | No Gas | 8670986.22 | 2.2 | 8658209.05 | 100.15 | 60 | 120 | |
| Tb | 159 | No Gas | 10090237.65 | 1.7 | 10130338.49 | 99.6 | 60 | 120 | |
| Tb | 159 | He | 5225660.33 | 1.0 | 5158319.33 | 101.31 | 60 | 120 | |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S1 |
| **File Name** | H6L09004.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:04:20 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 71417.03 | 0.8 |
| Be | 9 | 6 | No Gas | 1640.10 | 1.5 |
| B | 11 | 6 | No Gas | 3840.53 | 2.8 |
| Na | 23 | 45 | H2 | 1108777.17 | 1.1 |
| Mg | 24 | 45 | No Gas | 689377.92 | 0.4 |
| Al | 27 | 45 | No Gas | 977207.72 | 2.4 |
| Si | 28 | 45 | H2 | 182270.34 | 1.9 |
| P | 31 | 45 | No Gas | 59122.12 | 1.1 |
| K | 39 | 45 | He | 175205.50 | 2.7 |
| Ca | 40 | 45 | H2 | 825802.02 | 4.8 |
| Ti | 47 | 45 | No Gas | 1508.08 | 1.8 |
| V | 51 | 45 | He | 6861.72 | 4.9 |
| Cr | 52 | 45 | He | 8019.02 | 7.2 |
| Mn | 55 | 45 | No Gas | 33555.09 | 1.3 |
| Fe | 56 | 45 | H2 | 1250172.96 | 2.8 |
| Co | 59 | 45 | No Gas | 21414.79 | 1.2 |
| Ni | 60 | 45 | He | 2248.85 | 9.1 |
| Cu | 63 | 45 | He | 6969.79 | 5.8 |
| Zn | 66 | 72 | No Gas | 9475.97 | 0.9 |
| As | 75 | 72 | He | 982.70 | 5.2 |
| Se | 78 | 72 | H2 | 428.68 | 3.6 |
| Sr | 88 | 72 | No Gas | 30536.98 | 2.0 |
| Zr | 90 | 72 | No Gas | 133608.20 | 1.1 |
| Mo | 95 | 115 | No Gas | 5495.58 | 1.7 |
| Ag | 107 | 115 | No Gas | 16534.78 | 2.7 |
| Cd | 111 | 115 | No Gas | 3026.28 | 0.7 |
| Sn | 118 | 115 | No Gas | 12559.34 | 1.8 |
| Sb | 123 | 115 | No Gas | 10693.25 | 1.7 |
| Ba | 137 | 115 | No Gas | 4195.13 | 4.5 |
| W | 182 | 159 | No Gas | 4167.37 | 5.4 |
| Hg | 201 | 159 | He | 78.17 | 3.2 |
| Tl | 205 | 159 | No Gas | 19653.24 | 0.6 |
| Pb | 208 | 159 | No Gas | 29799.58 | 0.1 |
| U | 238 | 159 | No Gas | 22931.43 | 1.3 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1157450.14 | 1.2 | 1141329.81 | 101.41 | 60 | 120 | |
| Sc | 45 | No Gas | 4556982.33 | 1.4 | 4615577.5 | 98.73 | 60 | 120 | |
| Sc | 45 | H2 | 3345319.42 | 2.6 | 3170333.75 | 105.52 | 60 | 120 | |
| Sc | 45 | He | 538347.77 | 2.1 | 539902.19 | 99.71 | 60 | 120 | |
| Ge | 72 | No Gas | 1373836.88 | 0.6 | 1308491.96 | 104.99 | 60 | 120 | |
| Ge | 72 | H2 | 1018860.98 | 0.9 | 930488.13 | 109.5 | 60 | 120 | |
| Ge | 72 | He | 359075.76 | 1.0 | 336689.17 | 106.65 | 60 | 120 | |
| In | 115 | No Gas | 8830427.31 | 0.4 | 8658209.05 | 101.99 | 60 | 120 | |
| Tb | 159 | No Gas | 10204239.59 | 1.7 | 10130338.49 | 100.73 | 60 | 120 | |
| Tb | 159 | He | 5198845.33 | 1.4 | 5158319.33 | 100.79 | 60 | 120 | |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S2 |
| **File Name** | H6L09005.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:07:11 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 109950.01 | 1.8 |
| Be | 9 | 6 | No Gas | 16654.30 | 2.2 |
| B | 11 | 6 | No Gas | 21948.23 | 1.4 |
| Na | 23 | 45 | H2 | 33529238.00 | 0.9 |
| Mg | 24 | 45 | No Gas | 69950176.00 | 1.0 |
| Al | 27 | 45 | No Gas | 92886681.95 | 2.0 |
| Si | 28 | 45 | H2 | 996135.79 | 0.7 |
| P | 31 | 45 | No Gas | 88786.82 | 1.4 |
| K | 39 | 45 | He | 4591572.50 | 8.2 |
| Ca | 40 | 45 | H2 | 74462426.67 | 0.9 |
| Ti | 47 | 45 | No Gas | 125580.49 | 0.9 |
| V | 51 | 45 | He | 335595.46 | 9.5 |
| Cr | 52 | 45 | He | 397593.30 | 10.6 |
| Mn | 55 | 45 | No Gas | 13658992.00 | 1.3 |
| Fe | 56 | 45 | H2 | 122334050.67 | 0.4 |
| Co | 59 | 45 | No Gas | 2100582.16 | 1.2 |
| Ni | 60 | 45 | He | 153684.51 | 10.5 |
| Cu | 63 | 45 | He | 417196.43 | 9.5 |
| Zn | 66 | 72 | No Gas | 334738.51 | 1.0 |
| As | 75 | 72 | He | 67474.83 | 8.4 |
| Se | 78 | 72 | H2 | 36335.53 | 1.2 |
| Sr | 88 | 72 | No Gas | 2913999.26 | 1.2 |
| Zr | 90 | 72 | No Gas | 321267.03 | 1.9 |
| Mo | 95 | 115 | No Gas | 547216.07 | 0.7 |
| Ag | 107 | 115 | No Gas | 149897.47 | 1.9 |
| Cd | 111 | 115 | No Gas | 297012.98 | 1.0 |
| Sn | 118 | 115 | No Gas | 833345.19 | 1.2 |
| Sb | 123 | 115 | No Gas | 188203.71 | 0.2 |
| Ba | 137 | 115 | No Gas | 785009.17 | 0.3 |
| W | 182 | 159 | No Gas | 89552.76 | 2.3 |
| Hg | 201 | 159 | He | 557.18 | 5.5 |
| Tl | 205 | 159 | No Gas | 1986111.17 | 0.9 |
| Pb | 208 | 159 | No Gas | 2623207.78 | 0.7 |
| U | 238 | 159 | No Gas | 2329312.34 | 0.8 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1121291.19 | 1.5 | 1141329.81 | 98.24 | 60 | 120 | |
| Sc | 45 | No Gas | 4512149.50 | 1.9 | 4615577.5 | 97.76 | 60 | 120 | |
| Sc | 45 | H2 | 3216976.00 | 0.6 | 3170333.75 | 101.47 | 60 | 120 | |
| Sc | 45 | He | 556435.52 | 1.6 | 539902.19 | 103.06 | 60 | 120 | |
| Ge | 72 | No Gas | 1358935.04 | 1.1 | 1308491.96 | 103.86 | 60 | 120 | |
| Ge | 72 | H2 | 969194.71 | 0.5 | 930488.13 | 104.16 | 60 | 120 | |
| Ge | 72 | He | 360499.92 | 1.2 | 336689.17 | 107.07 | 60 | 120 | |
| In | 115 | No Gas | 8461991.97 | 1.1 | 8658209.05 | 97.73 | 60 | 120 | |
| Tb | 159 | No Gas | 10003963.77 | 1.3 | 10130338.49 | 98.75 | 60 | 120 | |
| Tb | 159 | He | 5221603.83 | 2.5 | 5158319.33 | 101.23 | 60 | 120 | |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S3 |
| **File Name** | H6L09006.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:10:19 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 289473.03 | 1.0 |
| Be | 9 | 6 | No Gas | 85597.94 | 0.8 |
| B | 11 | 6 | No Gas | 101386.99 | 1.2 |
| Na | 23 | 45 | H2 | 166029093.33 | 0.2 |
| Mg | 24 | 45 | No Gas | 356608512.00 | 0.4 |
| Al | 27 | 45 | No Gas | 484799659.44 | 0.9 |
| Si | 28 | 45 | H2 | 5127850.33 | 1.0 |
| P | 31 | 45 | No Gas | 315598.89 | 0.7 |
| K | 39 | 45 | He | 27039527.33 | 1.3 |
| Ca | 40 | 45 | H2 | 375630165.33 | 0.9 |
| Ti | 47 | 45 | No Gas | 647677.14 | 1.0 |
| V | 51 | 45 | He | 2315699.42 | 0.9 |
| Cr | 52 | 45 | He | 2734932.75 | 0.7 |
| Mn | 55 | 45 | No Gas | 69466461.33 | 0.6 |
| Fe | 56 | 45 | H2 | 599376128.00 | 0.4 |
| Co | 59 | 45 | No Gas | 10462985.33 | 0.5 |
| Ni | 60 | 45 | He | 983598.81 | 2.4 |
| Cu | 63 | 45 | He | 2622194.67 | 1.7 |
| Zn | 66 | 72 | No Gas | 1692473.71 | 0.5 |
| As | 75 | 72 | He | 437252.02 | 0.8 |
| Se | 78 | 72 | H2 | 175297.58 | 0.7 |
| Sr | 88 | 72 | No Gas | 14196267.77 | 1.6 |
| Zr | 90 | 72 | No Gas | 863259.96 | 0.3 |
| Mo | 95 | 115 | No Gas | 2827162.67 | 2.5 |
| Ag | 107 | 115 | No Gas | 709406.27 | 1.5 |
| Cd | 111 | 115 | No Gas | 1495512.75 | 0.3 |
| Sn | 118 | 115 | No Gas | 4375629.69 | 1.1 |
| Sb | 123 | 115 | No Gas | 922654.89 | 1.4 |
| Ba | 137 | 115 | No Gas | 4166525.94 | 0.1 |
| W | 182 | 159 | No Gas | 427850.67 | 1.0 |
| Hg | 201 | 159 | He | 3317.44 | 0.8 |
| Tl | 205 | 159 | No Gas | 9609732.68 | 0.4 |
| Pb | 208 | 159 | No Gas | 12899697.84 | 0.7 |
| U | 238 | 159 | No Gas | 11289753.16 | 1.0 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1177315.93 | 3.4 | 1141329.81 | 103.15 | 60 | 120 | |
| Sc | 45 | No Gas | 4797086.17 | 2.8 | 4615577.5 | 103.93 | 60 | 120 | |
| Sc | 45 | H2 | 3334411.67 | 0.6 | 3170333.75 | 105.18 | 60 | 120 | |
| Sc | 45 | He | 571597.19 | 1.8 | 539902.19 | 105.87 | 60 | 120 | |
| Ge | 72 | No Gas | 1419821.21 | 2.0 | 1308491.96 | 108.51 | 60 | 120 | |
| Ge | 72 | H2 | 980838.04 | 0.4 | 930488.13 | 105.41 | 60 | 120 | |
| Ge | 72 | He | 367777.11 | 1.7 | 336689.17 | 109.23 | 60 | 120 | |
| In | 115 | No Gas | 8495071.81 | 2.2 | 8658209.05 | 98.12 | 60 | 120 | |
| Tb | 159 | No Gas | 10103755.71 | 2.1 | 10130338.49 | 99.74 | 60 | 120 | |
| Tb | 159 | He | 5334198.17 | 2.5 | 5158319.33 | 103.41 | 60 | 120 | |

# Calibration Standard Report

| | |
|---|---|
| **Sample Name** | S4 |
| **File Name** | H6L09007.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:13:07 |
| **Sample Type** | CalStd |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Flal** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | CPS | RSD |
|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 520147.32 | 1.7 |
| Be | 9 | 6 | No Gas | 171893.36 | 1.0 |
| B | 11 | 6 | No Gas | 207012.11 | 2.4 |
| Na | 23 | 45 | H2 | 335438602.67 | 0.6 |
| Mg | 24 | 45 | No Gas | 741563690.67 | 0.8 |
| Al | 27 | 45 | No Gas | 1003196465.05 | 1.8 |
| Si | 28 | 45 | H2 | 10125560.33 | 0.5 |
| P | 31 | 45 | No Gas | 607460.77 | 0.4 |
| K | 39 | 45 | He | 53972680.00 | 2.6 |
| Ca | 40 | 45 | H2 | 760854506.67 | 1.4 |
| Ti | 47 | 45 | No Gas | 1436317.50 | 1.5 |
| V | 51 | 45 | He | 4658450.33 | 3.1 |
| Cr | 52 | 45 | He | 5434731.67 | 2.1 |
| Mn | 55 | 45 | No Gas | 143502522.67 | 0.7 |
| Fe | 56 | 45 | H2 | 1209011200.00 | 0.9 |
| Co | 59 | 45 | No Gas | 21057944.67 | 0.8 |
| Ni | 60 | 45 | He | 2010717.42 | 2.2 |
| Cu | 63 | 45 | He | 5107326.33 | 1.4 |
| Zn | 66 | 72 | No Gas | 3382187.50 | 0.8 |
| As | 75 | 72 | He | 855949.23 | 3.0 |
| Se | 78 | 72 | H2 | 345675.68 | 0.6 |
| Sr | 88 | 72 | No Gas | 28921756.63 | 1.6 |
| Zr | 90 | 72 | No Gas | 1938279.82 | 2.2 |
| Mo | 95 | 115 | No Gas | 5659083.25 | 0.5 |
| Ag | 107 | 115 | No Gas | 1511227.16 | 1.0 |
| Cd | 111 | 115 | No Gas | 2980728.01 | 1.3 |
| Sn | 118 | 115 | No Gas | 8824713.54 | 0.7 |
| Sb | 123 | 115 | No Gas | 1964241.80 | 1.3 |
| Ba | 137 | 115 | No Gas | 8339043.56 | 1.0 |
| W | 182 | 159 | No Gas | 870397.20 | 2.9 |
| Hg | 201 | 159 | He | 6670.11 | 1.6 |
| Tl | 205 | 159 | No Gas | 18967089.80 | 1.1 |
| Pb | 208 | 159 | No Gas | 25723696.15 | 0.4 |
| U | 238 | 159 | No Gas | 22797240.21 | 0.2 |

# Calibration Standard Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1200236.87 | 2.8 | 1141329.81 | 105.16 | 60 | 120 | |
| Sc | 45 | No Gas | 4919904.33 | 2.4 | 4615577.5 | 106.59 | 60 | 120 | |
| Sc | 45 | H2 | 3344147.67 | 2.0 | 3170333.75 | 105.48 | 60 | 120 | |
| Sc | 45 | He | 574012.81 | 0.7 | 539902.19 | 106.32 | 60 | 120 | |
| Ge | 72 | No Gas | 1409786.00 | 1.0 | 1308491.96 | 107.74 | 60 | 120 | |
| Ge | 72 | H2 | 969921.73 | 1.2 | 930488.13 | 104.24 | 60 | 120 | |
| Ge | 72 | He | 364589.71 | 1.3 | 336689.17 | 108.29 | 60 | 120 | |
| In | 115 | No Gas | 8329341.19 | 1.1 | 8658209.05 | 96.2 | 60 | 120 | |
| Tb | 159 | No Gas | 10089229.32 | 1.2 | 10130338.49 | 99.59 | 60 | 120 | |
| Tb | 159 | He | 5261894.17 | 0.6 | 5158319.33 | 102.01 | 60 | 120 | |

# Initial Calibration Verification (ICV) Report

| | |
|---|---|
| **Sample Name** | ICV |
| **File Name** | H6L09008.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:15:51 |
| **Sample Type** | ICV |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | % Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 28.966 | ppb | 4.7 | 332696.25 | 30 | 96.55 | 90 | 110 | |
| Be | 9 | 6 | No Gas | 29.262 | ppb | 2.9 | 101470.30 | 30 | 97.54 | 90 | 110 | |
| B | 11 | 6 | No Gas | 30.011 | ppb | 2.3 | 64451.00 | 30 | 100.04 | 90 | 110 | |
| Na | 23 | 45 | H2 | 28915.324 | ppb | 4.9 | 199465450.67 | 30000 | 96.38 | 90 | 110 | |
| Mg | 24 | 45 | No Gas | 28865.786 | ppb | 1.5 | 432076341.33 | 30000 | 96.22 | 90 | 110 | |
| Al | 27 | 45 | No Gas | 28822.915 | ppb | 3.7 | 583889284.63 | 30000 | 96.08 | 90 | 110 | |
| Si | 28 | 45 | H2 | 3132.492 | ppb | 2.3 | 6547752.17 | 3000 | 104.42 | 90 | 110 | |
| P | 31 | 45 | No Gas | 280.037 | ppb | 2.2 | 361026.57 | 300 | 93.35 | 90 | 110 | |
| K | 39 | 45 | He | 30048.929 | ppb | 7.4 | 32492248.00 | 30000 | 100.16 | 90 | 110 | |
| Ca | 40 | 45 | H2 | 28463.685 | ppb | 1.5 | 444814549.33 | 30000 | 94.88 | 90 | 110 | |
| Ti | 47 | 45 | No Gas | 267.638 | ppb | 1.2 | 766307.69 | 300 | 89.21 | 90 | 110 | > +/- 10% |
| V | 51 | 45 | He | 297.523 | ppb | 7.6 | 2767275.83 | 300 | 99.17 | 90 | 110 | |
| Cr | 52 | 45 | He | 306.207 | ppb | 5.4 | 3333103.67 | 300 | 102.07 | 90 | 110 | |
| Mn | 55 | 45 | No Gas | 1910.913 | ppb | 2.5 | 92387290.67 | 2000 | 95.55 | 90 | 110 | |
| Fe | 56 | 45 | H2 | 28147.684 | ppb | 1.1 | 699775808.00 | 30000 | 93.83 | 90 | 110 | |
| Co | 59 | 45 | No Gas | 294.939 | ppb | 0.7 | 12625378.67 | 300 | 98.31 | 90 | 110 | |
| Ni | 60 | 45 | He | 307.332 | ppb | 6.1 | 1230694.00 | 300 | 102.44 | 90 | 110 | |
| Cu | 63 | 45 | He | 305.140 | ppb | 4.0 | 3137351.58 | 300 | 101.71 | 90 | 110 | |
| Zn | 66 | 72 | No Gas | 307.456 | ppb | 5.0 | 2074933.21 | 300 | 102.49 | 90 | 110 | |
| As | 75 | 72 | He | 293.750 | ppb | 6.0 | 516646.01 | 300 | 97.92 | 90 | 110 | |
| Se | 78 | 72 | H2 | 295.861 | ppb | 3.5 | 207826.92 | 300 | 98.62 | 90 | 110 | |
| Sr | 88 | 72 | No Gas | 300.497 | ppb | 5.2 | 17281397.09 | 300 | 100.17 | 90 | 110 | |
| Zr | 90 | 72 | No Gas | 30.414 | ppb | 7.9 | 1142714.75 | 30 | 101.38 | 90 | 110 | |
| Mo | 95 | 115 | No Gas | 301.857 | ppb | 3.3 | 3460848.61 | 300 | 100.62 | 90 | 110 | |
| Ag | 107 | 115 | No Gas | 27.586 | ppb | 3.4 | 834779.55 | 30 | 91.95 | 90 | 110 | |
| Cd | 111 | 115 | No Gas | 305.664 | ppb | 1.8 | 1848090.37 | 300 | 101.89 | 90 | 110 | |
| Sn | 118 | 115 | No Gas | 297.887 | ppb | 2.0 | 5318266.18 | 300 | 99.3 | 90 | 110 | |
| Sb | 123 | 115 | No Gas | 54.703 | ppb | 2.6 | 1076078.74 | 60 | 91.17 | 90 | 110 | |
| Ba | 137 | 115 | No Gas | 308.097 | ppb | 0.9 | 2602866.56 | 300 | 102.7 | 90 | 110 | |
| W | 182 | 159 | No Gas | 30.077 | ppb | 2.6 | 533335.45 | 30 | 100.26 | 90 | 110 | |
| Hg | 201 | 159 | He | 2.981 | ppb | 5.8 | 4066.83 | 3 | 99.37 | 90 | 110 | |
| Tl | 205 | 159 | No Gas | 305.777 | ppb | 2.1 | 11885324.53 | 300 | 101.93 | 90 | 110 | |
| Pb | 208 | 159 | No Gas | 301.984 | ppb | 2.1 | 15884469.59 | 300 | 100.66 | 90 | 110 | |
| U | 238 | 159 | No Gas | 299.184 | ppb | 1.3 | 13998568.61 | 300 | 99.73 | 90 | 110 | |

# Initial Calibration Verification (ICV) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1206178.00 | 3.2 | 1141329.81 | 105.68 | 60 | 120 | |
| Sc | 45 | No Gas | 4976474.17 | 1.9 | 4615577.5 | 107.82 | 60 | 120 | |
| Sc | 45 | H2 | 3440465.83 | 2.6 | 3170333.75 | 108.52 | 60 | 120 | |
| Sc | 45 | He | 575522.19 | 4.6 | 539902.19 | 106.6 | 60 | 120 | |
| Ge | 72 | No Gas | 1409542.54 | 4.2 | 1308491.96 | 107.72 | 60 | 120 | |
| Ge | 72 | H2 | 984859.25 | 2.6 | 930488.13 | 105.84 | 60 | 120 | |
| Ge | 72 | He | 374701.92 | 3.9 | 336689.17 | 111.29 | 60 | 120 | |
| In | 115 | No Gas | 8476161.57 | 1.9 | 8658209.05 | 97.9 | 60 | 120 | |
| Tb | 159 | No Gas | 10308599.87 | 0.9 | 10130338.49 | 101.76 | 60 | 120 | |
| Tb | 159 | He | 5406618.00 | 3.9 | 5158319.33 | 104.81 | 60 | 120 | |

# Continuing Calibration Blank (CCB) Report

| | |
|---|---|
| **Sample Name** | ICB |
| **File Name** | H6L09009.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:18:28 |
| **Sample Type** | ICB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Flal** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | <0.000 | ppb | N/A | 69722.47 | 0.4 | |
| Be | 9 | 6 | No Gas | 0.015 | ppb | 32.2 | 74.45 | 0.08 | |
| B | 11 | 6 | No Gas | 0.533 | ppb | 41.0 | 4340.68 | 4 | |
| Na | 23 | 45 | H2 | <0.000 | ppb | N/A | 813401.33 | 40 | |
| Mg | 24 | 45 | No Gas | 8.928 | ppb | 58.4 | 161276.85 | 10 | |
| Al | 27 | 45 | No Gas | 8.764 | ppb | 55.9 | 201549.35 | 15 | |
| Si | 28 | 45 | H2 | 3.397 | ppb | 8.2 | 12827.92 | 8 | |
| P | 31 | 45 | No Gas | <0.000 | ppb | N/A | 35648.39 | 10 | |
| K | 39 | 45 | He | 0.112 | ppb | 2357.5 | 129345.30 | 20 | |
| Ca | 40 | 45 | H2 | 3.269 | ppb | 7.3 | 152270.62 | 25 | |
| Ti | 47 | 45 | No Gas | 0.098 | ppb | 48.4 | 520.68 | 0.5 | |
| V | 51 | 45 | He | <0.000 | ppb | N/A | 2394.21 | 0.5 | |
| Cr | 52 | 45 | He | <0.000 | ppb | N/A | 3075.68 | 0.2 | |
| Mn | 55 | 45 | No Gas | 0.654 | ppb | 58.9 | 43391.45 | 0.2 | >LOD |
| Fe | 56 | 45 | H2 | 2.952 | ppb | 8.4 | 123396.03 | 10 | |
| Co | 59 | 45 | No Gas | 0.092 | ppb | 63.4 | 4466.22 | 0.15 | |
| Ni | 60 | 45 | He | 0.028 | ppb | 27.3 | 282.67 | 0.2 | |
| Cu | 63 | 45 | He | 0.065 | ppb | 16.0 | 2570.24 | 0.4 | |
| Zn | 66 | 72 | No Gas | 0.206 | ppb | 35.9 | 3039.68 | 2 | |
| As | 75 | 72 | He | 0.046 | ppb | 10.0 | 265.00 | 0.2 | |
| Se | 78 | 72 | H2 | 0.080 | ppb | 34.6 | 135.33 | 0.2 | |
| Sr | 88 | 72 | No Gas | 0.095 | ppb | 60.4 | 7153.28 | 0.2 | |
| Zr | 90 | 72 | No Gas | 0.009 | ppb | 45.0 | 580.01 | 2 | |
| Mo | 95 | 115 | No Gas | 0.106 | ppb | 46.1 | 1487.88 | 0.2 | |
| Ag | 107 | 115 | No Gas | 0.012 | ppb | 41.9 | 607.79 | 0.08 | |
| Cd | 111 | 115 | No Gas | 0.150 | ppb | 44.2 | 1123.46 | 0.2 | |
| Sn | 118 | 115 | No Gas | 0.271 | ppb | 23.6 | 9267.74 | 0.2 | >LOD |
| Sb | 123 | 115 | No Gas | 0.023 | ppb | 39.6 | 1714.56 | 0.4 | |
| Ba | 137 | 115 | No Gas | 0.089 | ppb | 58.7 | 1068.94 | 0.2 | |
| W | 182 | 159 | No Gas | 0.027 | ppb | 39.0 | 776.69 | 0.3 | |
| Hg | 201 | 159 | He | 0.005 | ppb | 39.1 | 34.83 | 0.1 | |
| Tl | 205 | 159 | No Gas | 0.178 | ppb | 39.1 | 7788.26 | 0.1 | >LOD |
| Pb | 208 | 159 | No Gas | 0.224 | ppb | 25.5 | 17031.38 | 0.1 | >LOD |
| U | 238 | 159 | No Gas | 0.092 | ppb | 47.0 | 4861.11 | 0.05 | >LOD |

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# Continuing Calibration Blank (CCB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1229239.53 | 1.2 | 1141329.81 | 107.7 | 60 | 120 | |
| Sc | 45 | No Gas | 4830543.67 | 4.2 | 4615577.5 | 104.66 | 60 | 120 | |
| Sc | 45 | H2 | 3453355.25 | 1.0 | 3170333.75 | 108.93 | 60 | 120 | |
| Sc | 45 | He | 560691.96 | 1.3 | 539902.19 | 103.85 | 60 | 120 | |
| Ge | 72 | No Gas | 1342572.75 | 4.1 | 1308491.96 | 102.6 | 60 | 120 | |
| Ge | 72 | H2 | 963450.06 | 1.6 | 930488.13 | 103.54 | 60 | 120 | |
| Ge | 72 | He | 353422.95 | 2.1 | 336689.17 | 104.97 | 60 | 120 | |
| In | 115 | No Gas | 8960363.31 | 2.7 | 8658209.05 | 103.49 | 60 | 120 | |
| Tb | 159 | No Gas | 10453144.03 | 3.5 | 10130338.49 | 103.19 | 60 | 120 | |
| Tb | 159 | He | 5521254.00 | 1.4 | 5158319.33 | 107.04 | 60 | 120 | |

# Low Level Continuing Calibration Verification (LLCCV) Report

| | |
|---|---|
| **Sample Name** | MRLL2201 |
| **File Name** | H6L09010.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:21:03 |
| **Sample Type** | LLCCV |
| **Total Dilution** | 1.0000 |
| **Comment** | 1/100/10 ppb |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.840 | ppb | 9.1 | 79387.37 | 1 | 84 | 80 | 120 | |
| Be | 9 | 6 | No Gas | 0.949 | ppb | 7.3 | 3347.07 | 1 | 94.9 | 80 | 120 | |
| B | 11 | 6 | No Gas | 9.557 | ppb | 0.3 | 22952.10 | 10 | 95.57 | 80 | 120 | |
| Na | 23 | 45 | H2 | 109.968 | ppb | 2.3 | 1465413.25 | 100 | 109.97 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 106.093 | ppb | 0.9 | 1523913.87 | 100 | 106.09 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 102.385 | ppb | 0.6 | 1979172.10 | 100 | 102.39 | 80 | 120 | |
| Si | 28 | 45 | H2 | 97.423 | ppb | 1.7 | 195277.18 | 100 | 97.42 | 80 | 120 | |
| P | 31 | 45 | No Gas | 49.538 | ppb | 1.9 | 88844.43 | 50 | 99.08 | 80 | 120 | |
| K | 39 | 45 | He | 103.061 | ppb | 9.7 | 232901.57 | 100 | 103.06 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 113.069 | ppb | 1.8 | 1743119.96 | 100 | 113.07 | 80 | 120 | |
| Ti | 47 | 45 | No Gas | 0.993 | ppb | 2.8 | 2914.98 | 1 | 99.3 | 80 | 120 | |
| V | 51 | 45 | He | 0.992 | ppb | 4.7 | 11425.43 | 1 | 99.2 | 80 | 120 | |
| Cr | 52 | 45 | He | 1.083 | ppb | 2.9 | 14323.48 | 1 | 108.3 | 80 | 120 | |
| Mn | 55 | 45 | No Gas | 1.201 | ppb | 1.5 | 67310.54 | 1 | 120.1 | 80 | 120 | > +/- 20% |
| Fe | 56 | 45 | H2 | 110.406 | ppb | 1.7 | 2608286.42 | 100 | 110.41 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 1.048 | ppb | 1.2 | 42822.42 | 1 | 104.8 | 80 | 120 | |
| Ni | 60 | 45 | He | 1.132 | ppb | 3.4 | 4505.41 | 1 | 113.2 | 80 | 120 | |
| Cu | 63 | 45 | He | 1.177 | ppb | 3.0 | 13441.31 | 1 | 117.7 | 80 | 120 | |
| Zn | 66 | 72 | No Gas | 10.646 | ppb | 1.3 | 72665.11 | 10 | 106.46 | 80 | 120 | |
| As | 75 | 72 | He | 1.012 | ppb | 9.2 | 1929.14 | 1 | 101.2 | 80 | 120 | |
| Se | 78 | 72 | H2 | 1.029 | ppb | 6.0 | 789.36 | 1 | 102.9 | 80 | 120 | |
| Sr | 88 | 72 | No Gas | 2.098 | ppb | 1.5 | 121186.44 | 2 | 104.9 | 80 | 120 | |
| Zr | 90 | 72 | No Gas | 3.637 | ppb | 2.3 | 135258.02 | 5 | 72.74 | 80 | 120 | > +/- 20% |
| Mo | 95 | 115 | No Gas | 0.927 | ppb | 1.9 | 11249.20 | 1 | 92.7 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 0.950 | ppb | 0.8 | 30075.31 | 1 | 95 | 80 | 120 | |
| Cd | 111 | 115 | No Gas | 1.004 | ppb | 2.9 | 6477.44 | 1 | 100.4 | 80 | 120 | |
| Sn | 118 | 115 | No Gas | 0.958 | ppb | 4.1 | 21858.16 | 1 | 95.8 | 80 | 120 | |
| Sb | 123 | 115 | No Gas | 0.930 | ppb | 2.8 | 20191.10 | 1 | 93 | 80 | 120 | |
| Ba | 137 | 115 | No Gas | 0.949 | ppb | 1.6 | 8600.63 | 1 | 94.9 | 80 | 120 | |
| W | 182 | 159 | No Gas | 1.946 | ppb | 5.0 | 34761.36 | 2 | 97.3 | 80 | 120 | |
| Hg | 201 | 159 | He | 0.102 | ppb | 11.4 | 164.17 | 0.1 | 102 | 80 | 120 | |
| Tl | 205 | 159 | No Gas | 1.026 | ppb | 0.1 | 40697.29 | 1 | 102.6 | 80 | 120 | |
| Pb | 208 | 159 | No Gas | 1.061 | ppb | 1.2 | 60846.72 | 1 | 106.1 | 80 | 120 | |
| U | 238 | 159 | No Gas | 0.975 | ppb | 2.7 | 46156.82 | 1 | 97.5 | 80 | 120 | |

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**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1220072.04 | 2.7 | 1141329.81 | 106.9 | 60 | 120 | |
| Sc | 45 | No Gas | 4673065.33 | 1.1 | 4615577.5 | 101.25 | 60 | 120 | |
| Sc | 45 | H2 | 3211417.00 | 1.0 | 3170333.75 | 101.3 | 60 | 120 | |
| Sc | 45 | He | 549828.71 | 2.2 | 539902.19 | 101.84 | 60 | 120 | |
| Ge | 72 | No Gas | 1389598.75 | 1.8 | 1308491.96 | 106.2 | 60 | 120 | |
| Ge | 72 | H2 | 965869.21 | 0.9 | 930488.13 | 103.8 | 60 | 120 | |
| Ge | 72 | He | 365419.37 | 5.6 | 336689.17 | 108.53 | 60 | 120 | |
| In | 115 | No Gas | 8804783.80 | 1.7 | 8658209.05 | 101.69 | 60 | 120 | |
| Tb | 159 | No Gas | 10302887.37 | 2.0 | 10130338.49 | 101.7 | 60 | 120 | |
| Tb | 159 | He | 5378432.17 | 2.7 | 5158319.33 | 104.27 | 60 | 120 | |

# Interference Check Solution A (ICS-A) Report

| | |
|---|---|
| **Sample Name** | ICSA |
| **File Name** | H6L09012.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:26:14 |
| **Sample Type** | ICS-A |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.434 | ppb | 63.0 | 75412.86 | 2 | -50 | 50 | |
| Be | 9 | 6 | No Gas | 0.003 | ppb | 74.7 | 28.89 | 0.4 | -50 | 50 | |
| B | 11 | 6 | No Gas | 0.620 | ppb | 20.5 | 4468.49 | 10 | -50 | 50 | |
| Na | 23 | 45 | H2 | 104887.620 | ppb | 1.6 | 700278826.67 | 100000 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 102474.451 | ppb | 2.2 | 1510603477.33 | 100000 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 102691.114 | ppb | 3.1 | 2047137729.50 | 100000 | 80 | 120 | |
| Si | 28 | 45 | H2 | 5.625 | ppb | 7.8 | 16906.29 | 50 | -50 | 50 | |
| P | 31 | 45 | No Gas | 103483.643 | ppb | 2.6 | 117768954.67 | 100000 | 80 | 120 | |
| K | 39 | 45 | He | 100111.785 | ppb | 6.9 | 111098178.67 | 100000 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 104028.787 | ppb | 2.4 | 1576777216.00 | 100000 | 80 | 120 | |
| Ti | 47 | 45 | No Gas | 2123.530 | ppb | 2.7 | 5982518.00 | 2000 | 80 | 120 | |
| V | 51 | 45 | He | <0.000 | ppb | N/A | 2520.90 | 1 | -50 | 50 | |
| Cr | 52 | 45 | He | 0.847 | ppb | 9.7 | 12763.95 | 1 | -50 | 50 | > +/- 20% |
| Mn | 55 | 45 | No Gas | 0.092 | ppb | 17.4 | 17768.87 | 1 | -50 | 50 | |
| Fe | 56 | 45 | H2 | 104812.690 | ppb | 2.1 | 2527503445.33 | 100000 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 0.244 | ppb | 5.9 | 10975.09 | 0.75 | -50 | 50 | |
| Ni | 60 | 45 | He | 0.212 | ppb | 14.0 | 1055.38 | 1 | -50 | 50 | |
| Cu | 63 | 45 | He | 0.327 | ppb | 10.1 | 5477.77 | 2 | -50 | 50 | |
| Zn | 66 | 72 | No Gas | 1.369 | ppb | 3.5 | 11169.93 | 20 | -50 | 50 | |
| As | 75 | 72 | He | 0.104 | ppb | 5.8 | 381.01 | 1 | -50 | 50 | |
| Se | 78 | 72 | H2 | 0.197 | ppb | 5.8 | 213.33 | 1 | -50 | 50 | |
| Sr | 88 | 72 | No Gas | 0.892 | ppb | 4.1 | 54022.11 | 1 | -50 | 50 | > +/- 20% |
| Zr | 90 | 72 | No Gas | 0.131 | ppb | 16.4 | 5241.06 | 10 | -50 | 50 | |
| Mo | 95 | 115 | No Gas | 2056.030 | ppb | 0.8 | 23115096.30 | 2000 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 0.017 | ppb | 9.8 | 704.47 | 0.4 | -50 | 50 | |
| Cd | 111 | 115 | No Gas | 0.094 | ppb | 19.3 | 715.28 | 1 | -50 | 50 | |
| Sn | 118 | 115 | No Gas | 0.181 | ppb | 4.0 | 7038.56 | 1 | -50 | 50 | |
| Ba | 137 | 115 | No Gas | 0.056 | ppb | 3.3 | 721.13 | 1 | -50 | 50 | |
| W | 182 | 159 | No Gas | 0.172 | ppb | 13.5 | 3287.12 | 1 | -50 | 50 | |
| Hg | 201 | 159 | He | 0.001 | ppb | 306.5 | 28.33 | 0.5 | -50 | 50 | |
| Tl | 205 | 159 | No Gas | <0.000 | ppb | N/A | 626.68 | 0.5 | -50 | 50 | |
| Pb | 208 | 159 | No Gas | 0.037 | ppb | 26.5 | 6927.46 | 0.5 | -50 | 50 | |
| U | 238 | 159 | No Gas | <0.000 | ppb | N/A | 300.00 | 0.25 | -50 | 50 | |

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# Interference Check Solution A (ICS-A) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1218135.62 | 8.8 | 1141329.81 | 106.73 | 60 | 120 | |
| Sc | 45 | No Gas | 4901883.67 | 7.0 | 4615577.5 | 106.2 | 60 | 120 | |
| Sc | 45 | H2 | 3337767.83 | 2.2 | 3170333.75 | 105.28 | 60 | 120 | |
| Sc | 45 | He | 592444.94 | 5.2 | 539902.19 | 109.73 | 60 | 120 | |
| Ge | 72 | No Gas | 1424826.45 | 5.1 | 1308491.96 | 108.89 | 60 | 120 | |
| Ge | 72 | H2 | 952792.00 | 0.4 | 930488.13 | 102.4 | 60 | 120 | |
| Ge | 72 | He | 372186.82 | 4.1 | 336689.17 | 110.54 | 60 | 120 | |
| In | 115 | No Gas | 8308443.72 | 3.6 | 8658209.05 | 95.96 | 60 | 120 | |
| Tb | 159 | No Gas | 10133632.37 | 2.7 | 10130338.49 | 100.03 | 60 | 120 | |
| Tb | 159 | He | 5463078.00 | 4.8 | 5158319.33 | 105.91 | 60 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

| | |
|---|---|
| **Sample Name** | ICSAB |
| **File Name** | H6L09013.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 13:28:50 |
| **Sample Type** | ICSB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 18.078 | ppb | 0.7 | 252182.59 | 20 | 80 | 120 | |
| Be | 9 | 6 | No Gas | 18.081 | ppb | 4.9 | 67398.33 | 20 | 80 | 120 | |
| B | 11 | 6 | No Gas | 18.196 | ppb | 2.0 | 43368.00 | 20 | 80 | 120 | |
| Na | 23 | 45 | H2 | 93443.037 | ppb | 1.9 | 662069525.33 | 100000 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 93035.613 | ppb | 7.0 | 1486015744.00 | 100000 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 95314.038 | ppb | 3.1 | 2063742529.25 | 100000 | 80 | 120 | |
| Si | 28 | 45 | H2 | 173.468 | ppb | 1.9 | 378855.19 | 200 | 80 | 120 | |
| P | 31 | 45 | No Gas | 95235.689 | ppb | 5.6 | 117558282.67 | 100000 | 80 | 120 | |
| K | 39 | 45 | He | 100685.467 | ppb | 3.9 | 107907541.33 | 100000 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 94612.020 | ppb | 2.3 | 1521647061.33 | 100000 | 80 | 120 | |
| Tl | 47 | 45 | No Gas | 1973.325 | ppb | 4.8 | 6031068.83 | 2000 | 80 | 120 | |
| V | 51 | 45 | He | 19.246 | ppb | 3.4 | 180487.55 | 20 | 80 | 120 | |
| Cr | 52 | 45 | He | 20.546 | ppb | 4.7 | 225103.68 | 20 | 80 | 120 | |
| Mn | 55 | 45 | No Gas | 18.468 | ppb | 5.7 | 967457.02 | 20 | 80 | 120 | |
| Fe | 56 | 45 | H2 | 94836.516 | ppb | 2.8 | 2426221482.67 | 100000 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 17.881 | ppb | 6.7 | 817362.19 | 20 | 80 | 120 | |
| Ni | 60 | 45 | He | 19.152 | ppb | 4.2 | 76361.06 | 20 | 80 | 120 | |
| Cu | 63 | 45 | He | 19.481 | ppb | 5.9 | 200631.78 | 20 | 80 | 120 | |
| Zn | 66 | 72 | No Gas | 19.443 | ppb | 3.8 | 139449.53 | 20 | 80 | 120 | |
| As | 75 | 72 | He | 19.948 | ppb | 5.7 | 33819.96 | 20 | 80 | 120 | |
| Se | 78 | 72 | H2 | 17.580 | ppb | 5.8 | 13388.31 | 20 | 80 | 120 | |
| Sr | 88 | 72 | No Gas | 20.076 | ppb | 3.5 | 1213160.68 | 20 | 80 | 120 | |
| Zr | 90 | 72 | No Gas | 6.222 | ppb | 2.3 | 245742.53 | 20 | 80 | 120 | > +/- 20% |
| Mo | 95 | 115 | No Gas | 1955.529 | ppb | 4.4 | 23138610.75 | 2000 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 16.697 | ppb | 5.3 | 521455.75 | 20 | 80 | 120 | |
| Cd | 111 | 115 | No Gas | 17.623 | ppb | 4.1 | 110123.44 | 20 | 80 | 120 | |
| Sn | 118 | 115 | No Gas | 17.575 | ppb | 3.6 | 327709.45 | 20 | 80 | 120 | |
| Sb | 123 | 115 | No Gas | 17.711 | ppb | 4.5 | 360350.52 | 20 | 80 | 120 | |
| Ba | 137 | 115 | No Gas | 17.750 | ppb | 3.6 | 155012.00 | 20 | 80 | 120 | |
| W | 182 | 159 | No Gas | 17.886 | ppb | 6.6 | 332113.70 | 20 | 80 | 120 | |
| Hg | 201 | 159 | He | 1.974 | ppb | 6.7 | 2733.97 | 2 | 80 | 120 | |
| Tl | 205 | 159 | No Gas | 17.581 | ppb | 5.1 | 716456.29 | 20 | 80 | 120 | |
| Pb | 208 | 159 | No Gas | 17.591 | ppb | 6.3 | 973691.87 | 20 | 80 | 120 | |
| U | 238 | 159 | No Gas | 18.373 | ppb | 6.0 | 900581.28 | 20 | 80 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1297763.65 | 5.1 | 1141329.81 | 113.71 | 60 | 120 | |
| Sc | 45 | No Gas | 5323974.17 | 6.5 | 4615577.5 | 115.35 | 60 | 120 | |
| Sc | 45 | H2 | 3541860.25 | 2.9 | 3170333.75 | 111.72 | 60 | 120 | |
| Sc | 45 | He | 571205.42 | 2.9 | 539902.19 | 105.8 | 60 | 120 | |
| Ge | 72 | No Gas | 1478106.75 | 3.9 | 1308491.96 | 112.96 | 60 | 120 | |
| Ge | 72 | H2 | 1062566.98 | 5.2 | 930488.13 | 114.19 | 60 | 120 | |
| Ge | 72 | He | 359067.99 | 2.4 | 336689.17 | 106.65 | 60 | 120 | |
| In | 115 | No Gas | 8754812.13 | 3.9 | 8658209.05 | 101.12 | 60 | 120 | |
| Tb | 159 | No Gas | 10811846.24 | 4.8 | 10130338.49 | 106.73 | 60 | 120 | |
| Tb | 159 | He | 5469097.17 | 2.5 | 5158319.33 | 106.02 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | MRLL2203 |
| **File Name** | H6L09014.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:31:28 |
| **Sample Type** | Sample |
| **Total Dilution** | 1.0000 |
| **Comment** | 500 ppb CAT |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | <0.000 | <0.000 | ppb | N/A | 73980.10 | 50 | |
| Be | 9 | 6 | No Gas | 0.012 | 0.012 | ppb | 26.5 | 64.45 | 50 | |
| B | 11 | 6 | No Gas | 1.171 | 1.171 | ppb | 4.3 | 5830.10 | 100 | |
| Na | 23 | 45 | H2 | 531.435 | 531.435 | ppb | 1.2 | 4247276.83 | 50000 | |
| Mg | 24 | 45 | No Gas | 533.951 | 533.951 | ppb | 4.2 | 8167908.50 | 50000 | |
| Al | 27 | 45 | No Gas | 515.166 | 515.166 | ppb | 6.1 | 10651677.76 | 50000 | |
| Si | 28 | 45 | H2 | 0.966 | 0.966 | ppb | 11.0 | 7321.27 | 5000 | |
| P | 31 | 45 | No Gas | 40.581 | 40.581 | ppb | 48.2 | 85738.54 | 500 | |
| K | 39 | 45 | He | 516.691 | 516.691 | ppb | 6.1 | 661275.58 | 50000 | |
| Ca | 40 | 45 | H2 | 538.765 | 538.765 | ppb | 1.7 | 8099298.33 | 50000 | |
| Ti | 47 | 45 | No Gas | 0.841 | 0.841 | ppb | 43.4 | 2715.64 | 500 | |
| V | 51 | 45 | He | 0.004 | 0.004 | ppb | 428.7 | 2640.92 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2552.91 | 500 | |
| Mn | 55 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 13247.09 | 3000 | |
| Fe | 56 | 45 | H2 | 558.414 | 558.414 | ppb | 2.3 | 13244852.67 | 50000 | |
| Co | 59 | 45 | No Gas | 0.002 | 0.002 | ppb | 230.9 | 813.36 | 500 | |
| Ni | 60 | 45 | He | 0.014 | 0.014 | ppb | 31.9 | 224.00 | 500 | |
| Cu | 63 | 45 | He | 0.212 | 0.212 | ppb | 6.0 | 3973.91 | 500 | |
| Zn | 66 | 72 | No Gas | 0.827 | 0.827 | ppb | 2.2 | 7828.93 | 500 | |
| As | 75 | 72 | He | <0.000 | <0.000 | ppb | N/A | 168.33 | 500 | |
| Se | 78 | 72 | H2 | <0.000 | <0.000 | ppb | N/A | 73.33 | 500 | |
| Sr | 88 | 72 | No Gas | 0.018 | 0.018 | ppb | 16.8 | 3378.21 | 500 | |
| Zr | 90 | 72 | No Gas | 0.011 | 0.011 | ppb | 31.1 | 723.35 | 50 | |
| Mo | 95 | 115 | No Gas | 0.875 | 0.875 | ppb | 41.1 | 11556.73 | 500 | |
| Ag | 107 | 115 | No Gas | 0.069 | 0.069 | ppb | 7.1 | 2595.81 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 87.12 | 500 | |
| Sn | 118 | 115 | No Gas | 0.001 | 0.001 | ppb | 177.2 | 4513.00 | 500 | |
| Sb | 123 | 115 | No Gas | 0.016 | 0.016 | ppb | 37.3 | 1669.00 | 100 | |
| Ba | 137 | 115 | No Gas | 0.033 | 0.033 | ppb | 17.9 | 614.46 | 1000 | |
| W | 182 | 159 | No Gas | 0.019 | 0.019 | ppb | 45.8 | 700.02 | 50 | |
| Hg | 201 | 159 | He | 0.004 | 0.004 | ppb | 37.5 | 33.00 | 5 | |
| Tl | 205 | 159 | No Gas | 0.001 | 0.001 | ppb | 365.0 | 950.04 | 500 | |
| Pb | 208 | 159 | No Gas | 0.040 | 0.040 | ppb | 15.7 | 7837.64 | 500 | |
| U | 238 | 159 | No Gas | 0.000 | 0.000 | ppb | 2274.7 | 612.24 | 497 | |

QC ISTD Table

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1263724.29 | 2.5 | 1141329.81 | 110.72 | 60 | 120 | |
| Sc | 45 | No Gas | 5065675.33 | 2.4 | 4615577.5 | 109.75 | 60 | 120 | |
| Sc | 45 | H2 | 3270764.75 | 0.9 | 3170333.75 | 103.17 | 60 | 120 | |
| Sc | 45 | He | 551931.69 | 3.6 | 539902.19 | 102.23 | 60 | 120 | |
| Ge | 72 | No Gas | 1491645.67 | 1.4 | 1308491.96 | 114 | 60 | 120 | |
| Ge | 72 | H2 | 966026.02 | 1.0 | 930488.13 | 103.82 | 60 | 120 | |
| Ge | 72 | He | 358709.45 | 0.6 | 336689.17 | 106.54 | 60 | 120 | |
| In | 115 | No Gas | 9625027.13 | 2.4 | 8658209.05 | 111.17 | 60 | 120 | |
| Tb | 159 | No Gas | 11241529.83 | 0.8 | 10130338.49 | 110.97 | 60 | 120 | |
| Tb | 159 | He | 5556922.67 | 2.2 | 5158319.33 | 107.73 | 60 | 120 | |

# Continuing Calibration Verification (CCV) Report

| | |
|---|---|
| **Sample Name** | CCV1 |
| **File Name** | H6L09015.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:36:58 |
| **Sample Type** | CCV |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | % Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 24.168 | ppb | 5.1 | 292398.05 | 25 | 96.67 | 90 | 110 | |
| Be | 9 | 6 | No Gas | 24.206 | ppb | 6.6 | 84755.65 | 25 | 96.82 | 90 | 110 | |
| B | 11 | 6 | No Gas | 48.332 | ppb | 5.2 | 102898.54 | 50 | 96.66 | 90 | 110 | |
| Na | 23 | 45 | H2 | 23247.648 | ppb | 2.4 | 159859253.33 | 25000 | 92.99 | 90 | 110 | |
| Mg | 24 | 45 | No Gas | 24946.374 | ppb | 4.0 | 368077237.33 | 25000 | 99.79 | 90 | 110 | |
| Al | 27 | 45 | No Gas | 24155.891 | ppb | 5.2 | 482342406.15 | 25000 | 96.62 | 90 | 110 | |
| Si | 28 | 45 | H2 | 2361.616 | ppb | 0.5 | 4916079.50 | 2500 | 94.46 | 90 | 110 | |
| P | 31 | 45 | No Gas | 246.895 | ppb | 4.4 | 318140.65 | 250 | 98.76 | 90 | 110 | |
| K | 39 | 45 | He | 24541.261 | ppb | 3.3 | 26795486.00 | 25000 | 98.17 | 90 | 110 | |
| Ca | 40 | 45 | H2 | 23456.222 | ppb | 2.1 | 364857088.00 | 25000 | 93.82 | 90 | 110 | |
| Ti | 47 | 45 | No Gas | 233.950 | ppb | 3.1 | 660255.06 | 250 | 93.58 | 90 | 110 | |
| V | 51 | 45 | He | 246.547 | ppb | 2.4 | 2314192.83 | 250 | 98.62 | 90 | 110 | |
| Cr | 52 | 45 | He | 246.115 | ppb | 2.2 | 2701937.92 | 250 | 98.45 | 90 | 110 | |
| Mn | 55 | 45 | No Gas | 1522.170 | ppb | 4.5 | 72521784.00 | 1500 | 101.48 | 90 | 110 | |
| Fe | 56 | 45 | H2 | 23882.543 | ppb | 1.1 | 590990741.33 | 25000 | 95.53 | 90 | 110 | |
| Co | 59 | 45 | No Gas | 253.185 | ppb | 4.0 | 10679855.67 | 250 | 101.27 | 90 | 110 | |
| Ni | 60 | 45 | He | 243.055 | ppb | 3.4 | 981607.13 | 250 | 97.22 | 90 | 110 | |
| Cu | 63 | 45 | He | 253.227 | ppb | 2.2 | 2624408.83 | 250 | 101.29 | 90 | 110 | |
| Zn | 66 | 72 | No Gas | 250.552 | ppb | 3.9 | 1740656.46 | 250 | 100.22 | 90 | 110 | |
| As | 75 | 72 | He | 247.396 | ppb | 5.0 | 429695.98 | 250 | 98.96 | 90 | 110 | |
| Se | 78 | 72 | H2 | 235.986 | ppb | 0.7 | 170130.78 | 250 | 94.39 | 90 | 110 | |
| Sr | 88 | 72 | No Gas | 248.896 | ppb | 3.6 | 14730295.52 | 250 | 99.56 | 90 | 110 | |
| Zr | 90 | 72 | No Gas | 23.216 | ppb | 6.5 | 898045.25 | 25 | 92.86 | 90 | 110 | |
| Mo | 95 | 115 | No Gas | 239.209 | ppb | 4.4 | 2874084.47 | 250 | 95.68 | 90 | 110 | |
| Ag | 107 | 115 | No Gas | 22.953 | ppb | 4.6 | 727860.09 | 25 | 91.81 | 90 | 110 | |
| Cd | 111 | 115 | No Gas | 244.692 | ppb | 3.4 | 1550460.93 | 250 | 97.88 | 90 | 110 | |
| Sn | 118 | 115 | No Gas | 241.681 | ppb | 4.2 | 4522094.82 | 250 | 96.67 | 90 | 110 | |
| Sb | 123 | 115 | No Gas | 46.250 | ppb | 3.5 | 953659.93 | 50 | 92.5 | 90 | 110 | |
| Ba | 137 | 115 | No Gas | 484.874 | ppb | 3.1 | 4292296.92 | 500 | 96.97 | 90 | 110 | |
| W | 182 | 159 | No Gas | 24.821 | ppb | 5.4 | 461259.59 | 25 | 99.28 | 90 | 110 | |
| Hg | 201 | 159 | He | 2.521 | ppb | 2.0 | 3524.00 | 2.5 | 100.84 | 90 | 110 | |
| Tl | 205 | 159 | No Gas | 251.455 | ppb | 6.3 | 10238038.21 | 250 | 100.58 | 90 | 110 | |
| Pb | 208 | 159 | No Gas | 250.522 | ppb | 5.6 | 13807529.72 | 250 | 100.21 | 90 | 110 | |
| U | 238 | 159 | No Gas | 247.222 | ppb | 5.5 | 12119570.91 | 250 | 98.89 | 90 | 110 | |

# Continuing Calibration Verification (CCV) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1220488.09 | 6.2 | 1141329.81 | 106.94 | 60 | 120 | |
| Sc | 45 | No Gas | 4908040.17 | 3.5 | 4615577.5 | 106.34 | 60 | 120 | |
| Sc | 45 | H2 | 3424061.83 | 1.3 | 3170333.75 | 108 | 60 | 120 | |
| Sc | 45 | He | 579432.54 | 0.9 | 539902.19 | 107.32 | 60 | 120 | |
| Ge | 72 | No Gas | 1450050.08 | 3.6 | 1308491.96 | 110.82 | 60 | 120 | |
| Ge | 72 | H2 | 1010119.38 | 0.7 | 930488.13 | 108.56 | 60 | 120 | |
| Ge | 72 | He | 369793.85 | 3.0 | 336689.17 | 109.83 | 60 | 120 | |
| In | 115 | No Gas | 8886213.35 | 2.8 | 8658209.05 | 102.63 | 60 | 120 | |
| Tb | 159 | No Gas | 10820875.68 | 5.3 | 10130338.49 | 106.82 | 60 | 120 | |
| Tb | 159 | He | 5525243.00 | 0.9 | 5158319.33 | 107.11 | 60 | 120 | |

# Continuing Calibration Blank (CCB) Report

| | |
|---|---|
| **Sample Name** | CCB1 |
| **File Name** | H6L09016.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 13:39:35 |
| **Sample Type** | CCB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.058 | ppb | 167.2 | 70202.10 | 0.4 | |
| Be | 9 | 6 | No Gas | 0.015 | ppb | 35.2 | 72.22 | 0.08 | |
| B | 11 | 6 | No Gas | 0.675 | ppb | 26.9 | 4472.94 | 4 | |
| Na | 23 | 45 | H2 | <0.000 | ppb | N/A | 731318.60 | 40 | |
| Mg | 24 | 45 | No Gas | 8.154 | ppb | 54.7 | 150281.61 | 10 | |
| Al | 27 | 45 | No Gas | 7.953 | ppb | 55.6 | 185929.82 | 15 | |
| Si | 28 | 45 | H2 | 1.809 | ppb | 7.6 | 9140.33 | 8 | |
| P | 31 | 45 | No Gas | <0.000 | ppb | N/A | 34818.91 | 10 | |
| K | 39 | 45 | He | 2.079 | ppb | 116.4 | 128748.20 | 20 | |
| Ca | 40 | 45 | H2 | 2.128 | ppb | 14.6 | 129286.36 | 25 | |
| Ti | 47 | 45 | No Gas | 0.078 | ppb | 56.2 | 462.68 | 0.5 | |
| V | 51 | 45 | He | 0.020 | ppb | 6.4 | 2771.61 | 0.5 | |
| Cr | 52 | 45 | He | <0.000 | ppb | N/A | 2902.31 | 0.2 | |
| Mn | 55 | 45 | No Gas | 0.538 | ppb | 51.0 | 37999.73 | 0.2 | >LOD |
| Fe | 56 | 45 | H2 | 2.949 | ppb | 5.6 | 118661.93 | 10 | |
| Co | 59 | 45 | No Gas | 0.083 | ppb | 55.5 | 4122.08 | 0.15 | |
| Ni | 60 | 45 | He | 0.032 | ppb | 31.9 | 289.33 | 0.2 | |
| Cu | 63 | 45 | He | 0.135 | ppb | 3.2 | 3202.38 | 0.4 | |
| Zn | 66 | 72 | No Gas | 0.069 | ppb | 76.5 | 2196.18 | 2 | |
| As | 75 | 72 | He | 0.068 | ppb | 4.8 | 295.33 | 0.2 | |
| Se | 78 | 72 | H2 | 0.036 | ppb | 24.3 | 105.00 | 0.2 | |
| Sr | 88 | 72 | No Gas | 0.084 | ppb | 60.5 | 6755.30 | 0.2 | |
| Zr | 90 | 72 | No Gas | 0.007 | ppb | 36.9 | 530.01 | 2 | |
| Mo | 95 | 115 | No Gas | 0.098 | ppb | 42.9 | 1426.75 | 0.2 | |
| Ag | 107 | 115 | No Gas | 0.011 | ppb | 43.2 | 592.24 | 0.08 | |
| Cd | 111 | 115 | No Gas | 0.099 | ppb | 51.3 | 816.03 | 0.2 | |
| Sn | 118 | 115 | No Gas | 0.174 | ppb | 32.6 | 7577.78 | 0.2 | |
| Sb | 123 | 115 | No Gas | 0.022 | ppb | 37.3 | 1707.89 | 0.4 | |
| Ba | 137 | 115 | No Gas | 0.144 | ppb | 48.6 | 1582.33 | 0.2 | |
| W | 182 | 159 | No Gas | 0.019 | ppb | 42.1 | 660.02 | 0.3 | |
| Hg | 201 | 159 | He | 0.002 | ppb | 151.7 | 30.00 | 0.1 | |
| Tl | 205 | 159 | No Gas | 0.147 | ppb | 43.5 | 6725.35 | 0.1 | >LOD |
| Pb | 208 | 159 | No Gas | 0.165 | ppb | 35.4 | 14108.79 | 0.1 | >LOD |
| U | 238 | 159 | No Gas | 0.083 | ppb | 47.1 | 4564.31 | 0.05 | >LOD |

LY 12/22/20

# Continuing Calibration Blank (CCB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1185912.17 | 2.5 | 1141329.81 | 103.91 | 60 | 120 | |
| Sc | 45 | No Gas | 4774813.50 | 1.7 | 4615577.5 | 103.45 | 60 | 120 | |
| Sc | 45 | H2 | 3324173.75 | 1.7 | 3170333.75 | 104.85 | 60 | 120 | |
| Sc | 45 | He | 549392.73 | 1.8 | 539902.19 | 101.76 | 60 | 120 | |
| Ge | 72 | No Gas | 1359525.08 | 2.0 | 1308491.96 | 103.9 | 60 | 120 | |
| Ge | 72 | H2 | 960833.21 | 0.8 | 930488.13 | 103.26 | 60 | 120 | |
| Ge | 72 | He | 344940.76 | 1.6 | 336689.17 | 102.45 | 60 | 120 | |
| In | 115 | No Gas | 9094901.17 | 1.6 | 8658209.05 | 105.04 | 60 | 120 | |
| Tb | 159 | No Gas | 10637431.52 | 3.0 | 10130338.49 | 105.01 | 60 | 120 | |
| Tb | 159 | He | 5425697.00 | 1.2 | 5158319.33 | 105.18 | 60 | 120 | |

# Continuing Calibration Verification (CCV) Report

| | |
|---|---|
| **Sample Name** | CCV2 |
| **File Name** | H6L09027.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:08:03 |
| **Sample Type** | CCV |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | % Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 24.114 | ppb | 2.7 | 319007.93 | 25 | 96.46 | 90 | 110 | |
| Be | 9 | 6 | No Gas | 24.064 | ppb | 1.8 | 92170.41 | 25 | 96.26 | 90 | 110 | |
| B | 11 | 6 | No Gas | 50.518 | ppb | 2.1 | 117415.09 | 50 | 101.04 | 90 | 110 | |
| Na | 23 | 45 | H2 | 24698.570 | ppb | 5.2 | 173675776.00 | 25000 | 98.79 | 90 | 110 | |
| Mg | 24 | 45 | No Gas | 24877.584 | ppb | 3.0 | 392124480.00 | 25000 | 99.51 | 90 | 110 | |
| Al | 27 | 45 | No Gas | 24673.998 | ppb | 2.4 | 526578992.15 | 25000 | 98.7 | 90 | 110 | |
| Si | 28 | 45 | H2 | 2457.100 | ppb | 7.0 | 5228513.17 | 2500 | 98.28 | 90 | 110 | |
| P | 31 | 45 | No Gas | 244.020 | ppb | 5.0 | 336322.56 | 250 | 97.61 | 90 | 110 | |
| K | 39 | 45 | He | 25291.352 | ppb | 0.9 | 28007110.67 | 25000 | 101.17 | 90 | 110 | |
| Ca | 40 | 45 | H2 | 24463.571 | ppb | 4.3 | 389332170.67 | 25000 | 97.85 | 90 | 110 | |
| Ti | 47 | 45 | No Gas | 227.387 | ppb | 3.7 | 685525.11 | 250 | 90.95 | 90 | 110 | |
| V | 51 | 45 | He | 249.883 | ppb | 2.7 | 2378752.08 | 250 | 99.95 | 90 | 110 | |
| Cr | 52 | 45 | He | 250.466 | ppb | 1.2 | 2788962.83 | 250 | 100.19 | 90 | 110 | |
| Mn | 55 | 45 | No Gas | 1468.602 | ppb | 2.5 | 74780016.00 | 1500 | 97.91 | 90 | 110 | |
| Fe | 56 | 45 | H2 | 24342.892 | ppb | 4.6 | 616214016.00 | 25000 | 97.37 | 90 | 110 | |
| Co | 59 | 45 | No Gas | 247.594 | ppb | 3.1 | 11159452.67 | 250 | 99.04 | 90 | 110 | |
| Ni | 60 | 45 | He | 247.066 | ppb | 2.3 | 1012004.27 | 250 | 98.83 | 90 | 110 | |
| Cu | 63 | 45 | He | 254.816 | ppb | 0.5 | 2678794.83 | 250 | 101.93 | 90 | 110 | |
| Zn | 66 | 72 | No Gas | 248.905 | ppb | 1.7 | 1804419.67 | 250 | 99.56 | 90 | 110 | |
| As | 75 | 72 | He | 250.025 | ppb | 3.5 | 447731.97 | 250 | 100.01 | 90 | 110 | |
| Se | 78 | 72 | H2 | 237.063 | ppb | 10.5 | 179439.62 | 250 | 94.83 | 90 | 110 | |
| Sr | 88 | 72 | No Gas | 244.819 | ppb | 2.2 | 15117601.62 | 250 | 97.93 | 90 | 110 | |
| Zr | 90 | 72 | No Gas | 23.238 | ppb | 4.7 | 938068.97 | 25 | 92.95 | 90 | 110 | |
| Mo | 95 | 115 | No Gas | 237.850 | ppb | 2.0 | 2925981.48 | 250 | 95.14 | 90 | 110 | |
| Ag | 107 | 115 | No Gas | 22.711 | ppb | 2.4 | 737400.20 | 25 | 90.84 | 90 | 110 | |
| Cd | 111 | 115 | No Gas | 244.011 | ppb | 2.1 | 1582767.97 | 250 | 97.6 | 90 | 110 | |
| Sn | 118 | 115 | No Gas | 239.113 | ppb | 2.3 | 4580630.93 | 250 | 95.65 | 90 | 110 | |
| Sb | 123 | 115 | No Gas | 45.555 | ppb | 2.5 | 961601.97 | 50 | 91.11 | 90 | 110 | |
| Ba | 137 | 115 | No Gas | 486.247 | ppb | 2.2 | 4406249.13 | 500 | 97.25 | 90 | 110 | |
| W | 182 | 159 | No Gas | 24.088 | ppb | 4.8 | 455590.36 | 25 | 96.35 | 90 | 110 | |
| Hg | 201 | 159 | He | 2.521 | ppb | 4.5 | 3546.33 | 2.5 | 100.84 | 90 | 110 | |
| Tl | 205 | 159 | No Gas | 247.604 | ppb | 2.3 | 10266919.32 | 250 | 99.04 | 90 | 110 | |
| Pb | 208 | 159 | No Gas | 248.331 | ppb | 3.3 | 13934024.58 | 250 | 99.33 | 90 | 110 | |
| U | 238 | 159 | No Gas | 244.696 | ppb | 3.7 | 12210620.35 | 250 | 97.88 | 90 | 110 | |

# Continuing Calibration Verification (CCV) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1331980.53 | 1.2 | 1141329.81 | 116.7 | 60 | 120 | |
| Sc | 45 | No Gas | 5242394.83 | 2.6 | 4615577.5 | 113.58 | 60 | 120 | |
| Sc | 45 | H2 | 3506827.75 | 4.1 | 3170333.75 | 110.61 | 60 | 120 | |
| Sc | 45 | He | 587699.17 | 1.3 | 539902.19 | 108.85 | 60 | 120 | |
| Ge | 72 | No Gas | 1512059.79 | 2.1 | 1308491.96 | 115.56 | 60 | 120 | |
| Ge | 72 | H2 | 1066652.46 | 8.2 | 930488.13 | 114.63 | 60 | 120 | |
| Ge | 72 | He | 381147.04 | 2.9 | 336689.17 | 113.2 | 60 | 120 | |
| In | 115 | No Gas | 9093449.54 | 1.8 | 8658209.05 | 105.03 | 60 | 120 | |
| Tb | 159 | No Gas | 10999705.12 | 2.4 | 10130338.49 | 108.58 | 60 | 120 | |
| Tb | 159 | He | 5563664.67 | 2.7 | 5158319.33 | 107.86 | 60 | 120 | |

# Continuing Calibration Blank (CCB) Report

| | |
|---|---|
| **Sample Name** | CCB2 |
| **File Name** | H6L09028.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:10:40 |
| **Sample Type** | CCB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.018 | ppb | 586.3 | 73497.95 | 0.4 | |
| Be | 9 | 6 | No Gas | 0.022 | ppb | 28.3 | 100.00 | 0.08 | |
| B | 11 | 6 | No Gas | 1.643 | ppb | 5.2 | 6754.96 | 4 | |
| Na | 23 | 45 | H2 | 46.162 | ppb | 4.1 | 1095616.13 | 40 | >LOD |
| Mg | 24 | 45 | No Gas | 11.696 | ppb | 37.8 | 207454.97 | 10 | >LOD |
| Al | 27 | 45 | No Gas | 11.384 | ppb | 40.2 | 260611.29 | 15 | |
| Si | 28 | 45 | H2 | 1.273 | ppb | 10.8 | 8077.68 | 8 | |
| P | 31 | 45 | No Gas | <0.000 | ppb | N/A | 35889.71 | 10 | |
| K | 39 | 45 | He | 11.842 | ppb | 31.0 | 142402.54 | 20 | |
| Ca | 40 | 45 | H2 | 6.337 | ppb | 5.5 | 193329.30 | 25 | |
| Ti | 47 | 45 | No Gas | 0.117 | ppb | 27.2 | 589.35 | 0.5 | |
| V | 51 | 45 | He | 0.031 | ppb | 57.2 | 2948.32 | 0.5 | |
| Cr | 52 | 45 | He | <0.000 | ppb | N/A | 2834.96 | 0.2 | |
| Mn | 55 | 45 | No Gas | 0.727 | ppb | 40.4 | 48223.14 | 0.2 | >LOD |
| Fe | 56 | 45 | H2 | 5.848 | ppb | 7.0 | 188756.79 | 10 | |
| Co | 59 | 45 | No Gas | 0.124 | ppb | 35.6 | 5989.41 | 0.15 | |
| Ni | 60 | 45 | He | 0.048 | ppb | 23.6 | 362.67 | 0.2 | |
| Cu | 63 | 45 | He | 0.180 | ppb | 10.6 | 3743.85 | 0.4 | |
| Zn | 66 | 72 | No Gas | 0.112 | ppb | 37.7 | 2547.58 | 2 | |
| As | 75 | 72 | He | 0.071 | ppb | 36.5 | 304.67 | 0.2 | |
| Se | 78 | 72 | H2 | 0.055 | ppb | 20.9 | 115.33 | 0.2 | |
| Sr | 88 | 72 | No Gas | 0.139 | ppb | 40.9 | 10089.69 | 0.2 | |
| Zr | 90 | 72 | No Gas | 0.009 | ppb | 62.0 | 613.35 | 2 | |
| Mo | 95 | 115 | No Gas | 0.120 | ppb | 37.8 | 1732.35 | 0.2 | |
| Ag | 107 | 115 | No Gas | 0.013 | ppb | 44.9 | 646.69 | 0.08 | |
| Cd | 111 | 115 | No Gas | 0.107 | ppb | 48.6 | 889.91 | 0.2 | |
| Sn | 118 | 115 | No Gas | 0.095 | ppb | 41.5 | 6193.70 | 0.2 | |
| Sb | 123 | 115 | No Gas | 0.017 | ppb | 41.2 | 1650.11 | 0.4 | |
| Ba | 137 | 115 | No Gas | 0.209 | ppb | 35.9 | 2221.32 | 0.2 | >LOD |
| W | 182 | 159 | No Gas | 0.018 | ppb | 45.1 | 656.69 | 0.3 | |
| Hg | 201 | 159 | He | <0.000 | ppb | N/A | 22.67 | 0.1 | |
| Tl | 205 | 159 | No Gas | 0.157 | ppb | 28.9 | 7285.56 | 0.1 | >LOD |
| Pb | 208 | 159 | No Gas | 0.121 | ppb | 41.9 | 11977.90 | 0.1 | >LOD |
| U | 238 | 159 | No Gas | 0.115 | ppb | 32.6 | 6250.60 | 0.05 | >LOD |

LY 12|22|20

# Continuing Calibration Blank (CCB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1247802.28 | 1.9 | 1141329.81 | 109.33 | 60 | 120 | |
| Sc | 45 | No Gas | 4922934.67 | 0.6 | 4615577.5 | 106.66 | 60 | 120 | |
| Sc | 45 | H2 | 3332021.17 | 1.0 | 3170333.75 | 105.1 | 60 | 120 | |
| Sc | 45 | He | 563607.50 | 0.9 | 539902.19 | 104.39 | 60 | 120 | |
| Ge | 72 | No Gas | 1395987.29 | 1.5 | 1308491.96 | 106.69 | 60 | 120 | |
| Ge | 72 | H2 | 939219.48 | 0.1 | 930488.13 | 100.94 | 60 | 120 | |
| Ge | 72 | He | 351281.15 | 0.7 | 336689.17 | 104.33 | 60 | 120 | |
| In | 115 | No Gas | 9280180.81 | 1.1 | 8658209.05 | 107.18 | 60 | 120 | |
| Tb | 159 | No Gas | 10834626.79 | 1.3 | 10130338.49 | 106.95 | 60 | 120 | |
| Tb | 159 | He | 5485191.83 | 0.8 | 5158319.33 | 106.34 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-08I |
| **File Name** | H6L09029.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:13:15 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Pass |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 70.117 | 7.012 | ppb | 4.4 | 133607.75 | 50 | |
| Be | 9 | 6 | No Gas | <0.000 | <0.000 | ppb | N/A | 20.00 | 50 | |
| B | 11 | 6 | No Gas | 524.913 | 52.491 | ppb | 4.9 | 109802.67 | 100 | |
| Na | 23 | 45 | H2 | 230026.884 | 23002.688 | ppb | 2.0 | 153403717.33 | 50000 | |
| Mg | 24 | 45 | No Gas | 7404.701 | 740.470 | ppb | 3.4 | 10953446.33 | 50000 | |
| Al | 27 | 45 | No Gas | 5.159 | 0.516 | ppb | 101.7 | 42612.86 | 50000 | |
| Si | 28 | 45 | H2 | 14256.502 | 1425.650 | ppb | 1.4 | 2879935.25 | 5000 | |
| P | 31 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 36120.26 | 500 | |
| K | 39 | 45 | He | 4398.173 | 439.817 | ppb | 2.3 | 602180.85 | 50000 | |
| Ca | 40 | 45 | H2 | 31502.666 | 3150.267 | ppb | 0.8 | 47610401.33 | 50000 | |
| Ti | 47 | 45 | No Gas | 1.054 | 0.105 | ppb | 25.1 | 554.01 | 500 | |
| V | 51 | 45 | He | 3.662 | 0.366 | ppb | 2.4 | 6078.02 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2933.65 | 500 | |
| Mn | 55 | 45 | No Gas | 789.371 | 78.937 | ppb | 2.3 | 3773157.67 | 3000 | |
| Fe | 56 | 45 | H2 | 29.695 | 2.969 | ppb | 3.5 | 119042.96 | 50000 | |
| Co | 59 | 45 | No Gas | 0.238 | 0.024 | ppb | 19.6 | 1724.11 | 500 | |
| Ni | 60 | 45 | He | 0.738 | 0.074 | ppb | 13.0 | 468.68 | 500 | |
| Cu | 63 | 45 | He | 1.764 | 0.176 | ppb | 6.1 | 3751.19 | 500 | |
| Zn | 66 | 72 | No Gas | 44.194 | 4.419 | ppb | 1.9 | 33042.83 | 500 | |
| As | 75 | 72 | He | 6.438 | 0.644 | ppb | 4.6 | 1318.73 | 500 | |
| Se | 78 | 72 | H2 | <0.000 | <0.000 | ppb | N/A | 72.33 | 500 | |
| Sr | 88 | 72 | No Gas | 650.242 | 65.024 | ppb | 0.9 | 3909799.29 | 500 | |
| Zr | 90 | 72 | No Gas | 0.065 | 0.006 | ppb | 67.3 | 550.01 | 50 | |
| Mo | 95 | 115 | No Gas | 40.755 | 4.076 | ppb | 0.5 | 50301.51 | 500 | |
| Ag | 107 | 115 | No Gas | 0.051 | 0.005 | ppb | 24.2 | 388.89 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 116.89 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 3259.30 | 500 | |
| Sb | 123 | 115 | No Gas | 0.122 | 0.012 | ppb | 12.2 | 1504.53 | 100 | |
| Ba | 137 | 115 | No Gas | 450.860 | 45.086 | ppb | 0.6 | 408393.01 | 1000 | |
| W | 182 | 159 | No Gas | 15.210 | 1.521 | ppb | 2.5 | 28692.70 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 17.83 | 5 | |
| Tl | 205 | 159 | No Gas | 0.714 | 0.071 | ppb | 7.0 | 3783.91 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 3958.04 | 500 | |
| U | 238 | 159 | No Gas | 2.921 | 0.292 | ppb | 2.2 | 14971.37 | 497 | |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1200063.47 | 0.2 | 1141329.81 | 105.15 | 60 | 120 | |
| Sc | 45 | No Gas | 4902782.67 | 1.0 | 4615577.5 | 106.22 | 60 | 120 | |
| Sc | 45 | H2 | 3320655.92 | 1.8 | 3170333.75 | 104.74 | 60 | 120 | |
| Sc | 45 | He | 570714.54 | 1.4 | 539902.19 | 105.71 | 60 | 120 | |
| Ge | 72 | No Gas | 1471313.00 | 0.1 | 1308491.96 | 112.44 | 60 | 120 | |
| Ge | 72 | H2 | 1032755.67 | 4.3 | 930488.13 | 110.99 | 60 | 120 | |
| Ge | 72 | He | 370453.79 | 2.1 | 336689.17 | 110.03 | 60 | 120 | |
| In | 115 | No Gas | 9081928.60 | 0.8 | 8658209.05 | 104.89 | 60 | 120 | |
| Tb | 159 | No Gas | 10850422.07 | 1.0 | 10130338.49 | 107.11 | 60 | 120 | |
| Tb | 159 | He | 5393897.67 | 5.1 | 5158319.33 | 104.57 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-09I |
| **File Name** | H6L09030.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:15:51 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 443.040 | 44.304 | ppb | 2.7 | 456405.83 | 50 | |
| Be | 9 | 6 | No Gas | 0.018 | 0.002 | ppb | 322.7 | 25.56 | 50 | |
| B | 11 | 6 | No Gas | 1506.229 | 150.623 | ppb | 1.3 | 300923.22 | 100 | >LDR |
| Na | 23 | 45 | H2 | 1467434.917 | 146743.492 | ppb | 0.9 | 973723200.00 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 1334.451 | 133.445 | ppb | 1.8 | 1940329.38 | 50000 | |
| Al | 27 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 30896.29 | 50000 | |
| Si | 28 | 45 | H2 | 11502.482 | 1150.248 | ppb | 0.6 | 2323061.00 | 5000 | |
| P | 31 | 45 | No Gas | 6.352 | 0.635 | ppb | 119.5 | 36336.20 | 500 | |
| K | 39 | 45 | He | 17160.906 | 1716.091 | ppb | 5.1 | 1990575.88 | 50000 | |
| Ca | 40 | 45 | H2 | 59894.775 | 5989.477 | ppb | 1.6 | 90352453.33 | 50000 | |
| Ti | 47 | 45 | No Gas | 0.695 | 0.069 | ppb | 16.2 | 438.68 | 500 | |
| V | 51 | 45 | He | 3.717 | 0.372 | ppb | 7.1 | 6200.07 | 500 | |
| Cr | 52 | 45 | He | 8.463 | 0.846 | ppb | 2.0 | 12465.00 | 500 | |
| Mn | 55 | 45 | No Gas | 2.842 | 0.284 | ppb | 9.9 | 26088.19 | 3000 | |
| Fe | 56 | 45 | H2 | <0.000 | <0.000 | ppb | N/A | 38413.86 | 50000 | |
| Co | 59 | 45 | No Gas | 0.083 | 0.008 | ppb | 26.8 | 1034.04 | 500 | |
| Ni | 60 | 45 | He | 2.004 | 0.200 | ppb | 7.0 | 984.04 | 500 | |
| Cu | 63 | 45 | He | 1.274 | 0.127 | ppb | 11.3 | 3288.40 | 500 | |
| Zn | 66 | 72 | No Gas | 2.705 | 0.270 | ppb | 4.5 | 3661.83 | 500 | |
| As | 75 | 72 | He | 7.764 | 0.776 | ppb | 4.8 | 1564.42 | 500 | |
| Se | 78 | 72 | H2 | 0.327 | 0.033 | ppb | 34.0 | 106.67 | 500 | |
| Sr | 88 | 72 | No Gas | 1526.883 | 152.688 | ppb | 3.3 | 8841339.65 | 500 | |
| Zr | 90 | 72 | No Gas | 0.017 | 0.002 | ppb | 147.5 | 346.67 | 50 | |
| Mo | 95 | 115 | No Gas | 47.964 | 4.796 | ppb | 1.8 | 57276.13 | 500 | |
| Ag | 107 | 115 | No Gas | 0.026 | 0.003 | ppb | 42.9 | 298.89 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 31.14 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2466.90 | 500 | |
| Sb | 123 | 115 | No Gas | 0.048 | 0.005 | ppb | 62.3 | 1303.40 | 100 | |
| Ba | 137 | 115 | No Gas | 41.827 | 4.183 | ppb | 3.9 | 36920.18 | 1000 | |
| W | 182 | 159 | No Gas | 2.367 | 0.237 | ppb | 4.1 | 4497.49 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 16.17 | 5 | |
| Tl | 205 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 381.12 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 2336.76 | 500 | |
| U | 238 | 159 | No Gas | 2.521 | 0.252 | ppb | 4.0 | 12351.79 | 497 | |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1168451.24 | 4.9 | 1141329.81 | 102.38 | 60 | 120 | |
| Sc | 45 | No Gas | 4750476.17 | 2.1 | 4615577.5 | 102.92 | 60 | 120 | |
| Sc | 45 | H2 | 3318049.50 | 1.8 | 3170333.75 | 104.66 | 60 | 120 | |
| Sc | 45 | He | 577604.42 | 2.3 | 539902.19 | 106.98 | 60 | 120 | |
| Ge | 72 | No Gas | 1418576.37 | 3.9 | 1308491.96 | 108.41 | 60 | 120 | |
| Ge | 72 | H2 | 997518.12 | 1.3 | 930488.13 | 107.2 | 60 | 120 | |
| Ge | 72 | He | 374145.78 | 1.7 | 336689.17 | 111.12 | 60 | 120 | |
| In | 115 | No Gas | 8795634.07 | 3.3 | 8658209.05 | 101.59 | 60 | 120 | |
| Tb | 159 | No Gas | 10312935.70 | 3.2 | 10130338.49 | 101.8 | 60 | 120 | |
| Tb | 159 | He | 5413603.00 | 2.5 | 5158319.33 | 104.95 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-10I |
| **File Name** | H6L09031.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:18:26 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 1060.506 | 106.051 | ppb | 4.6 | 961318.82 | 50 | >LDR |
| Be | 9 | 6 | No Gas | 0.036 | 0.004 | ppb | 102.5 | 30.00 | 50 | |
| B | 11 | 6 | No Gas | 2518.045 | 251.805 | ppb | 4.5 | 482948.17 | 100 | >LDR |
| Na | 23 | 45 | H2 | 4760189.305 | 476018.931 | ppb | 1.5 | 3218681344.00 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 82377.003 | 8237.700 | ppb | 3.2 | 117654741.33 | 50000 | |
| Al | 27 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 28242.20 | 50000 | |
| Si | 28 | 45 | H2 | 12849.454 | 1284.945 | ppb | 3.1 | 2644236.33 | 5000 | |
| P | 31 | 45 | No Gas | 30.669 | 3.067 | ppb | 44.4 | 38996.02 | 500 | |
| K | 39 | 45 | He | 38922.656 | 3892.266 | ppb | 1.7 | 4447156.50 | 50000 | |
| Ca | 40 | 45 | H2 | 407428.070 | 40742.807 | ppb | 2.6 | 626019968.00 | 50000 | |
| Ti | 47 | 45 | No Gas | 0.784 | 0.078 | ppb | 13.7 | 462.01 | 500 | |
| V | 51 | 45 | He | 0.332 | 0.033 | ppb | 59.1 | 3105.69 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2486.23 | 500 | |
| Mn | 55 | 45 | No Gas | 811.643 | 81.164 | ppb | 6.0 | 3753028.08 | 3000 | |
| Fe | 56 | 45 | H2 | 1026.426 | 102.643 | ppb | 3.0 | 2557113.00 | 50000 | |
| Co | 59 | 45 | No Gas | 0.240 | 0.024 | ppb | 7.7 | 1677.44 | 500 | |
| Ni | 60 | 45 | He | 0.698 | 0.070 | ppb | 1.4 | 468.68 | 500 | |
| Cu | 63 | 45 | He | 3.063 | 0.306 | ppb | 9.2 | 5250.35 | 500 | |
| Zn | 66 | 72 | No Gas | 5.360 | 0.536 | ppb | 7.2 | 5365.73 | 500 | |
| As | 75 | 72 | He | 2.229 | 0.223 | ppb | 4.9 | 577.01 | 500 | |
| Se | 78 | 72 | H2 | 0.097 | 0.010 | ppb | 26.8 | 87.00 | 500 | |
| Sr | 88 | 72 | No Gas | 10541.867 | 1054.187 | ppb | 6.6 | 59891368.73 | 500 | >LDR |
| Zr | 90 | 72 | No Gas | 0.019 | 0.002 | ppb | 115.2 | 350.01 | 50 | |
| Mo | 95 | 115 | No Gas | 38.297 | 3.830 | ppb | 4.7 | 43108.56 | 500 | |
| Ag | 107 | 115 | No Gas | 0.077 | 0.008 | ppb | 16.2 | 431.12 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 41.43 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2663.61 | 500 | |
| Sb | 123 | 115 | No Gas | 0.150 | 0.015 | ppb | 87.9 | 1420.08 | 100 | |
| Ba | 137 | 115 | No Gas | 37.977 | 3.798 | ppb | 4.9 | 31599.46 | 1000 | |
| W | 182 | 159 | No Gas | 0.989 | 0.099 | ppb | 6.0 | 1930.16 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 15.83 | 5 | |
| Tl | 205 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 165.55 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 2627.89 | 500 | |
| U | 238 | 159 | No Gas | 0.968 | 0.097 | ppb | 4.1 | 4776.49 | 497 | |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1128105.08 | 6.7 | 1141329.81 | 98.84 | 60 | 120 | |
| Sc | 45 | No Gas | 4751532.00 | 4.8 | 4615577.5 | 102.95 | 60 | 120 | |
| Sc | 45 | H2 | 3382984.83 | 2.7 | 3170333.75 | 106.71 | 60 | 120 | |
| Sc | 45 | He | 590793.56 | 2.6 | 539902.19 | 109.43 | 60 | 120 | |
| Ge | 72 | No Gas | 1394707.50 | 6.2 | 1308491.96 | 106.59 | 60 | 120 | |
| Ge | 72 | H2 | 960194.58 | 0.4 | 930488.13 | 103.19 | 60 | 120 | |
| Ge | 72 | He | 364823.12 | 1.9 | 336689.17 | 108.36 | 60 | 120 | |
| In | 115 | No Gas | 8291310.39 | 4.1 | 8658209.05 | 95.76 | 60 | 120 | |
| Tb | 159 | No Gas | 9697523.51 | 5.9 | 10130338.49 | 95.73 | 60 | 120 | |
| Tb | 159 | He | 5177422.17 | 2.6 | 5158319.33 | 100.37 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-12I |
| **File Name** | H6L09033.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:23:37 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Fail |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 346.295 | 34.629 | ppb | 1.6 | 423059.15 | 50 | |
| Be | 9 | 6 | No Gas | 0.041 | 0.004 | ppb | 103.0 | 37.78 | 50 | |
| B | 11 | 6 | No Gas | 1754.272 | 175.427 | ppb | 0.1 | 398186.08 | 100 | >LDR |
| Na | 23 | 45 | H2 | 1120724.876 | 112072.488 | ppb | 3.2 | 797654848.00 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 50329.144 | 5032.914 | ppb | 2.4 | 81474514.67 | 50000 | |
| Al | 27 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 33774.77 | 50000 | |
| Si | 28 | 45 | H2 | 13014.586 | 1301.459 | ppb | 4.1 | 2817295.08 | 5000 | |
| P | 31 | 45 | No Gas | 55.008 | 5.501 | ppb | 26.2 | 47230.89 | 500 | |
| K | 39 | 45 | He | 10479.132 | 1047.913 | ppb | 2.7 | 1332008.33 | 50000 | |
| Ca | 40 | 45 | H2 | 131585.292 | 13158.529 | ppb | 2.6 | 212777605.33 | 50000 | |
| Ti | 47 | 45 | No Gas | 1.111 | 0.111 | ppb | 13.0 | 624.68 | 500 | |
| V | 51 | 45 | He | 1.377 | 0.138 | ppb | 5.5 | 4218.66 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2671.60 | 500 | |
| Mn | 55 | 45 | No Gas | 753.906 | 75.391 | ppb | 1.6 | 3955114.58 | 3000 | |
| Fe | 56 | 45 | H2 | 4679.322 | 467.932 | ppb | 2.8 | 12083290.67 | 50000 | |
| Co | 59 | 45 | No Gas | 0.165 | 0.017 | ppb | 17.2 | 1552.76 | 500 | |
| Ni | 60 | 45 | He | 0.920 | 0.092 | ppb | 8.8 | 575.34 | 500 | |
| Cu | 63 | 45 | He | 1.392 | 0.139 | ppb | 4.7 | 3585.14 | 500 | |
| Zn | 66 | 72 | No Gas | 5.110 | 0.511 | ppb | 4.5 | 5885.28 | 500 | |
| As | 75 | 72 | He | 4.580 | 0.458 | ppb | 7.0 | 1048.71 | 500 | |
| Se | 78 | 72 | H2 | <0.000 | <0.000 | ppb | N/A | 69.67 | 500 | |
| Sr | 88 | 72 | No Gas | 2192.024 | 219.202 | ppb | 3.4 | 14108796.66 | 500 | |
| Zr | 90 | 72 | No Gas | 0.273 | 0.027 | ppb | 11.2 | 1463.42 | 50 | |
| Mo | 95 | 115 | No Gas | 26.761 | 2.676 | ppb | 4.7 | 33704.87 | 500 | |
| Ag | 107 | 115 | No Gas | 0.066 | 0.007 | ppb | 13.2 | 444.45 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 17.70 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2319.10 | 500 | |
| Sb | 123 | 115 | No Gas | 0.073 | 0.007 | ppb | 90.4 | 1424.53 | 100 | |
| Ba | 137 | 115 | No Gas | 64.235 | 6.423 | ppb | 2.9 | 59506.91 | 1000 | |
| W | 182 | 159 | No Gas | 0.187 | 0.019 | ppb | 26.8 | 676.68 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 17.00 | 5 | |
| Tl | 205 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 138.89 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 3296.85 | 500 | |
| U | 238 | 159 | No Gas | 16.062 | 1.606 | ppb | 2.9 | 80800.02 | 497 | |

# Sample Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1328887.66 | 1.3 | 1141329.81 | 116.43 | 60 | 120 | |
| Sc | 45 | No Gas | 5381125.83 | 2.3 | 4615577.5 | 116.59 | 60 | 120 | |
| Sc | 45 | H2 | 3559952.08 | 3.0 | 3170333.75 | 112.29 | 60 | 120 | |
| Sc | 45 | He | 606724.27 | 0.7 | 539902.19 | 112.38 | 60 | 120 | |
| Ge | 72 | No Gas | 1576419.71 | 2.4 | 1308491.96 | 120.48 | 60 | 120 | ISTD Failed |
| Ge | 72 | H2 | 1090741.06 | 5.9 | 930488.13 | 117.22 | 60 | 120 | |
| Ge | 72 | He | 390325.44 | 1.9 | 336689.17 | 115.93 | 60 | 120 | |
| In | 115 | No Gas | 9254029.47 | 2.6 | 8658209.05 | 106.88 | 60 | 120 | |
| Tb | 159 | No Gas | 11006942.90 | 2.7 | 10130338.49 | 108.65 | 60 | 120 | |
| Tb | 159 | He | 5609973.50 | 1.6 | 5158319.33 | 108.76 | 60 | 120 | |

LY 12/22/20

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-13I |
| **File Name** | H6L09034.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:26:13 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Flal** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 585.942 | 58.594 | ppb | 2.9 | 651117.65 | 50 | >LDR |
| Be | 9 | 6 | No Gas | 0.008 | 0.001 | ppb | 392.0 | 24.44 | 50 | |
| B | 11 | 6 | No Gas | 1579.459 | 157.946 | ppb | 0.8 | 353241.49 | 100 | >LDR |
| Na | 23 | 45 | H2 | 2769415.469 | 276941.547 | ppb | 1.4 | 1992067328.00 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 96655.944 | 9665.594 | ppb | 4.1 | 152188437.33 | 50000 | |
| Al | 27 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 28419.26 | 50000 | |
| Si | 28 | 45 | H2 | 13769.073 | 1376.907 | ppb | 1.8 | 3014413.17 | 5000 | |
| P | 31 | 45 | No Gas | 39.036 | 3.904 | ppb | 17.8 | 44047.79 | 500 | |
| K | 39 | 45 | He | 18398.891 | 1839.889 | ppb | 3.1 | 2281743.67 | 50000 | |
| Ca | 40 | 45 | H2 | 350471.116 | 35047.112 | ppb | 1.5 | 572889344.00 | 50000 | |
| Ti | 47 | 45 | No Gas | 0.953 | 0.095 | ppb | 21.7 | 559.34 | 500 | |
| V | 51 | 45 | He | 1.111 | 0.111 | ppb | 16.6 | 4043.93 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2549.57 | 500 | |
| Mn | 55 | 45 | No Gas | 654.478 | 65.448 | ppb | 5.1 | 3340618.42 | 3000 | |
| Fe | 56 | 45 | H2 | 2761.004 | 276.100 | ppb | 1.1 | 7230771.17 | 50000 | |
| Co | 59 | 45 | No Gas | 0.217 | 0.022 | ppb | 10.1 | 1746.11 | 500 | |
| Ni | 60 | 45 | He | 0.113 | 0.011 | ppb | 38.4 | 239.33 | 500 | |
| Cu | 63 | 45 | He | 1.022 | 0.102 | ppb | 8.6 | 3252.39 | 500 | |
| Zn | 66 | 72 | No Gas | 2.563 | 0.256 | ppb | 10.1 | 3756.52 | 500 | |
| As | 75 | 72 | He | 0.281 | 0.028 | ppb | 27.4 | 257.67 | 500 | |
| Se | 78 | 72 | H2 | <0.000 | <0.000 | ppb | N/A | 64.67 | 500 | |
| Sr | 88 | 72 | No Gas | 8205.318 | 820.532 | ppb | 3.0 | 50082066.90 | 500 | >LDR |
| Zr | 90 | 72 | No Gas | 0.028 | 0.003 | ppb | 53.9 | 413.34 | 50 | |
| Mo | 95 | 115 | No Gas | 8.617 | 0.862 | ppb | 2.6 | 10543.07 | 500 | |
| Ag | 107 | 115 | No Gas | 0.056 | 0.006 | ppb | 9.8 | 393.34 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 23.16 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2533.58 | 500 | |
| Sb | 123 | 115 | No Gas | 0.079 | 0.008 | ppb | 21.6 | 1377.85 | 100 | |
| Ba | 137 | 115 | No Gas | 47.985 | 4.798 | ppb | 2.2 | 42619.82 | 1000 | |
| W | 182 | 159 | No Gas | 0.145 | 0.015 | ppb | 37.8 | 570.01 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 15.17 | 5 | |
| Tl | 205 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 127.78 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 2091.18 | 500 | |
| U | 238 | 159 | No Gas | 0.896 | 0.090 | ppb | 7.8 | 4863.19 | 497 | |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1308383.35 | 4.1 | 1141329.81 | 114.64 | 60 | 120 | |
| Sc | 45 | No Gas | 5240587.33 | 5.2 | 4615577.5 | 113.54 | 60 | 120 | |
| Sc | 45 | H2 | 3598286.67 | 1.6 | 3170333.75 | 113.5 | 60 | 120 | |
| Sc | 45 | He | 619832.13 | 0.7 | 539902.19 | 114.8 | 60 | 120 | |
| Ge | 72 | No Gas | 1495552.33 | 4.2 | 1308491.96 | 114.3 | 60 | 120 | |
| Ge | 72 | H2 | 1083843.64 | 5.1 | 930488.13 | 116.48 | 60 | 120 | |
| Ge | 72 | He | 386402.54 | 2.9 | 336689.17 | 114.77 | 60 | 120 | |
| In | 115 | No Gas | 8857170.22 | 2.7 | 8658209.05 | 102.3 | 60 | 120 | |
| Tb | 159 | No Gas | 10576688.75 | 4.1 | 10130338.49 | 104.41 | 60 | 120 | |
| Tb | 159 | He | 5453438.83 | 2.8 | 5158319.33 | 105.72 | 60 | 120 | |

# Sample Report

| | |
|---|---|
| **Sample Name** | L101-11I |
| **File Name** | H6L09035.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:28:49 |
| **Sample Type** | Sample |
| **Total Dilution** | 10.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Meas. Conc. | Units | RSD | CPS | LDR | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 628.734 | 62.873 | ppb | 5.5 | 697134.23 | 50 | >LDR |
| Be | 9 | 6 | No Gas | 0.000 | 0.000 | ppb | 18000.8 | 22.22 | 50 | |
| B | 11 | 6 | No Gas | 1631.846 | 163.185 | ppb | 5.4 | 366795.27 | 100 | >LDR |
| Na | 23 | 45 | H2 | 2907804.093 | 290780.409 | ppb | 1.0 | 2051456000.00 | 50000 | >LDR |
| Mg | 24 | 45 | No Gas | 99563.080 | 9956.308 | ppb | 2.8 | 156147594.67 | 50000 | |
| Al | 27 | 45 | No Gas | <0.000 | <0.000 | ppb | N/A | 33303.71 | 50000 | |
| Si | 28 | 45 | H2 | 14393.349 | 1439.335 | ppb | 2.5 | 3089392.00 | 5000 | |
| P | 31 | 45 | No Gas | 41.297 | 4.130 | ppb | 24.7 | 44117.97 | 500 | |
| K | 39 | 45 | He | 20152.959 | 2015.296 | ppb | 3.3 | 2371501.17 | 50000 | |
| Ca | 40 | 45 | H2 | 371696.155 | 37169.616 | ppb | 1.4 | 595876608.00 | 50000 | |
| Ti | 47 | 45 | No Gas | 1.048 | 0.105 | ppb | 11.8 | 586.68 | 500 | |
| V | 51 | 45 | He | 1.705 | 0.170 | ppb | 10.3 | 4426.05 | 500 | |
| Cr | 52 | 45 | He | <0.000 | <0.000 | ppb | N/A | 2742.28 | 500 | |
| Mn | 55 | 45 | No Gas | 675.454 | 67.545 | ppb | 1.6 | 3435925.58 | 3000 | |
| Fe | 56 | 45 | H2 | 2861.289 | 286.129 | ppb | 1.9 | 7346561.00 | 50000 | |
| Co | 59 | 45 | No Gas | 0.220 | 0.022 | ppb | 9.5 | 1750.78 | 500 | |
| Ni | 60 | 45 | He | 0.103 | 0.010 | ppb | 60.1 | 224.00 | 500 | |
| Cu | 63 | 45 | He | 2.105 | 0.210 | ppb | 6.2 | 4248.00 | 500 | |
| Zn | 66 | 72 | No Gas | 3.892 | 0.389 | ppb | 4.4 | 4698.82 | 500 | |
| As | 75 | 72 | He | 0.433 | 0.043 | ppb | 25.5 | 277.33 | 500 | |
| Se | 78 | 72 | H2 | <0.000 | <0.000 | ppb | N/A | 65.67 | 500 | |
| Sr | 88 | 72 | No Gas | 8366.168 | 836.617 | ppb | 1.7 | 50945194.64 | 500 | >LDR |
| Zr | 90 | 72 | No Gas | 0.044 | 0.004 | ppb | 46.9 | 476.68 | 50 | |
| Mo | 95 | 115 | No Gas | 8.794 | 0.879 | ppb | 1.0 | 10583.10 | 500 | |
| Ag | 107 | 115 | No Gas | 0.047 | 0.005 | ppb | 40.1 | 362.23 | 50 | |
| Cd | 111 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 25.14 | 500 | |
| Sn | 118 | 115 | No Gas | <0.000 | <0.000 | ppb | N/A | 2835.87 | 500 | |
| Sb | 123 | 115 | No Gas | 0.133 | 0.013 | ppb | 15.4 | 1464.53 | 100 | |
| Ba | 137 | 115 | No Gas | 48.727 | 4.873 | ppb | 0.8 | 42607.50 | 1000 | |
| W | 182 | 159 | No Gas | 0.129 | 0.013 | ppb | 49.5 | 536.68 | 50 | |
| Hg | 201 | 159 | He | <0.000 | <0.000 | ppb | N/A | 13.33 | 5 | |
| Tl | 205 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 172.22 | 500 | |
| Pb | 208 | 159 | No Gas | <0.000 | <0.000 | ppb | N/A | 1962.29 | 500 | |
| U | 238 | 159 | No Gas | 0.873 | 0.087 | ppb | 4.9 | 4714.25 | 497 | |

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1315434.70 | 0.7 | 1141329.81 | 115.25 | 60 | 120 | |
| Sc | 45 | No Gas | 5214593.67 | 2.0 | 4615577.5 | 112.98 | 60 | 120 | |
| Sc | 45 | H2 | 3529538.33 | 3.0 | 3170333.75 | 111.33 | 60 | 120 | |
| Sc | 45 | He | 591606.33 | 1.5 | 539902.19 | 109.58 | 60 | 120 | |
| Ge | 72 | No Gas | 1490979.88 | 0.8 | 1308491.96 | 113.95 | 60 | 120 | |
| Ge | 72 | H2 | 1048483.15 | 4.2 | 930488.13 | 112.68 | 60 | 120 | |
| Ge | 72 | He | 375694.70 | 1.3 | 336689.17 | 111.59 | 60 | 120 | |
| In | 115 | No Gas | 8717152.62 | 0.4 | 8658209.05 | 100.68 | 60 | 120 | |
| Tb | 159 | No Gas | 10470550.97 | 1.3 | 10130338.49 | 103.36 | 60 | 120 | |
| Tb | 159 | He | 5341196.67 | 1.8 | 5158319.33 | 103.55 | 60 | 120 | |

# Continuing Calibration Verification (CCV) Report

| | |
|---|---|
| **Sample Name** | CCV3 |
| **File Name** | H6L09036.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:31:25 |
| **Sample Type** | CCV |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Fail |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | % Rec | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 23.520 | ppb | 2.1 | 324720.84 | 25 | 94.08 | 90 | 110 | |
| Be | 9 | 6 | No Gas | 23.228 | ppb | 0.5 | 92264.81 | 25 | 92.91 | 90 | 110 | |
| B | 11 | 6 | No Gas | 48.994 | ppb | 1.9 | 118190.10 | 50 | 97.99 | 90 | 110 | |
| Na | 23 | 45 | H2 | 24586.168 | ppb | 1.0 | 173113632.00 | 25000 | 98.34 | 90 | 110 | |
| Mg | 24 | 45 | No Gas | 24541.770 | ppb | 1.0 | 393317237.33 | 25000 | 98.17 | 90 | 110 | |
| Al | 27 | 45 | No Gas | 23907.260 | ppb | 1.8 | 518714338.94 | 25000 | 95.63 | 90 | 110 | |
| Si | 28 | 45 | H2 | 2454.261 | ppb | 1.1 | 5231967.00 | 2500 | 98.17 | 90 | 110 | |
| P | 31 | 45 | No Gas | 241.431 | ppb | 1.7 | 338797.63 | 250 | 96.57 | 90 | 110 | |
| K | 39 | 45 | He | 24531.743 | ppb | 9.4 | 27636298.67 | 25000 | 98.13 | 90 | 110 | |
| Ca | 40 | 45 | H2 | 24182.344 | ppb | 0.5 | 385266090.67 | 25000 | 96.73 | 90 | 110 | |
| Ti | 47 | 45 | No Gas | 222.031 | ppb | 0.8 | 680705.35 | 250 | 88.81 | 90 | 110 | > +/- 10% |
| V | 51 | 45 | He | 242.806 | ppb | 8.7 | 2352286.25 | 250 | 97.12 | 90 | 110 | |
| Cr | 52 | 45 | He | 242.007 | ppb | 8.5 | 2742356.67 | 250 | 96.8 | 90 | 110 | |
| Mn | 55 | 45 | No Gas | 1453.948 | ppb | 1.0 | 75268581.33 | 1500 | 96.93 | 90 | 110 | |
| Fe | 56 | 45 | H2 | 24477.605 | ppb | 2.0 | 620310400.00 | 25000 | 97.91 | 90 | 110 | |
| Co | 59 | 45 | No Gas | 240.674 | ppb | 1.0 | 11029648.67 | 250 | 96.27 | 90 | 110 | |
| Ni | 60 | 45 | He | 241.690 | ppb | 9.0 | 1007254.83 | 250 | 96.68 | 90 | 110 | |
| Cu | 63 | 45 | He | 250.732 | ppb | 9.5 | 2680774.92 | 250 | 100.29 | 90 | 110 | |
| Zn | 66 | 72 | No Gas | 244.531 | ppb | 1.9 | 1788306.96 | 250 | 97.81 | 90 | 110 | |
| As | 75 | 72 | He | 238.267 | ppb | 5.4 | 441718.19 | 250 | 95.31 | 90 | 110 | |
| Se | 78 | 72 | H2 | 234.605 | ppb | 4.2 | 179440.11 | 250 | 93.84 | 90 | 110 | |
| Sr | 88 | 72 | No Gas | 242.210 | ppb | 0.4 | 15089298.29 | 250 | 96.88 | 90 | 110 | |
| Zr | 90 | 72 | No Gas | 22.873 | ppb | 1.2 | 931860.50 | 25 | 91.49 | 90 | 110 | |
| Mo | 95 | 115 | No Gas | 236.124 | ppb | 1.7 | 2945235.72 | 250 | 94.45 | 90 | 110 | |
| Ag | 107 | 115 | No Gas | 22.427 | ppb | 1.5 | 738399.30 | 25 | 89.71 | 90 | 110 | > +/- 10% |
| Cd | 111 | 115 | No Gas | 239.809 | ppb | 2.0 | 1577216.71 | 250 | 95.92 | 90 | 110 | |
| Sn | 118 | 115 | No Gas | 236.042 | ppb | 1.8 | 4585097.74 | 250 | 94.42 | 90 | 110 | |
| Sb | 123 | 115 | No Gas | 45.289 | ppb | 1.9 | 969362.36 | 50 | 90.58 | 90 | 110 | |
| Ba | 137 | 115 | No Gas | 480.254 | ppb | 3.1 | 4411989.13 | 500 | 96.05 | 90 | 110 | |
| W | 182 | 159 | No Gas | 24.488 | ppb | 1.0 | 465974.57 | 25 | 97.95 | 90 | 110 | |
| Hg | 201 | 159 | He | 2.358 | ppb | 4.3 | 3460.98 | 2.5 | 94.32 | 90 | 110 | |
| Tl | 205 | 159 | No Gas | 245.958 | ppb | 1.7 | 10256571.81 | 250 | 98.38 | 90 | 110 | |
| Pb | 208 | 159 | No Gas | 243.643 | ppb | 2.6 | 13748734.38 | 250 | 97.46 | 90 | 110 | |
| U | 238 | 159 | No Gas | 238.591 | ppb | 2.8 | 11975429.80 | 250 | 95.44 | 90 | 110 | |

DH 12/22/20

# Continuing Calibration Verification (CCV) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1381125.87 | 1.4 | 1141329.81 | 121.01 | 60 | 120 | ISTD Failed |
| Sc | 45 | No Gas | 5327794.67 | 1.6 | 4615577.5 | 115.43 | 60 | 120 | |
| Sc | 45 | H2 | 3506452.00 | 0.3 | 3170333.75 | 110.6 | 60 | 120 | |
| Sc | 45 | He | 600342.63 | 7.0 | 539902.19 | 111.19 | 60 | 120 | |
| Ge | 72 | No Gas | 1525063.04 | 0.9 | 1308491.96 | 116.55 | 60 | 120 | |
| Ge | 72 | H2 | 1072559.62 | 3.0 | 930488.13 | 115.27 | 60 | 120 | |
| Ge | 72 | He | 394754.60 | 3.1 | 336689.17 | 117.25 | 60 | 120 | |
| In | 115 | No Gas | 9219854.46 | 1.8 | 8658209.05 | 106.49 | 60 | 120 | |
| Tb | 159 | No Gas | 11060605.12 | 2.1 | 10130338.49 | 109.18 | 60 | 120 | |
| Tb | 159 | He | 5802838.50 | 2.0 | 5158319.33 | 112.49 | 60 | 120 | |

# Continuing Calibration Blank (CCB) Report

| | |
|---|---|
| **Sample Name** | CCB3 |
| **File Name** | H6L09037.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\H6L09.b |
| **Acq Time** | 2020-12-22 14:34:02 |
| **Sample Type** | CCB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | **LYaman** |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | Limit | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | <0.000 | ppb | N/A | 77152.43 | 0.4 | |
| Be | 9 | 6 | No Gas | 0.016 | ppb | 58.7 | 80.00 | 0.08 | |
| B | 11 | 6 | No Gas | 1.667 | ppb | 13.5 | 7200.75 | 4 | |
| Na | 23 | 45 | H2 | 54.280 | ppb | 4.0 | 1186844.33 | 40 | >LOD |
| Mg | 24 | 45 | No Gas | 14.931 | ppb | 15.9 | 257266.61 | 10 | >LOD |
| Al | 27 | 45 | No Gas | 14.130 | ppb | 15.7 | 317889.69 | 15 | |
| Si | 28 | 45 | H2 | 1.395 | ppb | 3.5 | 8596.00 | 8 | |
| P | 31 | 45 | No Gas | <0.000 | ppb | N/A | 36924.72 | 10 | |
| K | 39 | 45 | He | 6.660 | ppb | 80.3 | 141995.37 | 20 | |
| Ca | 40 | 45 | H2 | 8.836 | ppb | 8.1 | 238536.19 | 25 | |
| Ti | 47 | 45 | No Gas | 0.160 | ppb | 19.7 | 716.69 | 0.5 | |
| V | 51 | 45 | He | <0.000 | ppb | N/A | 2675.59 | 0.5 | |
| Cr | 52 | 45 | He | <0.000 | ppb | N/A | 2856.30 | 0.2 | |
| Mn | 55 | 45 | No Gas | 0.879 | ppb | 17.6 | 55909.47 | 0.2 | >LOD |
| Fe | 56 | 45 | H2 | 7.729 | ppb | 8.2 | 241547.13 | 10 | |
| Co | 59 | 45 | No Gas | 0.145 | ppb | 13.2 | 6928.58 | 0.15 | |
| Ni | 60 | 45 | He | 0.060 | ppb | 12.2 | 423.34 | 0.2 | |
| Cu | 63 | 45 | He | 0.141 | ppb | 9.7 | 3467.78 | 0.4 | |
| Zn | 66 | 72 | No Gas | 0.151 | ppb | 18.0 | 2823.63 | 2 | |
| As | 75 | 72 | He | 0.065 | ppb | 21.1 | 301.33 | 0.2 | |
| Se | 78 | 72 | H2 | 0.092 | ppb | 20.1 | 147.67 | 0.2 | |
| Sr | 88 | 72 | No Gas | 0.197 | ppb | 14.1 | 13374.08 | 0.2 | |
| Zr | 90 | 72 | No Gas | 0.011 | ppb | 10.7 | 676.69 | 2 | |
| Mo | 95 | 115 | No Gas | 0.146 | ppb | 18.3 | 2079.06 | 0.2 | |
| Ag | 107 | 115 | No Gas | 0.015 | ppb | 17.6 | 730.02 | 0.08 | |
| Cd | 111 | 115 | No Gas | 0.124 | ppb | 10.3 | 1016.33 | 0.2 | |
| Sn | 118 | 115 | No Gas | 0.122 | ppb | 23.6 | 6831.80 | 0.2 | |
| Sb | 123 | 115 | No Gas | 0.021 | ppb | 26.4 | 1750.12 | 0.4 | |
| Ba | 137 | 115 | No Gas | 0.238 | ppb | 9.8 | 2536.93 | 0.2 | >LOD |
| W | 182 | 159 | No Gas | 0.017 | ppb | 77.0 | 630.02 | 0.3 | |
| Hg | 201 | 159 | He | <0.000 | ppb | N/A | 24.83 | 0.1 | |
| Tl | 205 | 159 | No Gas | 0.178 | ppb | 17.6 | 8122.89 | 0.1 | >LOD |
| Pb | 208 | 159 | No Gas | 0.121 | ppb | 5.8 | 11996.85 | 0.1 | >LOD |
| U | 238 | 159 | No Gas | 0.142 | ppb | 10.4 | 7539.17 | 0.05 | >LOD |

LY 12/22/20

# Continuing Calibration Blank (CCB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1320299.68 | 5.6 | 1141329.81 | 115.68 | 60 | 120 | |
| Sc | 45 | No Gas | 4991995.17 | 7.8 | 4615577.5 | 108.16 | 60 | 120 | |
| Sc | 45 | H2 | 3440035.00 | 1.8 | 3170333.75 | 108.51 | 60 | 120 | |
| Sc | 45 | He | 584612.60 | 1.7 | 539902.19 | 108.28 | 60 | 120 | |
| Ge | 72 | No Gas | 1404296.29 | 4.8 | 1308491.96 | 107.32 | 60 | 120 | |
| Ge | 72 | H2 | 988773.19 | 1.1 | 930488.13 | 106.26 | 60 | 120 | |
| Ge | 72 | He | 359326.29 | 1.0 | 336689.17 | 106.72 | 60 | 120 | |
| In | 115 | No Gas | 9480496.42 | 7.8 | 8658209.05 | 109.5 | 60 | 120 | |
| Tb | 159 | No Gas | 10847369.84 | 4.1 | 10130338.49 | 107.08 | 60 | 120 | |
| Tb | 159 | He | 5728290.17 | 2.2 | 5158319.33 | 111.05 | 60 | 120 | |

# Interference Check Solution A (ICS-A) Report

| | |
|---|---|
| **Sample Name** | ICSA2 |
| **File Name** | H6L09038.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:36:37 |
| **Sample Type** | ICS-A |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 0.625 | ppb | 18.8 | 75170.63 | 2 | -50 | 50 | |
| Be | 9 | 6 | No Gas | 0.000 | ppb | 395.8 | 21.11 | 0.4 | -50 | 50 | |
| B | 11 | 6 | No Gas | 1.667 | ppb | 13.8 | 6448.15 | 10 | -50 | 50 | |
| Na | 23 | 45 | H2 | 97809.966 | ppb | 3.5 | 659628394.67 | 100000 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 94151.606 | ppb | 4.7 | 1396142976.00 | 100000 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 92934.290 | ppb | 4.9 | 1866283225.52 | 100000 | 80 | 120 | |
| Si | 28 | 45 | H2 | 5.094 | ppb | 3.2 | 16001.31 | 50 | -50 | 50 | |
| P | 31 | 45 | No Gas | 95550.419 | ppb | 2.4 | 109486389.33 | 100000 | 80 | 120 | |
| K | 39 | 45 | He | 97513.492 | ppb | 1.7 | 105459872.00 | 100000 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 96946.378 | ppb | 2.9 | 1484742442.67 | 100000 | 80 | 120 | |
| Ti | 47 | 45 | No Gas | 2002.470 | ppb | 3.2 | 5677966.67 | 2000 | 80 | 120 | |
| V | 51 | 45 | He | 0.008 | ppb | 94.5 | 2800.29 | 1 | -50 | 50 | |
| Cr | 52 | 45 | He | 0.857 | ppb | 4.0 | 12550.43 | 1 | -50 | 50 | > +/- 20% |
| Mn | 55 | 45 | No Gas | 0.121 | ppb | 22.9 | 19264.29 | 1 | -50 | 50 | |
| Fe | 56 | 45 | H2 | 100121.764 | ppb | 2.7 | 2439472554.67 | 100000 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 0.238 | ppb | 4.0 | 10826.30 | 0.75 | -50 | 50 | |
| Ni | 60 | 45 | He | 0.212 | ppb | 2.9 | 1028.71 | 1 | -50 | 50 | |
| Cu | 63 | 45 | He | 0.316 | ppb | 4.0 | 5226.34 | 2 | -50 | 50 | |
| Zn | 66 | 72 | No Gas | 1.260 | ppb | 3.2 | 10670.20 | 20 | -50 | 50 | |
| As | 75 | 72 | He | 0.106 | ppb | 3.6 | 379.68 | 1 | -50 | 50 | |
| Se | 78 | 72 | H2 | 0.107 | ppb | 9.8 | 156.00 | 1 | -50 | 50 | |
| Sr | 88 | 72 | No Gas | 0.869 | ppb | 4.2 | 53925.58 | 1 | -50 | 50 | > +/- 20% |
| Zr | 90 | 72 | No Gas | 0.089 | ppb | 9.3 | 3770.54 | 10 | -50 | 50 | |
| Mo | 95 | 115 | No Gas | 1919.350 | ppb | 2.6 | 22554400.21 | 2000 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 0.015 | ppb | 6.6 | 666.69 | 0.4 | -50 | 50 | |
| Cd | 111 | 115 | No Gas | 0.078 | ppb | 48.0 | 654.42 | 1 | -50 | 50 | |
| Sn | 118 | 115 | No Gas | 0.093 | ppb | 14.6 | 5752.37 | 1 | -50 | 50 | |
| Ba | 137 | 115 | No Gas | 0.076 | ppb | 11.2 | 931.14 | 1 | -50 | 50 | |
| W | 182 | 159 | No Gas | 0.128 | ppb | 4.8 | 2630.28 | 1 | -50 | 50 | |
| Hg | 201 | 159 | He | <0.000 | ppb | N/A | 19.67 | 0.5 | -50 | 50 | |
| Tl | 205 | 159 | No Gas | 0.002 | ppb | 256.9 | 900.03 | 0.5 | -50 | 50 | |
| Pb | 208 | 159 | No Gas | <0.000 | ppb | N/A | 4840.38 | 0.5 | -50 | 50 | |
| U | 238 | 159 | No Gas | <0.000 | ppb | N/A | 474.46 | 0.25 | -50 | 50 | |

LY 12/22/20

# Interference Check Solution A (ICS-A) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1184882.23 | 4.5 | 1141329.81 | 103.82 | 60 | 120 | |
| Sc | 45 | No Gas | 4933397.83 | 4.3 | 4615577.5 | 106.89 | 60 | 120 | |
| Sc | 45 | H2 | 3373825.00 | 4.1 | 3170333.75 | 106.42 | 60 | 120 | |
| Sc | 45 | He | 576076.65 | 2.2 | 539902.19 | 106.7 | 60 | 120 | |
| Ge | 72 | No Gas | 1457500.00 | 2.9 | 1308491.96 | 111.39 | 60 | 120 | |
| Ge | 72 | H2 | 973437.46 | 0.5 | 930488.13 | 104.62 | 60 | 120 | |
| Ge | 72 | He | 367782.94 | 0.6 | 336689.17 | 109.24 | 60 | 120 | |
| In | 115 | No Gas | 8683731.23 | 0.7 | 8658209.05 | 100.29 | 60 | 120 | |
| Tb | 159 | No Gas | 10528123.47 | 2.5 | 10130338.49 | 103.93 | 60 | 120 | |
| Tb | 159 | He | 5441320.83 | 1.7 | 5158319.33 | 105.49 | 60 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

| | |
|---|---|
| **Sample Name** | ICSAB2 |
| **File Name** | H6L09039.d |
| **Data Path Name** | D:\Agilent\ICPMH\1\DATA\2020\L\IH6L09.b |
| **Acq Time** | 2020-12-22 14:39:13 |
| **Sample Type** | ICSB |
| **Total Dilution** | 1.0000 |
| **Comment** | --- |
| **ISTD Ref FileName** | H6L09002.d |
| **Sample QC Pass/Fial** | Fail |
| **ISTD QC Pass/Fail** | Pass |
| **Operator** | LYaman |

**QC Analyte Table**

| Name | Mass | ISTD | Tune | Conc. | Units | RSD | CPS | ExpVal | %Low | %High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Li | 7 | 6 | No Gas | 19.062 | ppb | 1.5 | 233612.98 | 20 | 80 | 120 | |
| Be | 9 | 6 | No Gas | 19.319 | ppb | 1.4 | 64353.73 | 20 | 80 | 120 | |
| B | 11 | 6 | No Gas | 19.634 | ppb | 2.4 | 41559.28 | 20 | 80 | 120 | |
| Na | 23 | 45 | H2 | 97990.305 | ppb | 1.9 | 655734229.33 | 100000 | 80 | 120 | |
| Mg | 24 | 45 | No Gas | 95199.785 | ppb | 1.0 | 1409655338.67 | 100000 | 80 | 120 | |
| Al | 27 | 45 | No Gas | 96466.676 | ppb | 1.3 | 1933851277.85 | 100000 | 80 | 120 | |
| Si | 28 | 45 | H2 | 183.684 | ppb | 1.8 | 378603.83 | 200 | 80 | 120 | |
| P | 31 | 45 | No Gas | 97028.112 | ppb | 2.0 | 111000514.67 | 100000 | 80 | 120 | |
| K | 39 | 45 | He | 102286.464 | ppb | 4.4 | 106154290.67 | 100000 | 80 | 120 | |
| Ca | 40 | 45 | H2 | 98628.114 | ppb | 1.0 | 1498668032.00 | 100000 | 80 | 120 | |
| Tl | 47 | 45 | No Gas | 2003.764 | ppb | 1.4 | 5673687.67 | 2000 | 80 | 120 | |
| V | 51 | 45 | He | 19.999 | ppb | 4.3 | 181508.41 | 20 | 80 | 120 | |
| Cr | 52 | 45 | He | 20.821 | ppb | 3.8 | 220937.65 | 20 | 80 | 120 | |
| Mn | 55 | 45 | No Gas | 18.984 | ppb | 1.0 | 921257.50 | 20 | 80 | 120 | |
| Fe | 56 | 45 | H2 | 102661.012 | ppb | 2.4 | 2481294592.00 | 100000 | 80 | 120 | |
| Co | 59 | 45 | No Gas | 18.872 | ppb | 1.0 | 799539.25 | 20 | 80 | 120 | |
| Ni | 60 | 45 | He | 19.790 | ppb | 3.8 | 76428.36 | 20 | 80 | 120 | |
| Cu | 63 | 45 | He | 20.177 | ppb | 4.8 | 201231.42 | 20 | 80 | 120 | |
| Zn | 66 | 72 | No Gas | 19.843 | ppb | 1.6 | 138039.03 | 20 | 80 | 120 | |
| As | 75 | 72 | He | 20.452 | ppb | 2.6 | 34400.37 | 20 | 80 | 120 | |
| Se | 78 | 72 | H2 | 19.948 | ppb | 1.8 | 13955.88 | 20 | 80 | 120 | |
| Sr | 88 | 72 | No Gas | 20.605 | ppb | 0.8 | 1208340.99 | 20 | 80 | 120 | |
| Zr | 90 | 72 | No Gas | 6.416 | ppb | 1.6 | 245846.81 | 20 | 80 | 120 | > +/- 20% |
| Mo | 95 | 115 | No Gas | 2010.029 | ppb | 2.2 | 23391127.96 | 2000 | 80 | 120 | |
| Ag | 107 | 115 | No Gas | 17.454 | ppb | 3.9 | 536024.80 | 20 | 80 | 120 | |
| Cd | 111 | 115 | No Gas | 18.323 | ppb | 2.1 | 112599.23 | 20 | 80 | 120 | |
| Sn | 118 | 115 | No Gas | 17.895 | ppb | 2.2 | 328040.65 | 20 | 80 | 120 | |
| Sb | 123 | 115 | No Gas | 18.293 | ppb | 2.2 | 366036.48 | 20 | 80 | 120 | |
| Ba | 137 | 115 | No Gas | 18.018 | ppb | 2.4 | 154719.30 | 20 | 80 | 120 | |
| W | 182 | 159 | No Gas | 18.698 | ppb | 2.4 | 337461.82 | 20 | 80 | 120 | |
| Hg | 201 | 159 | He | 2.059 | ppb | 7.6 | 2813.98 | 2 | 80 | 120 | |
| Tl | 205 | 159 | No Gas | 18.438 | ppb | 2.7 | 730004.22 | 20 | 80 | 120 | |
| Pb | 208 | 159 | No Gas | 18.424 | ppb | 0.5 | 991042.75 | 20 | 80 | 120 | |
| U | 238 | 159 | No Gas | 18.952 | ppb | 1.6 | 902761.80 | 20 | 80 | 120 | |

# Interference Check Solution AB (ICS-AB) Report

**QC ISTD Table**

| Name | Mass | Tune Mode | CPS | CPS RSD | Ref CPS | % Rec | %QC Low | %QC High | QC Flag |
|---|---|---|---|---|---|---|---|---|---|
| Li | 6 | No Gas | 1158536.59 | 3.5 | 1141329.81 | 101.51 | 60 | 120 | |
| Sc | 45 | No Gas | 4921740.33 | 2.6 | 4615577.5 | 106.63 | 60 | 120 | |
| Sc | 45 | H2 | 3345141.17 | 1.5 | 3170333.75 | 105.51 | 60 | 120 | |
| Sc | 45 | He | 553416.15 | 4.2 | 539902.19 | 102.5 | 60 | 120 | |
| Ge | 72 | No Gas | 1433041.87 | 2.6 | 1308491.96 | 109.52 | 60 | 120 | |
| Ge | 72 | H2 | 975174.48 | 1.5 | 930488.13 | 104.8 | 60 | 120 | |
| Ge | 72 | He | 356125.01 | 2.9 | 336689.17 | 105.77 | 60 | 120 | |
| In | 115 | No Gas | 8605348.78 | 3.8 | 8658209.05 | 99.39 | 60 | 120 | |
| Tb | 159 | No Gas | 10489426.81 | 1.6 | 10130338.49 | 103.54 | 60 | 120 | |
| Tb | 159 | He | 5407538.17 | 5.9 | 5158319.33 | 104.83 | 60 | 120 | |

EMAX LABORATORIES, INC.

# ANALYSIS RUN LOG
*for*
ICP-MS



**Note:** For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

Start Date: 12/29/20 13:46

End Date: 12/29/20 21:45

**Comments:**

All soil/solid samples are diluted at 10x dilution prior to analysis.

Filter Lot #: N/A

see analytical sequence

CCV5-CCV9 Befail

| | |
|---|---|
| Book #: | AF6-030 |
| Instrument No.: | F6 |
| Analytical Batch: | 1F6L16 |
| Analytical Sequence: | F6L16 |
| Method File: | EM6020Hg |
| Micropipette ID: | ☐ 142781004 |
| Micropipette ID: | ☑ ICP-06 |
| Micropipette ID: | ☑ 339362028 |
| Micropipette ID: | ☑ GFAA-07 |
| Micropipette ID: | ☐ 339342032 |
| Micropipette ID: | ☑ 542780515 |
| Micropipette ID: | ☐ 542761827 |
| Micropipette ID: | ☐ |

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-200.8 | 6 |
| ☑ EMAX-6020 | 13 |
| ☐ EMAX-6020CA | 2 |
| ☐ EMAX- | |
| ☐ EMAX- | |

| STANDARDS ID | | STANDARDS ID | |
|---|---|---|---|
| S0 | SM6B-20-6501 | MRL1 | SM6B-203901 |
| S1 | 6502 | MRL2 | 7102 |
| S2 | 6601 | MRL3 | 7201 |
| S3 | 6602 | MRL4 | N/A |
| S4 | 6701 | MRL5 | |
| S5 | N/A | MRL6 | |
| S6 | | Internal Standard | SM6B-20-54-01 |
| S7 | | Post-Spike 1 | SM6A007-06-29 |
| ICV | SM6B-20-3701 | Post-Spike 2 | 06-30 |
| CCV | 6702 | Post-Spike 3 | N/A |
| ICSA | 6401 | Post-Spike 4 | |
| ICSAB | 6402 | TH 12/29/20 | |
| 6020 TUNE SOLN. | 3801 | | |
| 200.8 TUNE SOLN. | 3902 | | |

Analyzed By: TH

Date: 12/29/20

INITIAL CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW6020A (DISSOLVED)
Sequence : IF6L16
InstrumentID: F6

| | | ICV | | | | ICSA | | | ICSAB | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lab Samp ID : | | ICV | | | | ICSA | | | ICSAB | | |
| QC Limit : | | %R:90-110/RSD:<5 | | | | %R:80-120/<LOD | | | %R:80-120 | | |
| Lab File ID : | | F6L16009 | | | | F6L16013 | | | F6L16014 | | |
| DateAnalyed : | | 12/29/2014:09 | | | | 12/29/2014:27 | | | 12/29/2014:32 | | |
| Parameter | | Result | ICV EV | RSD | %Recovery | Result | ICSA EV | %Rec/LOD | Result | ICSAB EV | %Recovery |
| Lithium | | 29.22 | 30 | 1.53 | 97 | 0.63080 | 0 | >0 | 39.760 | 20 | 199* |
| Beryllium | | 28.61 | 30 | 0.53 | 95 | 0.0064120 | 0 | <0.1 | 20.730 | 20 | 104 |
| Boron | | 30.38 | 30 | 0.19 | 101 | 0.24960 | 0 | <5.0 | 20.580 | 20 | 103 |
| Sodium | | 29070 | 30000 | 1.05 | 97 | 100700 | 100000 | 101 | 98360 | 100000 | 98 |
| Magnesium | T | 28870 | 30000 | 0.55 | 96 | 98770 | 100000 | 99 | 98380 | 100000 | 98 |
| Aluminum | | 27660 | 30000 | 1.00 | 92 | 93970 | 100000 | 94 | 94350 | 100000 | 94 |
| Silicon | | 3034 | 3000 | 1.03 | 101 | 3.4060 | 0 | <20 | 230.50 | 200 | 115 |
| Phosphorus | | 292.0 | 300 | 0.91 | 97 | 89950 | 100000 | 90 | 88210 | 100000 | 88 |
| Potassium | | 29150 | 30000 | 0.69 | 97 | 99630 | 100000 | 100 | 98570 | 100000 | 99 |
| Calcium | | 29470 | 30000 | 0.78 | 98 | 102600 | 100000 | 103 | 100900 | 100000 | 101 |
| Titanium | | 293.0 | 300 | 0.55 | 98 | 2087.0 | 2000 | 104 | 2078.0 | 2000 | 104 |
| Vanadium | | 291.0 | 300 | 0.61 | 97 | 0.13390 | 0 | <0.5 | 20.440 | 20 | 102 |
| Chromium | T | 285.1 | 300 | 0.76 | 95 | 0.93550 | 0 | >0.25 | 20.810 | 20 | 104 |
| Manganese | T | 1864 | 2000 | 0.93 | 93 | 0.30080 | 0 | <0.5 | 19.990 | 20 | 100 |
| Iron | | 28930 | 30000 | 0.55 | 96 | 97840 | 100000 | 98 | 96720 | 100000 | 97 |
| Cobalt | | 281.8 | 300 | 0.83 | 94 | 0.44720 | 0 | >0.2 | 19.790 | 20 | 99 |
| Nickel | | 280.3 | 300 | 0.71 | 93 | 0.27900 | 0 | >0.2 | 19.120 | 20 | 96 |
| Copper | | 269.8 | 300 | 0.44 | 90 | 0.15870 | 0 | <0.5 | 18.210 | 20 | 91 |
| Zinc | | 301.3 | 300 | 0.44 | 100 | 2.9450 | 0 | <10 | 22.900 | 20 | 114 |
| Arsenic | | 292.1 | 300 | 0.72 | 97 | 0.28480 | 0 | >0.2 | 19.860 | 20 | 99 |
| Selenium | T | 297.8 | 300 | 0.50 | 99 | 0.15730 | 0 | <0.3 | 21.890 | 20 | 109 |
| Strontium | | 296.0 | 300 | 0.54 | 99 | 0.91060 | 0 | <1.0 | 20.880 | 20 | 104 |
| Zirconium | | 26.52 | 30 | 0.90 | 88* | 0.078570 | 0 | <2.0 | 5.7440 | 20 | 29* |
| Molybdenum | T | 301.1 | 300 | 0.46 | 100 | 2039.0 | 2000 | 102 | 2016.0 | 2000 | 101 |
| Silver | | 29.17 | 30 | 0.64 | 97 | 0.014300 | 0 | <0.2 | 18.530 | 20 | 93 |
| Cadmium | | 297.7 | 300 | 0.83 | 99 | 0.13370 | 0 | <0.2 | 19.640 | 20 | 98 |
| Tin | | 293.9 | 300 | 0.95 | 98 | 0.054910 | 0 | <0.2 | 20.140 | 20 | 101 |
| Antimony | | 58.06 | 60 | 1.02 | 97 | 0.027490 | 0 | <0.5 | 20.320 | 20 | 102 |
| Barium | | 306.3 | 300 | 0.89 | 102 | 0.052900 | 0 | <0.5 | 20.680 | 20 | 103 |
| Tungsten | | 34.36 | 30 | 1.28 | 115* | 0.16130 | 0 | <1.0 | 22.450 | 20 | 112 |
| Thallium | | 280.8 | 300 | 0.30 | 94 | 0.016640 | 0 | <0.2 | 19.240 | 20 | 96 |
| Lead | | 282.0 | 300 | 0.69 | 94 | 0.016050 | 0 | <0.1 | 19.430 | 20 | 97 |
| Uranium | | 282.4 | 300 | 0.95 | 94 | 0.0036290 | 0 | <0.1 | 19.390 | 20 | 97 |

Unit: ug/L
T: Target analyte
EV: Expected Value
Comment: * Out of QC limit

CONTINUING CALIBRATION VERIFICATION SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : METHOD SW6020A (DISSOLVED)
Sequence : IF6L16
Instrument ID: F6

| CCV SampleID | | | CCV1 | | | CCV2 | | |
|---|---|---|---|---|---|---|---|---|
| CCV DataFileID | | | F6L16016 | | | F6L16028 | | |
| CCV DateTime | | | 12/29/20 14:41 | | | 12/29/20 15:38 | | |
| PARAMETER | | CCV EV | RESULT | %REC | RSD | RESULT | %REC | RSD |
| Lithium | | 25 | 25.8 | 103 | 1.84 | 26.1 | 104 | 1.17 |
| Beryllium | | 25 | 24.8 | 99 | 1.14 | 25.1 | 100 | 1.15 |
| Boron | | 50 | 51.5 | 103 | 0.88 | 52.3 | 105 | 1.53 |
| Sodium | | 25000 | 24600 | 98 | 1.17 | 25100 | 100 | 1.59 |
| Magnesium | T | 25000 | 25800 | 103 | 0.57 | 26000 | 104 | 0.89 |
| Aluminum | | 25000 | 24600 | 98 | 1.31 | 24400 | 97 | 0.22 |
| Silicon | | 2500 | 2260 | 90 | 1.15 | 2330 | 93 | 0.42 |
| Phosphorus | | 250 | 269 | 107 | 1.49 | 256 | 102 | 1.23 |
| Potassium | | 25000 | 24700 | 99 | 1.09 | 24900 | 100 | 0.36 |
| Calcium | | 25000 | 24900 | 100 | 0.79 | 25200 | 101 | 0.40 |
| Titanium | | 250 | 247 | 99 | 0.57 | 248 | 99 | 0.92 |
| Vanadium | | 250 | 254 | 102 | 0.92 | 250 | 100 | 0.26 |
| Chromium | T | 250 | 250 | 100 | 0.33 | 245 | 98 | 0.77 |
| Manganese | T | 1500 | 1460 | 98 | 0.82 | 1460 | 98 | 1.72 |
| Iron | | 25000 | 24900 | 100 | 0.31 | 24900 | 100 | 0.96 |
| Cobalt | | 250 | 238 | 95 | 0.85 | 240 | 96 | 0.76 |
| Nickel | | 250 | 243 | 97 | 0.71 | 237 | 95 | 0.47 |
| Copper | | 250 | 240 | 96 | 0.44 | 234 | 94 | 0.70 |
| Zinc | | 250 | 258 | 103 | 1.23 | 260 | 104 | 1.40 |
| Arsenic | | 250 | 249 | 99 | 0.54 | 249 | 100 | 0.29 |
| Selenium | T | 250 | 258 | 103 | 0.26 | 256 | 102 | 0.38 |
| Strontium | | 250 | 257 | 103 | 1.86 | 258 | 103 | 0.58 |
| Zirconium | | 25 | 0.312 | 1* | 1.88 | 0.301 | 1* | 1.77 |
| Molybdenum | T | 250 | 255 | 102 | 0.89 | 254 | 102 | 0.76 |
| Silver | | 25 | 25.3 | 101 | 0.42 | 25.3 | 101 | 0.59 |
| Cadmium | | 250 | 256 | 102 | 0.60 | 255 | 102 | 0.82 |
| Tin | | 250 | 256 | 102 | 0.12 | 255 | 102 | 0.47 |
| Antimony | | 50 | 51.7 | 103 | 0.92 | 51.5 | 103 | 1.31 |
| Barium | | 500 | 513 | 103 | 1.64 | 516 | 103 | 1.32 |
| Tungsten | | 25 | 57.9 | 231* | 1.01 | 57.4 | 230* | 0.49 |
| Mercury | | 2.5 | 0.000000 | 0* | | 0.000000 | 0* | |
| Thallium | | 250 | 245 | 98 | 1.22 | 241 | 96 | 0.51 |
| Lead | | 250 | 245 | 98 | 0.44 | 244 | 98 | 0.82 |
| Uranium | | 250 | 249 | 100 | 1.38 | 244 | 98 | 0.90 |

Unit: ug/L
T: Target analyte
%Rec QC Limit: 90-110
RSD QC Limit: <5
CCV EV: CCV Expected Value ug/L
Comment: * Out of QC limit

CONTINUING CALIBRATION BLANK SUMMARY FORM

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG NO. : 20L101
Method : SW6020A (DISSOLVED)
Sequence : IF6L16
Instrument ID: F6

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CB SampleID | | : ICB | | CCB1 | | CCB2 | |
| CB DataFileID | | : F6L16010 | | F6L16017 | | F6L16029 | |
| CB DateTime | | : 12/29/2014:13 | | 12/29/2014:45 | | 12/29/2015:42 | |
| PARAMETER | LOD | RESULT | < LOD > | RESULT | < LOD > | RESULT | < LOD > |
| Lithium | 0 | 0.07 | >0 | 0.10 | >0 | 0.08 | >0 |
| Beryllium | 0.1 | 0.010 | <0.1 | 0.007 | <0.1 | 0.005 | <0.1 |
| Boron | 5.0 | 0.3 | <5.0 | 0.2 | <5.0 | 0.3 | <5.0 |
| Sodium | 50 | 30 | <50 | 10 | <50 | 7 | <50 |
| Magnesium T | 20 | 10 | <20 | 5 | <20 | 2 | <20 |
| Aluminum | 20 | 10 | <20 | 4 | <20 | 2 | <20 |
| Silicon | 20 | 7 | <20 | 1 | <20 | 1 | <20 |
| Phosphorus | 25 | 2 | <25 | 0.04 | <25 | 1 | <25 |
| Potassium | 20 | 20 | <20 | 4 | <20 | 3 | <20 |
| Calcium | 25 | 30 | >25 | 10 | <25 | 10 | <25 |
| Titanium | 0.5 | 0.1 | <0.5 | 0.05 | <0.5 | 0.02 | <0.5 |
| Vanadium | 0.5 | 0.2 | <0.5 | 0.07 | <0.5 | 0.1 | <0.5 |
| Chromium T | 0.25 | 0.1 | <0.25 | 0.04 | <0.25 | 0.06 | <0.25 |
| Manganese T | 0.5 | 0.7 | >0.5 | 0.2 | <0.5 | 0.10 | <0.5 |
| Iron | 10 | 30 | >10 | 10 | >10 | 10 | >10 |
| Cobalt | 0.2 | 0.1 | <0.2 | 0.02 | <0.2 | 0.010 | <0.2 |
| Nickel | 0.2 | 0.1 | <0.2 | 0.03 | <0.2 | 0.02 | <0.2 |
| Copper | 0.5 | 0.1 | <0.5 | 0.006 | <0.5 | 0.004 | <0.5 |
| Zinc | 10 | 0.3 | <10 | 0.1 | <10 | 0.2 | <10 |
| Arsenic | 0.2 | 0.2 | <0.2 | 0.06 | <0.2 | 0.07 | <0.2 |
| Selenium T | 0.3 | 0.3 | >0.3 | 0.1 | <0.3 | 0.1 | <0.3 |
| Strontium | 1.0 | 0.1 | <1.0 | 0.03 | <1.0 | 0.02 | <1.0 |
| Zirconium | 2.0 | 0.01 | <2.0 | 0.002 | <2.0 | 0.002 | <2.0 |
| Molybdenum T | 0.5 | 0.2 | <0.5 | 0.07 | <0.5 | 0.03 | <0.5 |
| Silver | 0.2 | 0.01 | <0.2 | 0.004 | <0.2 | 0.003 | <0.2 |
| Cadmium | 0.2 | 0.1 | <0.2 | 0.02 | <0.2 | 0.02 | <0.2 |
| Tin | 0.2 | 0.2 | <0.2 | 0.06 | <0.2 | 0.03 | <0.2 |
| Antimony | 0.5 | 0.02 | <0.5 | 0.03 | <0.5 | 0.03 | <0.5 |
| Barium | 0.5 | 0.2 | <0.5 | 0.06 | <0.5 | 0.04 | <0.5 |
| Tungsten | 1.0 | 0.04 | <1.0 | 0.04 | <1.0 | 0.03 | <1.0 |
| Mercury | 0.1 | 0.00 | <0.1 | 0.00 | <0.1 | 0.00 | <0.1 |
| Thallium | 0.2 | 0.2 | <0.2 | 0.03 | <0.2 | 0.01 | <0.2 |
| Lead | 0.1 | 0.1 | >0.1 | 0.02 | <0.1 | 0.01 | <0.1 |
| Uranium | 0.1 | 0.1 | >0.1 | 0.04 | <0.1 | 0.03 | <0.1 |

Unit: ug/L
CB: Calibration Blank
T: Target analyte
Acceptance Criteria: CCB Result <LOD
Comment:

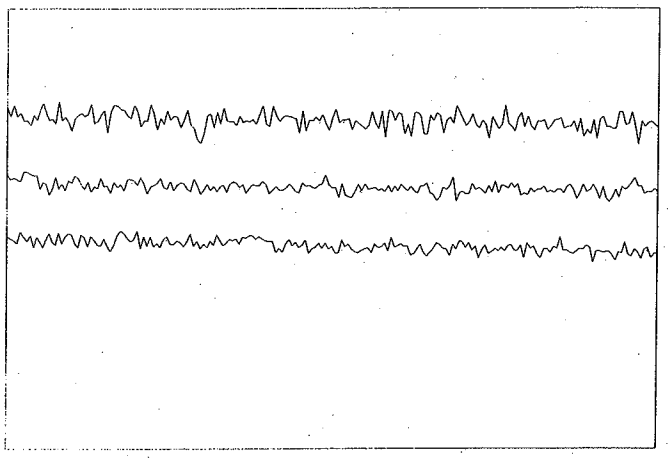
| | Method | Type | Vial | Data File | Sample | Comment | Dil/Lvl | ISTD Conc | Action on Failure | Skip | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | Keyword | | TUNBEG | Start of TUNE | | | | | | |
| 2 | C:\ICPCHEM\1\METHODS\TN6020_D.M | Tun6 | 1301 | F6L16001 | 6020tunchk | | 1.000 | | | | |
| 3 | C:\ICPCHEM\1\METHODS\TN200_8C.M | Tun2 | 1302 | F6L16002 | 200.8tunchk | | 1.000 | | | | |
| 4 | | Keyword | | TUNEND | End of TUNE | | | | | | |
| 5 | | Keyword | | CALBEG | Start of CALIB | | | | | | |
| 6 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalBlk | 1101 | F6L16003 | BLNK | | Level 1 | | | | |
| 7 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalBlk | 1102 | F6L16004 | S0 | | Level 1 | | | | |
| 8 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalStd | 1104 | F6L16005 | S1 0.5 | | Level 2 | | | | |
| 9 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalStd | 1105 | F6L16006 | S2 50 | | Level 3 | | | | |
| 10 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalStd | 1106 | F6L16007 | S3 250 | | Level 4 | | | | |
| 11 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CalStd | 1107 | F6L16008 | S4 500 | | Level 5 | | | | |
| 12 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICV1 | 1204 | F6L16009 | ICV | | 1.000 | | | | |
| 13 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICB | 1102 | F6L16010 | ICB | | 1.000 | | | | |
| 14 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1305 | F6L16011 | MRLL2901 ✓ | 1/100/10 ppb | 1.000 | | | | |
| 15 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1306 | F6L16012 | MRLL2902 | 0.4/40/4 ppb | 1.000 | | | | |
| 16 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICS-A | 1303 | F6L16013 | ICSA | | 1.000 | | | | |
| 17 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICS-AB | 1304 | F6L16014 | ICSAB | | 1.000 | | | | |
| 18 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1307 | F6L16015 | MRLL2903 | 500 ppb CAT | 1.000 | | | | |
| 19 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16016 | CCV1 | | 1.000 | | | | |
| 20 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16017 | CCB1 | | 1.000 | | | | |
| 21 | | Keyword | | CALEND | End of CALIB | | | | | | |
| 22 | | Keyword | | SMPLBEG | Start of SMPL | | | | | | |
| 23 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2101 | F6L16018 | IML009WB | | 1.000 | | | | |
| 24 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2102 | F6L16019 | IML009WL | | 1.000 | | | | |
| 25 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2103 | F6L16020 | IML009WC | | 1.000 | | | | |
| 26 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2104 | F6L16021 | IML011WB | | 1.000 | | | | |
| 27 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2105 | F6L16022 | IML011WL | | 1.000 | | | | |
| 28 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2106 | F6L16023 | IML011WC | | 1.000 | | | | |
| 29 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2404 | F6L16024 | L116-16 | | 1.000 | | | | |
| 30 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2405 | F6L16025 | IML024WB | | 1.000 | | | | |
| 31 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2406 | F6L16026 | IML024WL | | 1.000 | | | | |
| 32 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2407 | F6L16027 | IML024WC | | 1.000 | | | | |
| 33 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16028 | CCV2 | | 1.000 | | | | |
| 34 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16029 | CCB2 | | 1.000 | | | | |
| 35 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2107 | F6L16030 | L102-01 | Na mg Ca↑ | 1.000 | | | | |
| 36 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2108 | F6L16031 | L102-02 | | 1.000 | | | | |
| 37 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2109 | F6L16032 | L102-03 | | 1.000 | | | | |
| 38 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2110 | F6L16033 | L102-04 | | 1.000 | | | | |
| 39 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2111 | F6L16034 | L102-05 | | 1.000 | | | | |
| 40 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2112 | F6L16035 | L102-07 | | 1.000 | | | | |
| 41 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2201 | F6L16036 | L102-08 | | 1.000 | | | | |
| 42 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2202 | F6L16037 | L102-09 | Na Ca↑ | 1.000 | | | | |

| | Method | Type | Vial | Data File | Sample | Comment | Dil/Lvl | ISTD Conc | Action on Failure | Skip | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 43 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2203 | F6L16038 | L102-10 | Ca ↑ | 1.000 | | | | |
| 44 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2204 | F6L16039 | L102-12 | Na Mg Ca ↑ | 1.000 | | | | |
| 45 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16040 | CCV3 | | 1.000 | | | | |
| 46 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16041 | CCB3 | | 1.000 | | | | |
| 47 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2205 | F6L16042 | L102-13 | Na Mg Ca ↑ | 1.000 | | | | |
| 48 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2206 | F6L16043 | L102-14 | ↓ | 1.000 | | | | |
| 49 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2207 | F6L16044 | L102-16 | | 1.000 | | | | |
| 50 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2208 | F6L16045 | L102-17A | Ca ↑ | 1.000 | | | | |
| 51 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2209 | F6L16046 | L102-17 | ↓ | 1.000 | | | | |
| 52 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2210 | F6L16047 | L102-17J | | 5.000 | | | | |
| 53 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2211 | F6L16048 | L102-17M | | 1.000 | | | | |
| 54 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2212 | F6L16049 | L102-17S | ↓ | 1.000 | | | | |
| 55 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2301 | F6L16050 | L102-18 | Na Mg Ca ↑ | 1.000 | | | | |
| 56 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16051 | CCV4 | | 1.000 | | | | |
| 57 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16052 | CCB4 | | 1.000 | | | | |
| 58 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1305 | F6L16053 | MRLL2904 Na,Ca,Fe | 1/100/10 ppb Se fail ↓ | 1.000 | | | | |
| 59 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICS-A | 1303 | F6L16054 | ICSA2 | | 1.000 | | | | |
| 60 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | ICS-AB | 1304 | F6L16055 | ICSAB2 | | 1.000 | | | | |
| 61 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1305 | F6L16056 | MRLL2905 ✓ | 1/100/10 ppb | 1.000 | | | | |
| 62 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 1307 | F6L16057 | MRLL2906 | 500 CAT | 1.000 | | | | |
| 63 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2302 | F6L16058 | L116-01 ! Na Mg Ca↑↑↑ ISJ ! | | 1.000 | | | | |
| 64 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16059 | CCV5 Be ↓ | | 1.000 | | | | |
| 65 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16060 | CCB5 | | 1.000 | | | | |
| 66 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2501 | F6L16061 | IML023WB | | 1.000 | | | | |
| 67 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2502 | F6L16062 | IML023WL | | 1.000 | | | | |
| 68 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2503 | F6L16063 | IML023WC | | 1.000 | | | | |
| 69 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | MBW | 2504 | F6L16064 | IML032WB | | 1.000 | | | | |
| 70 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2505 | F6L16065 | IML032WL | | 1.000 | | | | |
| 71 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | LCS | 2506 | F6L16066 | IML032WC | | 1.000 | | | | |
| 72 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3207 | F6L16067 | L174-01A | | 1.000 | | | | |
| 73 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2507 | F6L16068 | L174-01 | | 1.000 | | | | |
| 74 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3208 | F6L16069 | L174-01J | | 5.000 | | | | |
| 75 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3209 | F6L16070 | L174-01M ✓ | | 1.000 | | | | |
| 76 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16071 | CCV6 Be ↓ | | 1.000 | | | | |
| 77 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16072 | CCB6 | | 1.000 | | | | |
| 78 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3210 | F6L16073 | L174-01S ✓ | | 1.000 | | | | |
| 79 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2508 | F6L16074 | L174-02 | | 1.000 | | | | |
| 80 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2509 | F6L16075 | L174-03 | | 1.000 | | | | |
| 81 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2510 | F6L16076 | L174-04 | | 1.000 | | | | |
| 82 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2511 | F6L16077 | L174-05 | | 1.000 | | | | |
| 83 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 2512 | F6L16078 | L174-06 | | 1.000 | | | | |
| 84 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3101 | F6L16079 | L174-07 | | 1.000 | | | | |

| | Method | Type | Vial | Data File | Sample | Comment | Dil/Lvl | ISTD Conc | Action on Failure | Skip | Result |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 85 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3102 | F6L16080 | L174-08 | | 1.000 | | | | |
| 86 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3103 | F6L16081 | L174-09 | | 1.000 | | | | |
| 87 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16082 | CCV7 Rel | | 1.000 | | | | |
| 88 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16083 | CCB7 | | 1.000 | | | | |
| 89 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3104 | F6L16084 | L161-01 | | 1.000 | | | | |
| 90 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3105 | F6L16085 | L161-02 | | 1.000 | | | | |
| 91 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3106 | F6L16086 | L161-03A | | 1.000 | | | | |
| 92 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3107 | F6L16087 | L161-03 | | 1.000 | | | | |
| 93 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3108 | F6L16088 | L161-03J | | 5.000 | | | | |
| 94 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3109 | F6L16089 | L161-03M | | 1.000 | | | | |
| 95 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3110 | F6L16090 | L161-03S | | 1.000 | | | | |
| 96 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3111 | F6L16091 | L174-04 | | 1.000 | | | | |
| 97 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3112 | F6L16092 | L174-05 | | 1.000 | | | | |
| 98 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3201 | F6L16093 | L174-06 | | 1.000 | | | | |
| 99 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16094 | CCV8 Rel | | 1.000 | | | | |
| 100 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16095 | CCB8 | | 1.000 | | | | |
| 101 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3202 | F6L16096 | L174-07 | | 1.000 | | | | |
| 102 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3203 | F6L16097 | L174-08 | | 1.000 | | | | |
| 103 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3204 | F6L16098 | L174-09 | | 1.000 | | | | |
| 104 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3205 | F6L16099 | L174-10 | | 1.000 | | | | |
| 105 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | Sample | 3206 | F6L16100 | L174-11 | | 1.000 | | | | |
| 106 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCV | 1206 | F6L16101 | CCV9 Rel | | 1.000 | | | | |
| 107 | C:\ICPCHEM\1\METHODS\EM6020Hg.M | CCB | 1102 | F6L16102 | CCB9 | | 1.000 | | | | |
| 108 | | Keyword | | StandBy | | | | | | | |
| 109 | | Keyword | | SMPLEND | End of SMPL | | | | | | |
| 110 | | Keyword | | End | End of Sequence | | | | | | |
| 111 | | Keyword | | BLKBEG | Start of BLANK | | | | | | |
| 112 | | Keyword | | BLKEND | End of BLANK | | | | | | |
| 113 | | Keyword | | ERRBEG | Start of ERRTERM | | | | | | |
| 114 | | Keyword | | ERREND | End of ERRTERM | | | | | | |

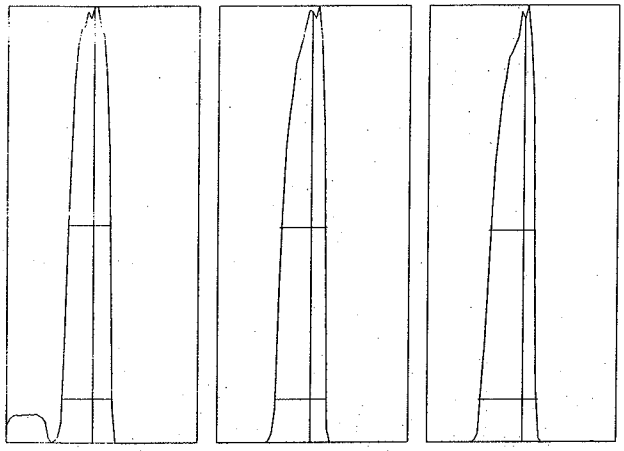
# Tune Report

Tune File : ATUNE.U
Comment : IF6L16



| | | |
|---|---|---|
| Integration Time: | 0.1000 sec | |
| Sampling Period: | 0.6200 sec | |
| n: | 200 | |
| Oxide: | 156/140 | 1.350% |
| Doubly Charged: | 70/140 | 1.994% |

| m/z | Range | Count | Mean | RSD% | Background |
|---|---|---|---|---|---|
| 7 | 50,000 | 22106.0 | 23099.8 | 3.21 | 1.60 |
| 89 | 100,000 | 58398.0 | 59399.7 | 2.19 | 2.30 |
| 205 | 50,000 | 36379.0 | 37301.4 | 2.51 | 6.60 |
| 156/140 | 2 | 1.474% | 1.388% | 6.76 | |
| 70/140 | 5 | 2.054% | 1.915% | 4.29 | |



| m/z: | 7 | 89 | 205 |
|---|---|---|---|
| Height: | 7,069 | 17,608 | 11,354 |
| Axis: | 6.90 | 89.00 | 205.05 |
| W-50%: | 0.70 | 0.75 | 0.75 |
| W-10%: | 0.800 | 0.800 | 0.9500 |

Integration Time: 0.0300 sec
Acquisition Time: 10.1600 sec

Y axis : Linear



Generated : Dec 29, 2020 11:16:49
Printed : Dec 29, 2020 11:16:51

# Tune Report

Tune File : ATUNE.U
Comment : IF6L16

## Tuning Parameters

| ===Plasma Condition=== | | | ===Ion Lenses=== | | | ===Q-Pole Parameters=== | | |
|---|---|---|---|---|---|---|---|---|
| RF Power | 1500 | W | Extract 1 | 1 | V | AMU Gain | 141 | |
| RF Matching | 1.7 | V | Extract 2 | -140 | V | AMU Offset | 115 | |
| Smpl Depth | 8 | mm | Omega Bias-ce | -20 | V | Axis Gain | 0.9962 | |
| Torch-H | -1.2 | mm | Omega Lens-ce | 1 | V | Axis Offset | -0.03 | |
| Torch-V | 0.1 | mm | Cell Entrance | -30 | V | QP Bias | -3 | V |
| Carrier Gas | 0.9 | L/min | QP Focus | 2 | V | | | |
| Makeup Gas | 0.14 | L/min | Cell Exit | -30 | V | ===Detector Parameters=== | | |
| Optional Gas | --- | % | | | | Discriminator | 8 | mV |
| Nebulizer Pump | 0.1 | rps | ===Octopole Parameters=== | | | Analog HV | 2130 | V |
| Sample Pump | --- | rps | OctP RF | 169 | V | Pulse HV | 1510 | V |
| S/C Temp | 2 | degC | OctP Bias | -6 | V | | | |

### ===Reaction Cell===

| Reaction Mode | OFF | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| H2 Gas | 0 | mL/min | He Gas | 0 | mL/min | Optional Gas | --- | % |



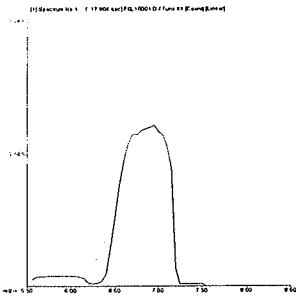
Generated : Dec 29, 2020 11:16:49
Printed : Dec 29, 2020 11:16:54

# 6020 QC Tune Report

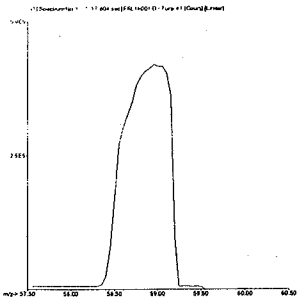
Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16001.D
Date Acquired: Dec 29 2020 11:36 am
Acq. Method: TN6020_D.M
Operator: THuang
Sample Name: 6020tunchk
Misc Info:
Vial Number: 1301
Current Method: C:\ICPCHEM\1\METHODS\TN6020_D.M

RSD (%)

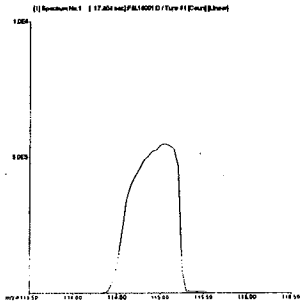
| Element | Actual | Required | Flag |
|---|---|---|---|
| 7 Li | 2.67 | 5.00 | |
| 59 Co | 1.87 | 5.00 | |
| 115 In | 2.22 | 5.00 | |
| 205 Tl | 0.90 | 5.00 | |



**7 Li**
**Mass Calib.**
Actual: 6.90
Required: 6.90 - 7.10
Flag:
**Peak Width-10%**
Actual: 0.60
Limit 0.90
Flag:



**59 Co**
**Mass Calib.**
Actual: 58.95
Required: 58.90 - 59.10
Flag:
**Peak Width-10%**
Actual: 0.60
Limit 0.90
Flag:



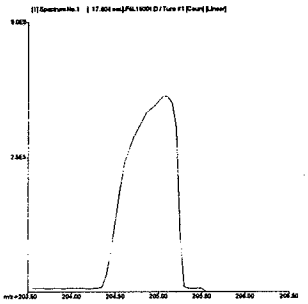
**115 In**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 115.05 | |
| Required: | 114.90 - | 115.10 |
| Flag: | | |

**Peak Width-10%**

| | |
|---|---|
| Actual: | 0.65 |
| Limit | 0.90 |
| Flag: | |



**205 Tl**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 205.05 | |
| Required: | 204.90 - | 205.10 |
| Flag: | | |

**Peak Width-10%**

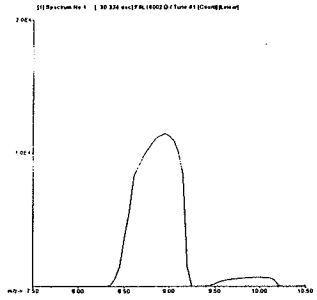
| | |
|---|---|
| Actual: | 0.65 |
| Limit | 0.90 |
| Flag: | |

200.8 QC Tune Report

| | |
|---|---|
| **Data File:** | **C:\DATA\IF62020\L\IF6L16.B\F6L16002.D** |
| **Date Acquired:** | **Dec 29 2020 01:37 pm** |
| **Acq. Method:** | **TN200_8C.M** |
| **Operator:** | **THuang** |
| **Sample Name:** | **200.8tunchk** |
| **Misc Info:** | |
| **Vial Number:** | **1302** |
| **Current Method:** | **C:\ICPCHEM\1\METHODS\TN200_8C.M** |

**RSD (%)**

| Element | Actual | Required | Flag |
|---|---|---|---|
| 9 Be | 2.30 | 5.00 | |
| 24 Mg | 1.65 | 5.00 | |
| 59 Co | 1.65 | 5.00 | |
| 115 In | 2.21 | 5.00 | |
| 208 Pb | 2.67 | 5.00 | |



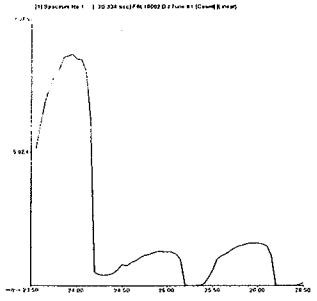
**9 Be**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 8.95 | |
| Required: | 8.90 - | 9.10 |
| Flag: | | |

**Peak Width-5%**

| | |
|---|---|
| Actual: | 0.60 |
| Limit | 0.75 |
| Flag: | |



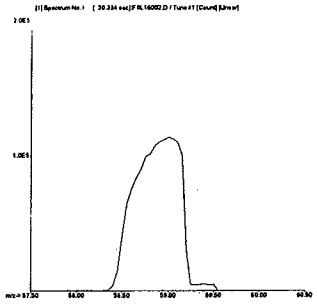
**24 Mg**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 23.95 | |
| Required: | 23.90 - | 24.10 |
| Flag: | | |

**Peak Width-5%**

| | |
|---|---|
| Actual: | 0.60 |
| Limit | 0.75 |
| Flag: | |



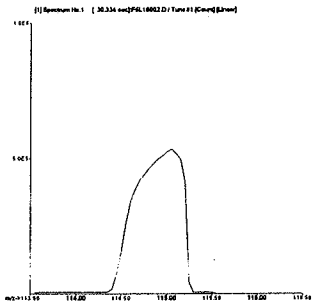
**59 Co**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 59.00 | |
| Required: | 58.90 - | 59.10 |
| Flag: | | |

**Peak Width-5%**

| | |
|---|---|
| Actual: | 0.60 |
| Limit | 0.75 |
| Flag: | |



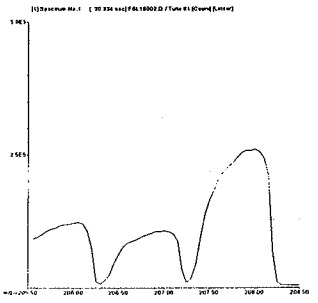
**115 In**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 115.00 | |
| Required: | 114.90 - | 115.10 |
| Flag: | | |

**Peak Width-5%**

| | |
|---|---|
| Actual: | 0.65 |
| Limit | 0.75 |
| Flag: | |



**208 Pb**

**Mass Calib.**

| | | |
|---|---|---|
| Actual: | 207.95 | |
| Required: | 207.90 - | 208.10 |
| Flag: | | |

**Peak Width-5%**

| | |
|---|---|
| Actual: | 0.60 |
| Limit | 0.75 |
| Flag: | |

**Tune Result:** Pass

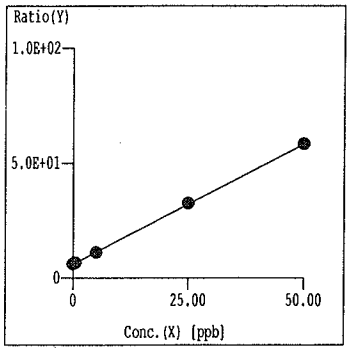
Last Calib: Dec 29, 2020 02:07 pm
Calibration Type: External Calibration Method
Calibration Title:
Weighting Method: 1/(SD*SD)
Mass Interpolation Fit for VIS: Point to Point
Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Multi Tune: #1 h2.u
#2 he.u
#3 norm.u

=== Standard Files ===
<Data Correction>
Bkg File: ---
Rejected Masses: ---
Interference Correction: ON

| | Data File | Sample Name | Date Acquired |
|---|---|---|---|
| 1 | c:\data\if62020\l\if6l16.b\f6l16004.d\f6l16004.d# | S0 | Dec 29 2020 01:46 pm |
| 2 | c:\data\if62020\l\if6l16.b\f6l16005.d\f6l16005.d# | S1 0.5 | Dec 29 2020 01:51 pm |
| 3 | c:\data\if62020\l\if6l16.b\f6l16006.d\f6l16006.d# | S2 50 | Dec 29 2020 01:56 pm |
| 4 | c:\data\if62020\l\if6l16.b\f6l16007.d\f6l16007.d# | S3 250 | Dec 29 2020 02:00 pm |
| 5 | c:\data\if62020\l\if6l16.b\f6l16008.d\f6l16008.d# | S4 500 | Dec 29 2020 02:04 pm |
| 6 | --- | | |
| 7 | --- | | |
| 8 | --- | | |
| 9 | --- | | |
| 10 | --- | | |
| 11 | --- | | |
| 12 | --- | | |
| 13 | --- | | |
| 14 | --- | | |
| 15 | --- | | |
| 16 | --- | | |
| 17 | --- | | |
| 18 | --- | | |
| 19 | --- | | |
| 20 | --- | | |

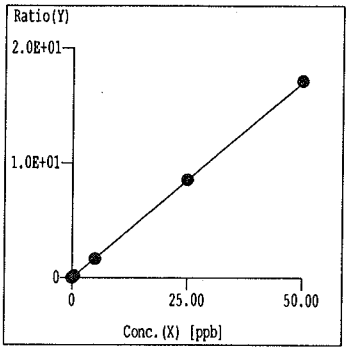
=== Graph Detail ===

Step Mass Element (3) 7 Li | ISTD 6 | Unit ppb



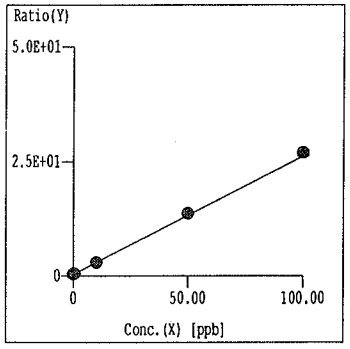

Curve Fit: Y=aX+b
r = 1.0000
Y = 1.041E+000*X +6.096E+000
X = 9.604E-001*Y -5.854E+000
DL = 1.960E-01 ppb
BEC = 5.854 ppb

Step Mass Element (3) 9 Be | ISTD 6 | Unit ppb



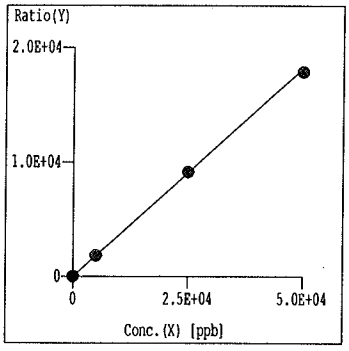

Curve Fit: Y=aX+b
r = 1.0000
Y = 3.402E-001*X +6.332E-003
X = 2.939E+000*Y -1.861E-002
DL = 5.022E-03 ppb
BEC = 1.861E-02 ppb

Step Mass Element (3) 11 B | ISTD 6 | Unit ppb



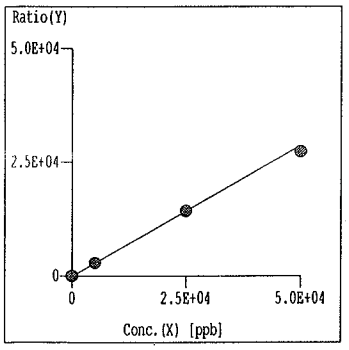

Curve Fit: Y=aX+b
r = 1.0000
Y = 2.578E-001*X +3.821E-001
X = 3.879E+000*Y -1.482E+000
DL = 5.025E-02 ppb
BEC = 1.482 ppb

Step Mass Element (1) 23 Na | ISTD 45 | Unit ppb



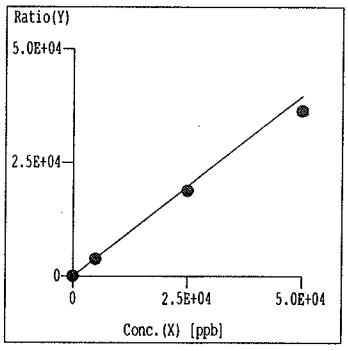

Curve Fit: Y=aX+b
r = 0.9999
Y = 3.635E-001*X +9.463E+000
X = 2.751E+000*Y -2.604E+001
DL = 4.316 ppb
BEC = 26.04 ppb

Step Mass Element (3) 24 Mg | ISTD 45 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9997
Y = 5.724E-001*X +9.069E-001
X = 1.747E+000*Y -1.584E+000
DL = 4.425E-02 ppb
BEC = 1.584 ppb

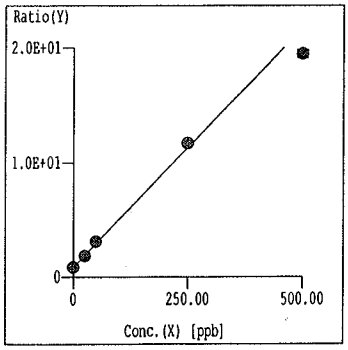
Step Mass Element (3) 27 Al | ISTD 45 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 7.916E-001*X +1.946E+000
X = 1.263E+000*Y -2.458E+000
DL = 4.340E-02 ppb
BEC = 2.458 ppb

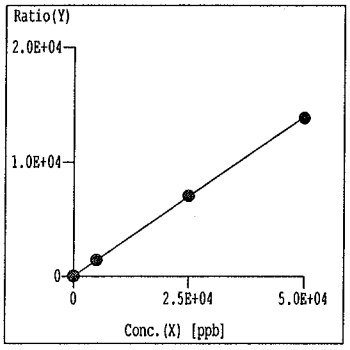
=== Graph Detail ===

Step Mass Element (3) 31 P | ISTD 45 | Unit ppb



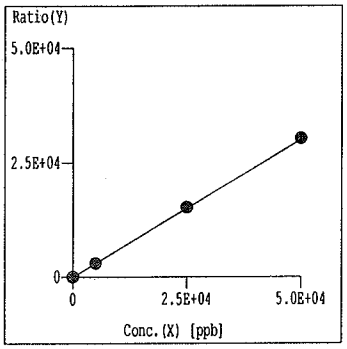

Curve Fit: Y=aX+b
r = 0.9968
Y = 4.177E-002*X +8.570E-001
X = 2.394E+001*Y -2.052E+001
DL = 2.399 ppb
BEC = 20.52 ppb

Step Mass Element (2) 39 K | ISTD 45 | Unit ppb



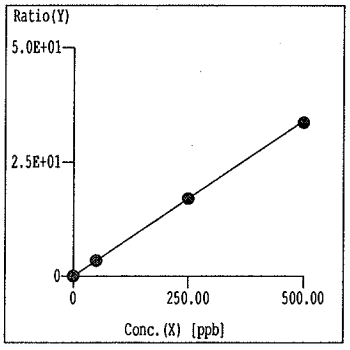

Curve Fit: Y=aX+b
r = 1.0000
Y = 2.795E-001*X +2.283E+001
X = 3.578E+000*Y -8.170E+001
DL = 9.405E-01 ppb
BEC = 81.70 ppb

Step Mass Element (1) 40 Ca | ISTD 45 | Unit ppb



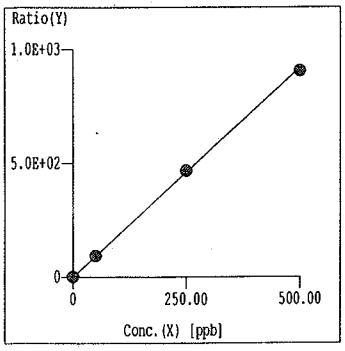

Curve Fit: Y=aX+b
r = 1.0000
Y = 6.002E-001*X +8.321E+000
X = 1.666E+000*Y -1.386E+001
DL = 2.720E-01 ppb
BEC = 13.86 ppb

Step Mass Element (3) 47 Ti | ISTD 45 | Unit ppb



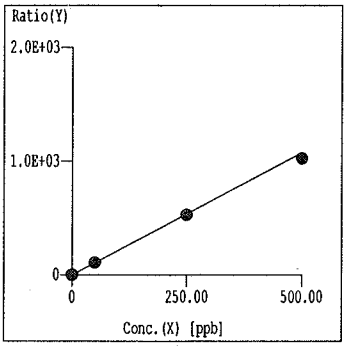

Curve Fit: Y=aX+b
r = 1.0000
Y = 6.811E-002*X +5.986E-003
X = 1.468E+001*Y -8.789E-002
DL = 1.419E-02 ppb
BEC = 8.789E-02 ppb

Step Mass Element (2) 51 V | ISTD 45 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 1.837E+000*X +9.428E-001
X = 5.443E-001*Y -5.132E-001
DL = 3.434E-02 ppb
BEC = 5.132E-01 ppb

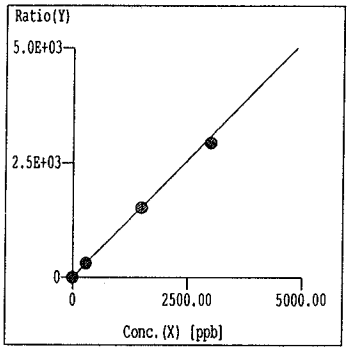
Step Mass Element (2) 52 Cr | ISTD 45 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 2.153E+000*X +2.259E-001
X = 4.645E-001*Y -1.049E-001
DL = 4.555E-03 ppb
BEC = 1.049E-01 ppb

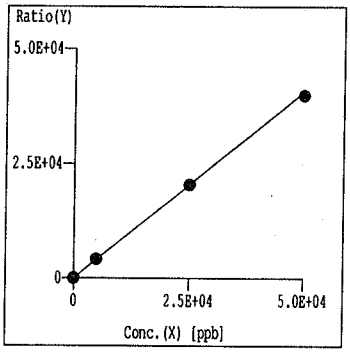
=== Graph Detail ===

Step Mass Element (3) 55 Mn | ISTD 45 | Unit ppb



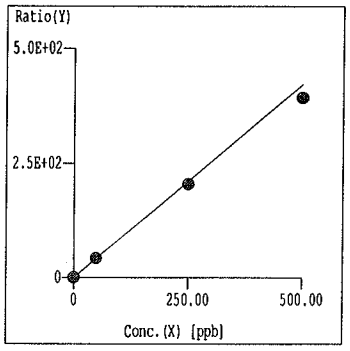

Curve Fit: Y=aX+b
r = 0.9998
Y = 1.027E+000*X +1.361E-001
X = 9.741E-001*Y -1.326E-001
DL = 9.353E-03 ppb
BEC = 1.326E-01 ppb

Step Mass Element (1) 56 Fe | ISTD 45 | Unit ppb



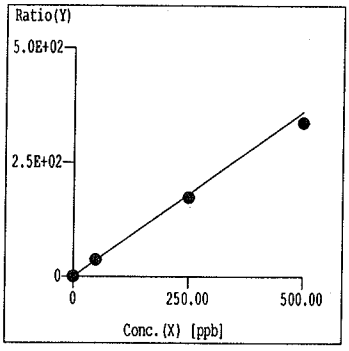

Curve Fit: Y=aX+b
r = 0.9999
Y = 8.162E-001*X +1.710E+000
X = 1.225E+000*Y -2.095E+000
DL = 1.163E-01 ppb
BEC = 2.095 ppb

Step Mass Element (3) 59 Co | ISTD 45 | Unit ppb



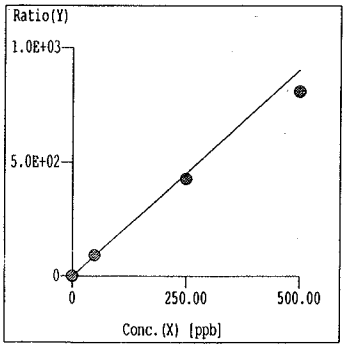

Curve Fit: Y=aX+b
r = 0.9998
Y = 8.436E-001*X +2.320E-002
X = 1.185E+000*Y -2.751E-002
DL = 6.845E-03 ppb
BEC = 2.751E-02 ppb

Step Mass Element (2) 60 Ni | ISTD 45 | Unit ppb



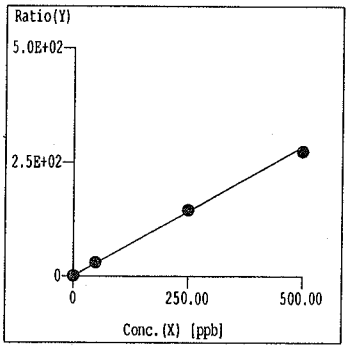

Curve Fit: Y=aX+b
r = 0.9999
Y = 7.217E-001*X +1.062E-001
X = 1.386E+000*Y -1.471E-001
DL = 6.728E-03 ppb
BEC = 1.471E-01 ppb

Step Mass Element (2) 63 Cu | ISTD 45 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9996
Y = 1.803E+000*X +2.987E-001
X = 5.545E-001*Y -1.656E-001
DL = 9.005E-03 ppb
BEC = 1.656E-01 ppb

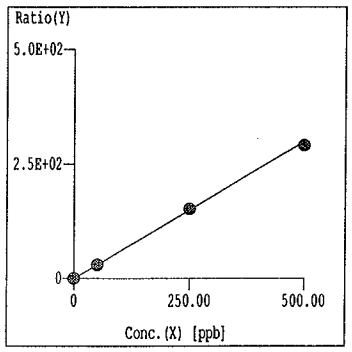
Step Mass Element (3) 66 Zn | ISTD 72 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9995
Y = 5.688E-001*X +5.389E-001
X = 1.758E+000*Y -9.475E-001
DL = 5.430E-02 ppb
BEC = 9.475E-01 ppb

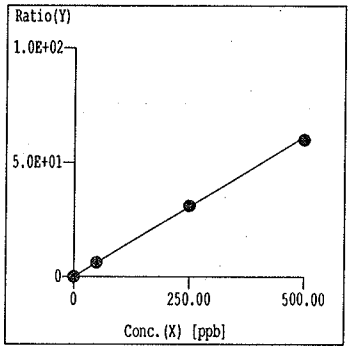
=== Graph Detail ===

Step Mass Element (2) 75 As | ISTD 72 | Unit ppb



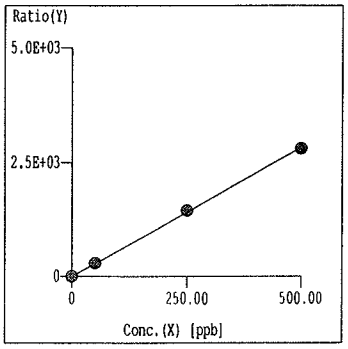

Curve Fit: Y=aX+b
r = 0.9998
Y = 5.975E-001*X +5.707E-002
X = 1.674E+000*Y -9.551E-002
DL = 8.557E-03 ppb
BEC = 9.551E-02 ppb

Step Mass Element (1) 78 Se | ISTD 72 | Unit ppb



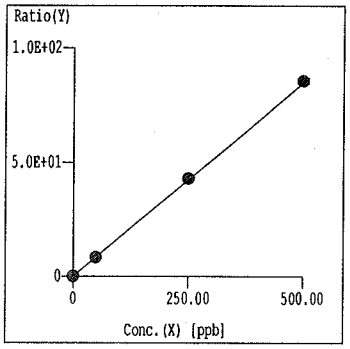

Curve Fit: Y=aX+b
r = 0.9999
Y = 1.227E-001*X +2.538E-003
X = 8.153E+000*Y -2.069E-002
DL = 3.953E-03 ppb
BEC = 2.069E-02 ppb

Step Mass Element (3) 88 Sr | ISTD 72 | Unit ppb



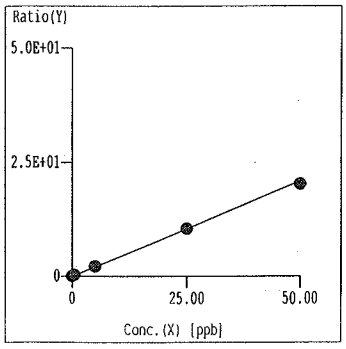

Curve Fit: Y=aX+b
r = 0.9999
Y = 5.651E+000*X +1.261E-001
X = 1.770E-001*Y -2.232E-002
DL = 1.013E-03 ppb
BEC = 2.232E-02 ppb

Step Mass Element (3) 95 Mo | ISTD 115 | Unit ppb



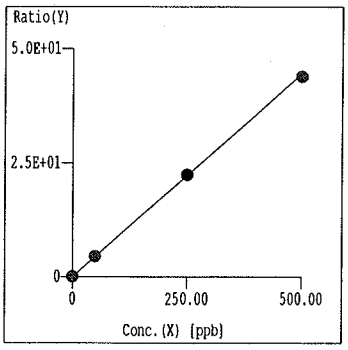

Curve Fit: Y=aX+b
r = 1.0000
Y = 1.698E-001*X +4.492E-003
X = 5.890E+000*Y -2.646E-002
DL = 2.100E-03 ppb
BEC = 2.646E-02 ppb

Step Mass Element (3) 107 Ag | ISTD 115 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 4.183E-001*X +1.777E-003
X = 2.391E+000*Y -4.249E-003
DL = 1.169E-03 ppb
BEC = 4.249E-03 ppb

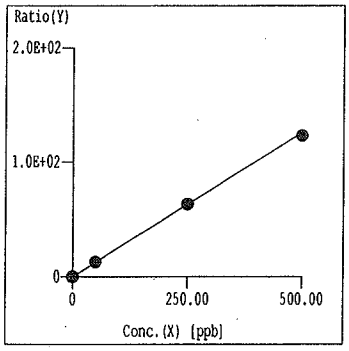
Step Mass Element (3) 111 Cd | ISTD 115 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 8.920E-002*X +2.298E-003
X = 1.121E+001*Y -2.577E-002
DL = 2.666E-02 ppb
BEC = 2.577E-02 ppb

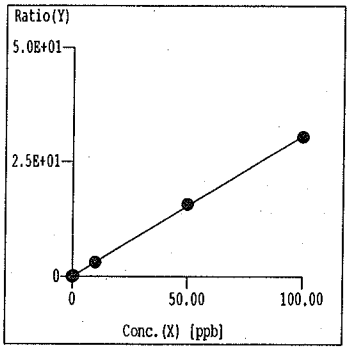
=== Graph Detail ===

Step Mass Element (3) 118 Sn | ISTD 115 | Unit ppb



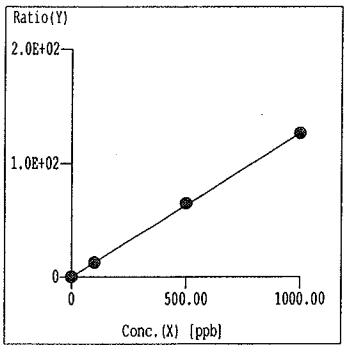

Curve Fit: Y=aX+b
r = 0.9999
Y = 2.511E-001*X +1.841E-002
X = 3.983E+000*Y -7.334E-002
DL = 1.591E-02 ppb
BEC = 7.334E-02 ppb

Step Mass Element (3) 121 Sb | ISTD 115 | Unit ppb



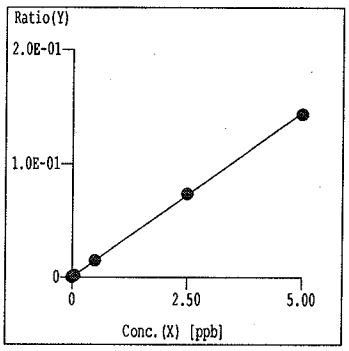

Curve Fit: Y=aX+b
r = 0.9999
Y = 3.067E-001*X +3.247E-003
X = 3.261E+000*Y -1.059E-002
DL = 2.562E-03 ppb
BEC = 1.059E-02 ppb

Step Mass Element (3) 137 Ba | ISTD 115 | Unit ppb



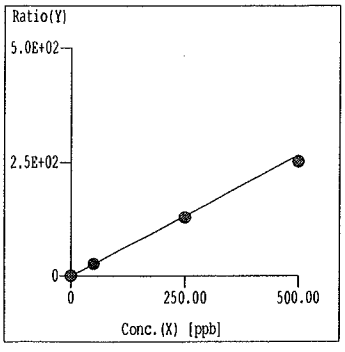

Curve Fit: Y=aX+b
r = 0.9999
Y = 1.265E-001*X +4.359E-003
X = 7.905E+000*Y -3.446E-002
DL = 1.311E-02 ppb
BEC = 3.446E-02 ppb

Step Mass Element (3) 201 Hg | ISTD 159 | Unit ppb



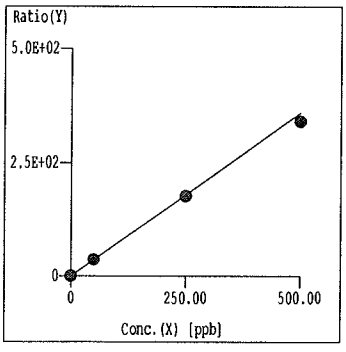

Curve Fit: Y=aX+b
r = 0.9999
Y = 2.900E-002*X +2.420E-004
X = 3.449E+001*Y -8.345E-003
DL = 8.190E-03 ppb
BEC = 8.345E-03 ppb

Step Mass Element (3) 205 Tl | ISTD 159 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9999
Y = 5.323E-001*X +2.437E-002
X = 1.879E+000*Y -4.579E-002
DL = 8.612E-03 ppb
BEC = 4.579E-02 ppb

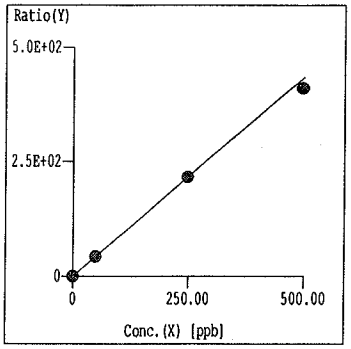
Step Mass Element (3) 208 Pb | ISTD 159 | Unit ppb




Curve Fit: Y=aX+b
r = 0.9998
Y = 7.188E-001*X +3.521E-002
X = 1.391E+000*Y -4.898E-002
DL = 4.442E-03 ppb
BEC = 4.898E-02 ppb

=== Graph Detail ===

| Step | Mass | Element | ISTD | Unit |
|---|---|---|---|---|
| (3) | 238 | U | 159 | ppb |




Curve Fit: Y=aX+b
r = 0.9997
Y = 8.680E-001*X +4.786E-003
X = 1.152E+000*Y -5.513E-003
DL = 1.600E-03 ppb
BEC = 5.513E-03 ppb

**Calibration Blank QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16003 |
| Date Acquired: | Dec 29 2020 01:42 pm |
| Operator: | THuang |
| Sample Name: | BLNK |
| Misc Info: | |
| Vial Number: | 1101 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg |
| Last Cal Update: | Dec 29 2020 01:45 pm |
| Sample Type: | CalBlk |
| Total Dil Factor: | 1.00 |

**QC&ISTD Elements**

| Element | | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|---|
| 6 | Li | 994848.50 | A | 413500.00 | 41.56 |
| 7 | Li | 59503.52 | P | 25310.00 | 42.54 |
| 9 | Be | 270.01 | P | 45.83 | 16.97 |
| 11 | B | 5708.00 | P | 1632.00 | 28.59 |
| 23 | Na | 313141.91 | P | 14120.00 | 4.51 |
| 24 | Mg | 27562.35 | P | 2975.00 | 10.79 |
| 27 | Al | 40310.71 | P | 7289.00 | 18.08 |
| 28 | Si | 16400.46 | P | 1771.00 | 10.80 |
| 31 | P | 16703.43 | P | 14680.00 | 87.89 |
| 39 | K | 95457.40 | P | 3014.00 | 3.16 |
| 40 | Ca | 157060.00 | P | 15230.00 | 9.70 |
| 45 | Sc | 1145458.00 | A | 138800.00 | 12.12 |
| 45 | Sc | 61010.70 | P | 46410.00 | 76.07 |
| 45 | Sc | 1212065.00 | A | 599700.00 | 49.48 |
| 47 | Ti | 96.67 | P | 23.33 | 24.13 |
| 51 | V | 294.67 | P | 138.80 | 47.10 |
| 52 | Cr | 452.90 | P | 168.50 | 37.21 |
| 55 | Mn | 6066.33 | P | 3032.00 | 49.98 |
| 56 | Fe | 165574.91 | P | 22800.00 | 13.77 |
| 59 | Co | 1836.86 | P | 531.90 | 28.96 |
| 60 | Ni | 134.22 | P | 54.86 | 40.87 |
| 63 | Cu | 676.47 | P | 200.30 | 29.61 |
| 66 | Zn | 682.27 | P | 299.80 | 43.94 |
| 72 | Ge | 239851.80 | P | 27180.00 | 11.33 |
| 72 | Ge | 24881.91 | P | 18710.00 | 75.20 |
| 72 | Ge | 232738.09 | P | 112700.00 | 48.42 |
| 75 | As | 40.67 | P | 14.89 | 36.61 |
| 78 | Se | 23.11 | P | 1.54 | 6.66 |
| 88 | Sr | 395.58 | P | 77.06 | 19.48 |
| 90 | Zr | 221.14 | P | 108.90 | 49.25 |
| 95 | Mo | 398.91 | P | 55.01 | 13.79 |
| 107 | Ag | 51.11 | P | 22.20 | 43.43 |
| 111 | Cd | 11.64 | P | 22.51 | 193.38 |
| 115 | In | 1395649.00 | A | 681400.00 | 48.82 |
| 118 | Sn | 1023.41 | P | 169.60 | 16.57 |
| 121 | Sb | 203.34 | P | 12.02 | 5.91 |
| 137 | Ba | 163.34 | P | 48.08 | 29.44 |
| 159 | Tb | 1816262.00 | A | 878500.00 | 48.37 |
| 182 | W | 767.90 | P | 351.00 | 45.71 |
| 201 | Hg | | P | | |
| 201 | Hg | 30.00 | P | 5.77 | 19.25 |
| 205 | Tl | 1409.02 | P | 114.80 | 8.15 |
| 208 | Pb | 3200.29 | P | 672.80 | 21.02 |
| 209 | Bi | 1135336.00 | M | 526400.00 | 46.37 |
| 235 | U | 11.11 | P | 7.70 | 69.28 |
| 238 | U | 518.92 | P | 56.71 | 10.93 |

**Calibration Blank QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16004 |
| Date Acquired: | Dec 29 2020 01:46 pm |
| Operator: | THuang |
| Sample Name: | S0 |
| Misc Info: | |
| Vial Number: | 1102 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg |
| Last Cal Update: | Dec 29 2020 01:45 pm |
| Sample Type: | CalBlk |
| Total Dil Factor: | 1.00 |

**QC&ISTD Elements**

| Element | | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|---|
| 6 | Li | 3394344.00 | A | 33620.00 | 0.99 |
| 7 | Li | 207421.30 | P | 293.50 | 0.14 |
| 9 | Be | 217.79 | P | 18.96 | 8.71 |
| 11 | B | 12948.06 | P | 177.30 | 1.37 |
| 23 | Na | 268036.59 | P | 14220.00 | 5.31 |
| 24 | Mg | 40200.46 | P | 156.60 | 0.39 |
| 27 | Al | 86180.56 | P | 228.60 | 0.27 |
| 28 | Si | 6641.11 | P | 253.60 | 3.82 |
| 31 | P | 38252.04 | P | 1592.00 | 4.16 |
| 39 | K | 158487.30 | P | 1498.00 | 0.95 |
| 40 | Ca | 247377.09 | P | 5519.00 | 2.23 |
| 45 | Sc | 2921253.00 | A | 82550.00 | 2.83 |
| 45 | Sc | 704233.19 | P | 7723.00 | 1.10 |
| 45 | Sc | 4437904.00 | A | 26030.00 | 0.59 |
| 47 | Ti | 241.12 | P | 13.47 | 5.59 |
| 51 | V | 7301.83 | P | 86.86 | 1.19 |
| 52 | Cr | 1513.64 | P | 8.57 | 0.57 |
| 55 | Mn | 5291.11 | P | 170.40 | 3.22 |
| 56 | Fe | 49072.71 | P | 643.40 | 1.31 |
| 59 | Co | 966.73 | P | 89.70 | 9.28 |
| 60 | Ni | 644.91 | P | 9.00 | 1.40 |
| 63 | Cu | 1263.40 | P | 25.44 | 2.01 |
| 66 | Zn | 4808.73 | P | 102.50 | 2.13 |
| 72 | Ge | 595893.13 | P | 15320.00 | 2.57 |
| 72 | Ge | 270821.91 | P | 1452.00 | 0.54 |
| 72 | Ge | 815341.69 | P | 5857.00 | 0.72 |
| 75 | As | 154.45 | P | 5.43 | 3.52 |
| 78 | Se | 15.11 | P | 1.02 | 6.74 |
| 88 | Sr | 1026.74 | P | 18.56 | 1.81 |
| 90 | Zr | 305.57 | P | 18.96 | 6.20 |
| 95 | Mo | 228.90 | P | 5.09 | 2.22 |
| 107 | Ag | 88.89 | P | 8.39 | 9.44 |
| 111 | Cd | 73.32 | P | 40.09 | 54.68 |
| 115 | In | 5098577.00 | A | 23240.00 | 0.46 |
| 118 | Sn | 943.41 | P | 65.68 | 6.96 |
| 121 | Sb | 164.45 | P | 13.47 | 8.19 |
| 137 | Ba | 215.57 | P | 29.13 | 13.51 |
| 159 | Tb | 6539240.00 | A | 50430.00 | 0.77 |
| 182 | W | 562.25 | P | 18.95 | 3.37 |
| 201 | Hg | | P | | |
| 201 | Hg | 15.56 | P | 5.09 | 32.73 |
| 205 | Tl | 738.94 | P | 102.10 | 13.82 |
| 208 | Pb | 2227.95 | P | 59.85 | 2.69 |
| 209 | Bi | 4086853.00 | A | 12160.00 | 0.30 |
| 235 | U | 8.89 | P | 3.85 | 43.30 |
| 238 | U | 287.79 | P | 32.03 | 11.13 |

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16005.D\F6L16005.D#
Date Acquired: Dec 29 2020 01:51 pm
Operator: THuang
Sample Name: S1 0.5
Misc Info:
Vial Number: 1104
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 01:49 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 3395493.00 | A | 54450.00 | 1.60 |
| 7 Li | 226773.09 | P | 830.50 | 0.37 |
| 9 Be | 5908.00 | P | 189.90 | 3.21 |
| 11 B | 18424.93 | P | 319.40 | 1.73 |
| 23 Na | 840187.50 | M | 29040.00 | 3.46 |
| 24 Mg | 1495330.00 | A | 23270.00 | 1.56 |
| 27 Al | 1896981.00 | A | 5700.00 | 0.30 |
| 28 Si | 367445.19 | P | 5895.00 | 1.60 |
| 31 P | 83992.73 | P | 1176.00 | 1.40 |
| 39 K | 261019.59 | P | 1904.00 | 0.73 |
| 40 Ca | 1081151.00 | A | 16980.00 | 1.57 |
| 45 Sc | 3018340.00 | A | 64370.00 | 2.13 |
| 45 Sc | 705567.00 | P | 4311.00 | 0.61 |
| 45 Sc | 4522477.00 | A | 6891.00 | 0.15 |
| 47 Ti | 2090.23 | P | 45.83 | 2.19 |
| 51 V | 12684.10 | P | 117.30 | 0.92 |
| 52 Cr | 9929.78 | P | 15.50 | 0.16 |
| 55 Mn | 30220.18 | P | 158.30 | 0.52 |
| 56 Fe | 1385675.00 | A | 21070.00 | 1.52 |
| 59 Co | 21621.89 | P | 435.70 | 2.02 |
| 60 Ni | 3526.88 | P | 24.78 | 0.70 |
| 63 Cu | 9075.48 | P | 82.11 | 0.90 |
| 66 Zn | 6996.32 | P | 135.50 | 1.94 |
| 72 Ge | 613742.13 | P | 10370.00 | 1.69 |
| 72 Ge | 272398.50 | P | 1920.00 | 0.70 |
| 72 Ge | 818606.81 | P | 5141.00 | 0.63 |
| 75 As | 970.48 | P | 11.00 | 1.13 |
| 78 Se | 398.45 | P | 29.76 | 7.47 |
| 88 Sr | 26404.65 | P | 733.20 | 2.78 |
| 90 Zr | 115019.30 | P | 835.20 | 0.73 |
| 95 Mo | 4558.66 | P | 73.75 | 1.62 |
| 107 Ag | 13589.06 | P | 215.50 | 1.59 |
| 111 Cd | 2756.74 | P | 93.29 | 3.38 |
| 115 In | 5077645.00 | A | 53170.00 | 1.05 |
| 118 Sn | 7252.08 | P | 232.70 | 3.21 |
| 121 Sb | 8107.02 | P | 135.10 | 1.67 |
| 137 Ba | 3547.24 | P | 104.80 | 2.95 |
| 159 Tb | 6544913.00 | A | 14880.00 | 0.23 |
| 182 W | 4230.80 | P | 110.20 | 2.60 |
| 201 Hg | | P | | |
| 201 Hg | 108.89 | P | 25.89 | 23.78 |
| 205 Tl | 19875.22 | P | 55.11 | 0.28 |
| 208 Pb | 27996.92 | P | 440.00 | 1.57 |
| 209 Bi | 4099137.00 | A | 26280.00 | 0.64 |
| 235 U | 86.67 | P | 15.28 | 17.63 |
| 238 U | 30864.67 | P | 300.90 | 0.97 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3395493.50 | 1.60 | 3394344.30 | 100.0 | 60 - 125 | |
| 45 Sc | 3018340.50 | 2.13 | 2921252.80 | 103.3 | 60 - 125 | |
| 45 Sc | 705567.00 | 0.61 | 704233.19 | 100.2 | 60 - 125 | |
| 45 Sc | 4522477.00 | 0.15 | 4437904.00 | 101.9 | 60 - 125 | |
| 72 Ge | 613742.13 | 1.69 | 595893.06 | 103.0 | 60 - 125 | |
| 72 Ge | 272398.50 | 0.70 | 270821.88 | 100.6 | 60 - 125 | |
| 72 Ge | 818606.81 | 0.63 | 815341.69 | 100.4 | 60 - 125 | |
| 115 In | 5077645.00 | 1.05 | 5098577.00 | 99.6 | 60 - 125 | |
| 159 Tb | 6544913.00 | 0.23 | 6539240.00 | 100.1 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16006.D\F6L16006.D#
Date Acquired: Dec 29 2020 01:56 pm
Operator: THuang
Sample Name: S2 50
Misc Info:
Vial Number: 1105
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 01:54 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 3364749.00 | A | 40930.00 | 1.22 |
| 7 Li | 374626.09 | P | 2184.00 | 0.58 |
| 9 Be | 55289.04 | P | 911.90 | 1.65 |
| 11 B | 98637.56 | P | 600.80 | 0.61 |
| 23 Na | 53568592.00 | A | 1286000.00 | 2.40 |
| 24 Mg | 128622800.00 | A | 955700.00 | 0.74 |
| 27 Al | 168113900.00 | A | 1081000.00 | 0.64 |
| 28 Si | 1402282.00 | A | 38000.00 | 2.71 |
| 31 P | 138531.41 | P | 3359.00 | 2.42 |
| 39 K | 9745572.00 | A | 92920.00 | 0.95 |
| 40 Ca | 88933912.00 | A | 1400000.00 | 1.57 |
| 45 Sc | 2942298.00 | A | 51500.00 | 1.75 |
| 45 Sc | 686225.88 | P | 5626.00 | 0.82 |
| 45 Sc | 4444431.00 | A | 22820.00 | 0.51 |
| 47 Ti | 151550.91 | P | 1644.00 | 1.08 |
| 51 V | 643648.69 | P | 4910.00 | 0.76 |
| 52 Cr | 745230.69 | P | 5957.00 | 0.80 |
| 55 Mn | 13623450.00 | A | 81260.00 | 0.60 |
| 56 Fe | 121607900.00 | A | 2264000.00 | 1.86 |
| 59 Co | 1899035.00 | A | 3901.00 | 0.21 |
| 60 Ni | 253071.80 | P | 2374.00 | 0.94 |
| 63 Cu | 632454.38 | P | 5876.00 | 0.93 |
| 66 Zn | 243280.50 | P | 938.50 | 0.39 |
| 72 Ge | 590594.88 | P | 14530.00 | 2.46 |
| 72 Ge | 261475.00 | P | 1783.00 | 0.68 |
| 72 Ge | 800245.63 | P | 5017.00 | 0.63 |
| 75 As | 77619.87 | P | 842.20 | 1.09 |
| 78 Se | 36340.09 | P | 963.70 | 2.65 |
| 88 Sr | 2347360.00 | A | 16750.00 | 0.71 |
| 90 Zr | 251049.00 | P | 3196.00 | 1.27 |
| 95 Mo | 414046.09 | P | 1203.00 | 0.29 |
| 107 Ag | 107427.50 | P | 1219.00 | 1.13 |
| 111 Cd | 222290.70 | P | 1694.00 | 0.76 |
| 115 In | 4948506.00 | A | 43230.00 | 0.87 |
| 118 Sn | 631583.88 | P | 1858.00 | 0.29 |
| 121 Sb | 150599.41 | P | 1272.00 | 0.84 |
| 137 Ba | 623484.81 | P | 5657.00 | 0.91 |
| 159 Tb | 6569784.00 | A | 16310.00 | 0.25 |
| 182 W | 36862.87 | P | 543.30 | 1.47 |
| 201 Hg | | P | | |
| 201 Hg | 966.74 | P | 20.28 | 2.10 |
| 205 Tl | 1752137.00 | A | 9523.00 | 0.54 |
| 208 Pb | 2392928.00 | A | 14270.00 | 0.60 |
| 209 Bi | 3916270.00 | A | 13070.00 | 0.33 |
| 235 U | 7210.01 | P | 237.30 | 3.29 |
| 238 U | 2821313.00 | A | 30620.00 | 1.09 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3364749.00 | 1.22 | 3394344.30 | 99.1 | 60 - 125 | |
| 45 Sc | 2942298.00 | 1.75 | 2921252.80 | 100.7 | 60 - 125 | |
| 45 Sc | 686225.88 | 0.82 | 704233.19 | 97.4 | 60 - 125 | |
| 45 Sc | 4444431.00 | 0.51 | 4437904.00 | 100.1 | 60 - 125 | |
| 72 Ge | 590594.88 | 2.46 | 595893.06 | 99.1 | 60 - 125 | |
| 72 Ge | 261474.97 | 0.68 | 270821.88 | 96.5 | 60 - 125 | |
| 72 Ge | 800245.63 | 0.63 | 815341.69 | 98.1 | 60 - 125 | |
| 115 In | 4948506.00 | 0.87 | 5098577.00 | 97.1 | 60 - 125 | |
| 159 Tb | 6569783.50 | 0.25 | 6539240.00 | 100.5 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16007.D\F6L16007.D#
Date Acquired: Dec 29 2020 02:00 pm
Operator: THuang
Sample Name: S3 250
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 01:59 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 3070820.00 | A | 22220.00 | 0.72 |
| 7 Li | 998924.00 | A | 21750.00 | 2.18 |
| 9 Be | 261948.20 | P | 1103.00 | 0.42 |
| 11 B | 420081.50 | P | 2844.00 | 0.68 |
| 23 Na | 264738300.00 | A | 5041000.00 | 1.90 |
| 24 Mg | 618702720.00 | A | 3899000.00 | 0.63 |
| 27 Al | 811840580.00 | A | 4021000.00 | 0.50 |
| 28 Si | 6641200.00 | A | 121400.00 | 1.83 |
| 31 P | 504863.59 | P | 4608.00 | 0.91 |
| 39 K | 46380300.00 | A | 400500.00 | 0.86 |
| 40 Ca | 442126400.00 | A | 9062000.00 | 2.05 |
| 45 Sc | 2898424.00 | A | 46600.00 | 1.61 |
| 45 Sc | 658430.81 | P | 5728.00 | 0.87 |
| 45 Sc | 4323753.00 | A | 40480.00 | 0.94 |
| 47 Ti | 733356.13 | P | 5033.00 | 0.69 |
| 51 V | 3068001.00 | A | 22720.00 | 0.74 |
| 52 Cr | 3484613.00 | A | 29180.00 | 0.84 |
| 55 Mn | 65763800.00 | A | 495900.00 | 0.75 |
| 56 Fe | 590022980.00 | A | 13190000.00 | 2.24 |
| 59 Co | 8849336.00 | A | 48660.00 | 0.55 |
| 60 Ni | 1140497.00 | A | 7198.00 | 0.63 |
| 63 Cu | 2810033.00 | A | 38350.00 | 1.36 |
| 66 Zn | 1138357.00 | A | 1885.00 | 0.17 |
| 72 Ge | 562565.81 | P | 11890.00 | 2.11 |
| 72 Ge | 249600.00 | P | 1962.00 | 0.79 |
| 72 Ge | 781503.81 | P | 4137.00 | 0.53 |
| 75 As | 377451.50 | P | 2308.00 | 0.61 |
| 78 Se | 174054.09 | P | 4212.00 | 2.42 |
| 88 Sr | 11306360.00 | A | 123300.00 | 1.09 |
| 90 Zr | 668542.31 | P | 5619.00 | 0.84 |
| 95 Mo | 2010391.00 | A | 16030.00 | 0.80 |
| 107 Ag | 490844.50 | P | 1356.00 | 0.28 |
| 111 Cd | 1048799.00 | M | 17200.00 | 1.64 |
| 115 In | 4680121.00 | A | 26650.00 | 0.57 |
| 118 Sn | 2938674.00 | A | 17440.00 | 0.59 |
| 121 Sb | 731709.88 | P | 3944.00 | 0.54 |
| 137 Ba | 3032151.00 | A | 30320.00 | 1.00 |
| 159 Tb | 6302473.00 | A | 9759.00 | 0.15 |
| 182 W | 376228.91 | P | 3178.00 | 0.84 |
| 201 Hg | | P | | |
| 201 Hg | 4637.64 | P | 47.02 | 1.01 |
| 205 Tl | 8156427.00 | A | 42610.00 | 0.52 |
| 208 Pb | 11138540.00 | A | 88520.00 | 0.79 |
| 209 Bi | 3621229.00 | A | 20680.00 | 0.57 |
| 235 U | 35232.25 | P | 44.81 | 0.13 |
| 238 U | 13567640.00 | A | 103400.00 | 0.76 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3070820.30 | 0.72 | 3394344.30 | 90.5 | 60 - 125 | |
| 45 Sc | 2898424.00 | 1.61 | 2921252.80 | 99.2 | 60 - 125 | |
| 45 Sc | 658430.81 | 0.87 | 704233.19 | 93.5 | 60 - 125 | |
| 45 Sc | 4323753.50 | 0.94 | 4437904.00 | 97.4 | 60 - 125 | |
| 72 Ge | 562565.75 | 2.11 | 595893.06 | 94.4 | 60 - 125 | |
| 72 Ge | 249600.05 | 0.79 | 270821.88 | 92.2 | 60 - 125 | |
| 72 Ge | 781503.81 | 0.53 | 815341.69 | 95.8 | 60 - 125 | |
| 115 In | 4680121.00 | 0.57 | 5098577.00 | 91.8 | 60 - 125 | |
| 159 Tb | 6302473.00 | 0.15 | 6539240.00 | 96.4 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16007.D\F6L16007.D#
Date Acquired: Dec 29 2020 02:00 pm
Operator: THuang
Sample Name: S3 250
Misc Info:
Vial Number: 1106
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 01:59 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 3070820.00 | A | 22220.00 | 0.72 |
| 7 Li | 998924.00 | A | 21750.00 | 2.18 |
| 9 Be | 261948.20 | P | 1103.00 | 0.42 |
| 11 B | 420081.50 | P | 2844.00 | 0.68 |
| 23 Na | 264738300.00 | A | 5041000.00 | 1.90 |
| 24 Mg | 618702720.00 | A | 3899000.00 | 0.63 |
| 27 Al | 811840580.00 | A | 4021000.00 | 0.50 |
| 28 Si | 6641200.00 | A | 121400.00 | 1.83 |
| 31 P | 504863.59 | P | 4608.00 | 0.91 |
| 39 K | 46380300.00 | A | 400500.00 | 0.86 |
| 40 Ca | 442126400.00 | A | 9062000.00 | 2.05 |
| 45 Sc | 2898424.00 | A | 46600.00 | 1.61 |
| 45 Sc | 658430.81 | P | 5728.00 | 0.87 |
| 45 Sc | 4323753.00 | A | 40480.00 | 0.94 |
| 47 Ti | 733356.13 | P | 5033.00 | 0.69 |
| 51 V | 3068001.00 | A | 22720.00 | 0.74 |
| 52 Cr | 3484613.00 | A | 29180.00 | 0.84 |
| 55 Mn | 65763800.00 | A | 495900.00 | 0.75 |
| 56 Fe | 590022980.00 | A | 13190000.00 | 2.24 |
| 59 Co | 8849336.00 | A | 48660.00 | 0.55 |
| 60 Ni | 1140497.00 | A | 7198.00 | 0.63 |
| 63 Cu | 2810033.00 | A | 38350.00 | 1.36 |
| 66 Zn | 1138357.00 | A | 1885.00 | 0.17 |
| 72 Ge | 562565.81 | P | 11890.00 | 2.11 |
| 72 Ge | 249600.00 | P | 1962.00 | 0.79 |
| 72 Ge | 781503.81 | P | 4137.00 | 0.53 |
| 75 As | 377451.50 | P | 2308.00 | 0.61 |
| 78 Se | 174054.09 | P | 4212.00 | 2.42 |
| 88 Sr | 11306360.00 | A | 123300.00 | 1.09 |
| 90 Zr | 668542.31 | P | 5619.00 | 0.84 |
| 95 Mo | 2010391.00 | A | 16030.00 | 0.80 |
| 107 Ag | 490844.50 | P | 1356.00 | 0.28 |
| 111 Cd | 1048799.00 | M | 17200.00 | 1.64 |
| 115 In | 4680121.00 | A | 26650.00 | 0.57 |
| 118 Sn | 2938674.00 | A | 17440.00 | 0.59 |
| 121 Sb | 731709.88 | P | 3944.00 | 0.54 |
| 137 Ba | 3032151.00 | A | 30320.00 | 1.00 |
| 159 Tb | 6302473.00 | A | 9759.00 | 0.15 |
| 182 W | 376228.91 | P | 3178.00 | 0.84 |
| 201 Hg | | P | | |
| 201 Hg | 4637.64 | P | 47.02 | 1.01 |
| 205 Tl | 8156427.00 | A | 42610.00 | 0.52 |
| 208 Pb | 11138540.00 | A | 88520.00 | 0.79 |
| 209 Bi | 3621229.00 | A | 20680.00 | 0.57 |
| 235 U | 35232.25 | P | 44.81 | 0.13 |
| 238 U | 13567640.00 | A | 103400.00 | 0.76 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3070820.30 | 0.72 | 3394344.30 | 90.5 | 60 - 125 | |
| 45 Sc | 2898424.00 | 1.61 | 2921252.80 | 99.2 | 60 - 125 | |
| 45 Sc | 658430.81 | 0.87 | 704233.19 | 93.5 | 60 - 125 | |
| 45 Sc | 4323753.50 | 0.94 | 4437904.00 | 97.4 | 60 - 125 | |
| 72 Ge | 562565.75 | 2.11 | 595893.06 | 94.4 | 60 - 125 | |
| 72 Ge | 249600.05 | 0.79 | 270821.88 | 92.2 | 60 - 125 | |
| 72 Ge | 781503.81 | 0.53 | 815341.69 | 95.8 | 60 - 125 | |
| 115 In | 4680121.00 | 0.57 | 5098577.00 | 91.8 | 60 - 125 | |
| 159 Tb | 6302473.00 | 0.15 | 6539240.00 | 96.4 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**Calibration Standard QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16008.D\F6L16008.D#
Date Acquired: Dec 29 2020 02:04 pm
Operator: THuang
Sample Name: S4 500
Misc Info:
Vial Number: 1107
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 02:03 pm
Sample Type: CalStd
Total Dil Factor: 1.00

**QC&ISTD Elements**

| Element | CPS Mean | | SD | RSD(%) |
|---|---|---|---|---|
| 6 Li | 2818302.00 | A | 46800.00 | 1.66 |
| 7 Li | 1644370.00 | A | 10290.00 | 0.63 |
| 9 Be | 482631.41 | P | 6525.00 | 1.35 |
| 11 B | 758666.88 | A | 7129.00 | 0.94 |
| 23 Na | 508376700.00 | A | 23680000.00 | 4.66 |
| 24 Mg | 1153067000.00 | A | 690900.00 | 0.06 |
| 27 Al | 1534178000.00 | A | 19520000.00 | 1.27 |
| 28 Si | 12861810.00 | A | 498900.00 | 3.88 |
| 31 P | 822573.81 | A | 6728.00 | 0.82 |
| 39 K | 89244632.00 | A | 89280.00 | 0.10 |
| 40 Ca | 862059070.00 | A | 32690000.00 | 3.79 |
| 45 Sc | 2847647.00 | A | 110200.00 | 3.87 |
| 45 Sc | 644659.31 | P | 2232.00 | 0.35 |
| 45 Sc | 4226859.00 | A | 42790.00 | 1.01 |
| 47 Ti | 1419396.00 | A | 14900.00 | 1.05 |
| 51 V | 5834624.00 | A | 19500.00 | 0.33 |
| 52 Cr | 6603028.00 | A | 27760.00 | 0.42 |
| 55 Mn | 123962000.00 | A | 1142000.00 | 0.92 |
| 56 Fe | 1134194000.00 | A | 48280000.00 | 4.26 |
| 59 Co | 16607760.00 | A | 96260.00 | 0.58 |
| 60 Ni | 2169937.00 | A | 19330.00 | 0.89 |
| 63 Cu | 5204495.00 | A | 11300.00 | 0.22 |
| 66 Zn | 2120621.00 | A | 7617.00 | 0.36 |
| 72 Ge | 551968.00 | P | 18060.00 | 3.27 |
| 72 Ge | 245232.20 | P | 632.80 | 0.26 |
| 72 Ge | 774279.81 | P | 1922.00 | 0.25 |
| 75 As | 711829.19 | P | 1146.00 | 0.16 |
| 78 Se | 330278.91 | P | 11510.00 | 3.48 |
| 88 Sr | 21695260.00 | A | 93120.00 | 0.43 |
| 90 Zr | 1359902.00 | A | 21270.00 | 1.56 |
| 95 Mo | 3855607.00 | A | 29580.00 | 0.77 |
| 107 Ag | 912827.19 | P | 3516.00 | 0.39 |
| 111 Cd | 1976104.00 | A | 11090.00 | 0.56 |
| 115 In | 4505223.00 | A | 31950.00 | 0.71 |
| 118 Sn | 5522207.00 | A | 4738.00 | 0.09 |
| 121 Sb | 1368559.00 | A | 9093.00 | 0.66 |
| 137 Ba | 5691965.00 | A | 32370.00 | 0.57 |
| 159 Tb | 6099389.00 | A | 32000.00 | 0.52 |
| 182 W | 761091.63 | P | 1319.00 | 0.17 |
| 201 Hg | | P | | |
| 201 Hg | 8746.45 | P | 43.60 | 0.50 |
| 205 Tl | 15340180.00 | A | 92170.00 | 0.60 |
| 208 Pb | 20749750.00 | A | 159400.00 | 0.77 |
| 209 Bi | 3402795.00 | A | 14130.00 | 0.42 |
| 235 U | 66194.82 | P | 132.70 | 0.20 |
| 238 U | 24997630.00 | A | 99890.00 | 0.40 |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2818302.30 | 1.66 | 3394344.30 | 83.0 | 60 - 125 | |
| 45 Sc | 2847647.30 | 3.87 | 2921252.80 | 97.5 | 60 - 125 | |
| 45 Sc | 644659.25 | 0.35 | 704233.19 | 91.5 | 60 - 125 | |
| 45 Sc | 4226858.50 | 1.01 | 4437904.00 | 95.2 | 60 - 125 | |
| 72 Ge | 551968.00 | 3.27 | 595893.06 | 92.6 | 60 - 125 | |
| 72 Ge | 245232.23 | 0.26 | 270821.88 | 90.6 | 60 - 125 | |
| 72 Ge | 774279.81 | 0.25 | 815341.69 | 95.0 | 60 - 125 | |
| 115 In | 4505223.00 | 0.71 | 5098577.00 | 88.4 | 60 - 125 | |
| 159 Tb | 6099388.50 | 0.52 | 6539240.00 | 93.3 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

--- :Element Failures --- :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Pass**
**ISTD: Pass**

**ICV QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16009.D\F6L16009.D# |
| Date Acquired: | Dec 29 2020 02:09 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICV |
| Misc Info: | |
| Vial Number: | 1204 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | ICV1 |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc. RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 29.22 | ppb | 1125876.0 | 1.53 | 30.00 | 90 - 110 | |
| 9 Be | 28.61 | ppb | 300251.8 | 0.53 | 30.00 | 90 - 110 | |
| 11 B | 30.38 | ppb | 253219.3 | 0.19 | 30.00 | 90 - 110 | |
| 23 Na | 29070.00 | ppb | 303894020.0 | 1.05 | 30000.00 | 90 - 110 | |
| 24 Mg | 28870.00 | ppb | 715167490.0 | 0.55 | 30000.00 | 90 - 110 | |
| 27 Al | 27660.00 | ppb | 947674300.0 | 1.00 | 30000.00 | 90 - 110 | |
| 28 Si | 3034.00 | ppb | 8312414.0 | 1.03 | 3000.00 | 90 - 110 | |
| 31 P | 292.00 | ppb | 564916.9 | 0.91 | 300.00 | 90 - 110 | |
| 39 K | 29150.00 | ppb | 53508728.0 | 0.69 | 30000.00 | 90 - 110 | |
| 40 Ca | 29470.00 | ppb | 508601220.0 | 0.78 | 30000.00 | 90 - 110 | |
| 47 Ti | 293.00 | ppb | 863834.6 | 0.55 | 300.00 | 90 - 110 | |
| 51 V | 291.00 | ppb | 3507866.0 | 0.61 | 300.00 | 90 - 110 | |
| 52 Cr | 285.10 | ppb | 4021484.0 | 0.76 | 300.00 | 90 - 110 | |
| 55 Mn | 1864.00 | ppb | 82810232.0 | 0.93 | 2000.00 | 90 - 110 | |
| 56 Fe | 28930.00 | ppb | 678725820.0 | 0.55 | 30000.00 | 90 - 110 | |
| 59 Co | 281.80 | ppb | 10289920.0 | 0.83 | 300.00 | 90 - 110 | |
| 60 Ni | 280.30 | ppb | 1325535.0 | 0.71 | 300.00 | 90 - 110 | |
| 63 Cu | 269.80 | ppb | 3189443.0 | 0.44 | 300.00 | 90 - 110 | ~~Fail~~ 90% TH 12/29/20 |
| 66 Zn | 301.30 | ppb | 1340982.0 | 0.44 | 300.00 | 90 - 110 | |
| 75 As | 292.10 | ppb | 431774.7 | 0.72 | 300.00 | 90 - 110 | |
| 78 Se | 297.80 | ppb | 203136.6 | 0.50 | 300.00 | 90 - 110 | |
| 88 Sr | 296.00 | ppb | 13045420.0 | 0.54 | 300.00 | 90 - 110 | |
| 90 Zr | 26.52 | ppb | 810992.5 | 0.90 | 30.00 | 90 - 110 | Fail |
| 95 Mo | 301.10 | ppb | 2367304.0 | 0.46 | 300.00 | 90 - 110 | |
| 107 Ag | 29.17 | ppb | 565110.0 | 0.64 | 30.00 | 90 - 110 | |
| 111 Cd | 297.70 | ppb | 1229782.0 | 0.83 | 300.00 | 90 - 110 | |
| 118 Sn | 293.90 | ppb | 3417782.0 | 0.95 | 300.00 | 90 - 110 | |
| 121 Sb | 58.06 | ppb | 824672.5 | 1.02 | 60.00 | 90 - 110 | |
| 137 Ba | 306.30 | ppb | 1794337.0 | 0.89 | 300.00 | 90 - 110 | |
| 182 W | 34.36 | ppb | 444969.1 | 1.28 | 30.00 | 90 - 110 | Fail |
| 201 Hg | 2.80 | ppb | 5189.0 | 0.82 | 3.00 | 90 - 110 | |
| 205 Tl | 280.80 | ppb | 9513254.0 | 0.30 | 300.00 | 90 - 110 | |
| 208 Pb | 282.00 | ppb | 12898210.0 | 0.69 | 300.00 | 90 - 110 | |
| 235 U | 2.87 | ppb | 58357.2 | 0.70 | 2.20 | 90 - 110 | Fail |
| 238 U | 282.40 | ppb | 15595090.0 | 0.95 | 300.00 | 90 - 110 | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3082635.3 | 0.91 | 3394344.30 | 90.8 | 60 - 125 | |
| 45 Sc | 2873571.0 | 2.37 | 2921252.80 | 98.4 | 60 - 125 | |
| 45 Sc | 654994.6 | 0.76 | 704233.19 | 93.0 | 60 - 125 | |
| 45 Sc | 4327618.5 | 0.29 | 4437904.00 | 97.5 | 60 - 125 | |
| 72 Ge | 555930.8 | 2.33 | 595893.06 | 93.3 | 60 - 125 | |
| 72 Ge | 247327.2 | 0.49 | 270821.88 | 91.3 | 60 - 125 | |
| 72 Ge | 779948.6 | 0.54 | 815341.69 | 95.7 | 60 - 125 | |
| 115 In | 4630364.5 | 0.16 | 5098577.00 | 90.8 | 60 - 125 | |
| 159 Tb | 6362963.0 | 0.51 | 6539240.00 | 97.3 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

4 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

**Data Results:**

Analytes: Fail
ISTD: Pass

ICB QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16010.D\F6L16010.D# |
| Date Acquired: | Dec 29 2020 02:13 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICB |
| Misc Info: | |
| Vial Number: | 1102 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | ICB |
| Dilution Factor: | 1.00 |

QC Elements

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.0747 | ppb | 210795.0 | 62.63 | 0.20 | |
| 9 Be | 0.0096 | ppb | 327.8 | 62.07 | 0.10 | |
| 11 B | 0.3108 | ppb | 15779.7 | 20.47 | 5.00 | |
| 23 Na | 33.5800 | ppb | 626939.0 | 19.87 | 40.00 | |
| 24 Mg | 13.3200 | ppb | 379532.1 | 12.74 | 10.00 | Fail |
| 27 Al | 12.4400 | ppb | 524569.3 | 15.69 | 20.00 | |
| 28 Si | 6.5560 | ppb | 26908.0 | 13.96 | 20.00 | |
| 31 P | 1.9060 | ppb | 41644.6 | 66.06 | 10.00 | |
| 39 K | 18.4100 | ppb | 191847.4 | 30.08 | 20.00 | |
| 40 Ca | 32.5800 | ppb | 806113.1 | 20.50 | 25.00 | Fail |
| 47 Ti | 0.1333 | ppb | 670.0 | 22.93 | 0.50 | |
| 51 V | 0.1732 | ppb | 8645.7 | 21.58 | 0.50 | |
| 52 Cr | 0.1492 | ppb | 3752.1 | 24.28 | 0.20 | |
| 55 Mn | 0.6786 | ppb | 37033.4 | 12.89 | 0.20 | Fail |
| 56 Fe | 34.1400 | ppb | 854681.9 | 19.23 | 10.00 | Fail |
| 59 Co | 0.1052 | ppb | 4977.9 | 11.96 | 0.20 | |
| 60 Ni | 0.1355 | ppb | 1398.3 | 25.67 | 0.20 | |
| 63 Cu | 0.1237 | ppb | 3577.6 | 32.09 | 0.40 | |
| 66 Zn | 0.2582 | ppb | 5483.4 | 14.08 | 2.00 | |
| 75 As | 0.1829 | ppb | 436.7 | 25.87 | 0.20 | |
| 78 Se | 0.3430 | ppb | 259.6 | 13.84 | 0.20 | Fail |
| 90 Zr | 0.0124 | ppb | 707.8 | 32.63 | 2.00 | |
| 95 Mo | 0.1607 | ppb | 1605.7 | 17.47 | 0.40 | |
| 107 Ag | 0.0132 | ppb | 370.0 | 5.80 | 0.20 | |
| 111 Cd | 0.1095 | ppb | 610.1 | 21.88 | 0.20 | |
| 118 Sn | 0.1570 | ppb | 2926.0 | 5.72 | 0.20 | |
| 121 Sb | 0.0227 | ppb | 516.7 | 26.31 | 0.40 | |
| 137 Ba | 0.1561 | ppb | 1219.0 | 15.83 | 0.20 | |
| 182 W | 0.0387 | ppb | 1013.4 | 16.52 | 1.00 | |
| 201 Hg | 0.0096 | ppb | 34.4 | 20.78 | 0.10 | |
| 205 Tl | 0.1580 | ppb | 7169.1 | 10.34 | 0.20 | |
| 208 Pb | 0.1246 | ppb | 8248.1 | 13.30 | 0.10 | Fail |
| 235 U | 0.0013 | ppb | 36.7 | 55.12 | 1.00 | |
| 238 U | 0.1185 | ppb | 7112.7 | 9.55 | 0.10 | Fail |

L'ab OK TH 12/29/20

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3415141.8 | 2.77 | 3394344.30 | 100.6 | 60 - 125 | |
| 45 Sc | 2898869.0 | 2.61 | 2921252.80 | 99.2 | 60 - 125 | |
| 45 Sc | 685664.0 | 0.48 | 704233.19 | 97.4 | 60 - 125 | |
| 45 Sc | 4444488.5 | 1.29 | 4437904.00 | 100.1 | 60 - 125 | |
| 72 Ge | 582762.3 | 2.04 | 595893.06 | 97.8 | 60 - 125 | |
| 72 Ge | 262336.3 | 0.64 | 270821.88 | 96.9 | 60 - 125 | |
| 72 Ge | 799570.6 | 0.50 | 815341.69 | 98.1 | 60 - 125 | |
| 115 In | 5059053.0 | 0.98 | 5098577.00 | 99.2 | 60 - 125 | |
| 159 Tb | 6609610.5 | 0.05 | 6539240.00 | 101.1 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

7 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

| | |
|---|---|
| Analytes: | Fail |
| ISTD: | Pass |

# Sample QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16011.D\F6L16011.D# |
| Date Acquired: | Dec 29 2020 02:18 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | MRLL2901 |
| Misc Info: | 1/100/10 ppb |
| Vial Number: | 1305 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | Sample |
| Dilution Factor: | 1.00 |
| Autodil Factor: | Undiluted |
| Final Dil Factor: | 1.00 |

| Tune # | Name |
|---|---|
| #1 | h2.u |
| #2 | he.u |
| #3 | norm.u |

**QC Elements**

| Element | Tune | ISTD | CPS | Corr Conc | Raw Conc | Units | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 7 Li | # 3 | 6 | 254047.6 | 0.0000 | 1.0140 | ppb | 2.73 | 50.00 | |
| 9 Be | # 3 | 6 | 11185.5 | 0.0000 | 0.9069 | ppb | 1.31 | 50.00 | |
| 11 B | # 3 | 6 | 104347.8 | 0.0000 | 9.9120 | ppb | 1.57 | 100.00 | |
| 23 Na | # 1 | 45 | 1404574.0 | 0.0000 | 105.6000 | ppb | 0.65 | 50000.00 | |
| 24 Mg | # 3 | 45 | 2802836.0 | 0.0000 | 106.4000 | ppb | 0.87 | 50000.00 | |
| 27 Al | # 3 | 45 | 3631117.0 | 0.0000 | 98.7500 | ppb | 1.31 | 50000.00 | |
| 28 Si | # 1 | 45 | 329290.6 | 0.0000 | 114.5000 | ppb | 1.30 | 5000.00 | |
| 31 P | # 3 | 45 | 135929.3 | 0.0000 | 51.2800 | ppb | 0.71 | 500.00 | |
| 39 K | # 2 | 45 | 371649.9 | 0.0000 | 109.4000 | ppb | 0.50 | 50000.00 | |
| 40 Ca | # 1 | 45 | 2294423.0 | 0.0000 | 116.3000 | ppb | 0.68 | 50000.00 | |
| 47 Ti | # 3 | 45 | 3813.9 | 0.0000 | 1.1480 | ppb | 2.84 | 500.00 | |
| 51 V | # 2 | 45 | 19799.1 | 0.0000 | 1.0360 | ppb | 0.38 | 500.00 | |
| 52 Cr | # 2 | 45 | 17845.6 | 0.0000 | 1.0860 | ppb | 0.73 | 500.00 | |
| 55 Mn | # 3 | 45 | 58678.6 | 0.0000 | 1.1290 | ppb | 2.50 | 3000.00 | |
| 56 Fe | # 1 | 45 | 2712728.0 | 0.0000 | 111.1000 | ppb | 1.42 | 50000.00 | |
| 59 Co | # 3 | 45 | 41818.6 | 0.0000 | 1.0660 | ppb | 1.49 | 500.00 | |
| 60 Ni | # 2 | 45 | 6235.8 | 0.0000 | 1.0950 | ppb | 1.60 | 500.00 | |
| 63 Cu | # 2 | 45 | 15335.7 | 0.0000 | 1.0560 | ppb | 0.52 | 500.00 | |
| 66 Zn | # 3 | 72 | 55571.7 | 0.0000 | 11.0200 | ppb | 0.88 | 500.00 | |
| 75 As | # 2 | 72 | 1760.1 | 0.0000 | 0.9995 | ppb | 2.74 | 500.00 | |
| 78 Se | # 1 | 72 | 764.5 | 0.0000 | 1.0290 | ppb | 4.95 | 500.00 | |
| 88 Sr | # 3 | 72 | 102691.2 | 0.0000 | 2.2040 | ppb | 0.65 | 500.00 | |
| 90 Zr | # 3 | 72 | 111733.5 | 0.0000 | 3.4830 | ppb | 0.68 | 50.00 | |
| 95 Mo | # 3 | 115 | 8884.1 | 0.0000 | 0.9957 | ppb | 1.13 | 500.00 | |
| 107 Ag | # 3 | 115 | 22689.7 | 0.0000 | 1.0550 | ppb | 2.57 | 50.00 | |
| 111 Cd | # 3 | 115 | 5055.2 | 0.0000 | 1.0810 | ppb | 2.84 | 500.00 | |
| 118 Sn | # 3 | 115 | 14544.5 | 0.0000 | 1.0580 | ppb | 4.65 | 500.00 | |
| 121 Sb | # 3 | 115 | 15979.4 | 0.0000 | 1.0070 | ppb | 1.38 | 500.00 | |
| 137 Ba | # 3 | 115 | 7118.7 | 0.0000 | 1.0650 | ppb | 5.05 | 1000.00 | |
| 182 W | # 3 | 159 | 32191.9 | 0.0000 | 2.3260 | ppb | 0.22 | 50.00 | |
| 201 Hg | # 3 | 159 | 220.0 | 0.0000 | 0.1048 | ppb | 13.47 | 25.00 | |
| 205 Tl | # 3 | 159 | 39534.4 | 0.0000 | 1.0620 | ppb | 0.66 | 500.00 | |
| 208 Pb | # 3 | 159 | 54955.0 | 0.0000 | 1.0920 | ppb | 1.86 | 500.00 | |
| 235 U | # 3 | 159 | 145.6 | 0.0000 | 0.0064 | ppb | 6.27 | 30.00 | |
| 238 U | # 3 | 159 | 59230.4 | 0.0000 | 1.0130 | ppb | 0.63 | 500.00 | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li # 3 | 3552297.80 | 0.86 | 3394344.30 | 104.7 | 60 - 125 | |
| 45 Sc # 1 | 2936094.30 | 1.85 | 2921252.80 | 100.5 | 60 - 125 | |
| 45 Sc # 2 | 695873.88 | 0.87 | 704233.19 | 98.8 | 60 - 125 | |
| 45 Sc # 3 | 4532580.00 | 1.10 | 4437904.00 | 102.1 | 60 - 125 | |
| 72 Ge # 1 | 593502.38 | 2.44 | 595893.06 | 99.6 | 60 - 125 | |
| 72 Ge # 2 | 269012.97 | 0.81 | 270821.88 | 99.3 | 60 - 125 | |
| 72 Ge # 3 | 816081.19 | 0.47 | 815341.69 | 100.1 | 60 - 125 | |
| 115 In # 3 | 5119451.00 | 0.55 | 5098577.00 | 100.4 | 60 - 125 | |
| 159 Tb # 3 | 6702216.50 | 1.29 | 6539240.00 | 102.5 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

## Sample QC Report

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16012.D\F6L16012.D#
Date Acquired: Dec 29 2020 02:22 pm
Acq. Method: EM6020Hg.M
Operator: THuang
Sample Name: MRLL2902
Misc Info: 0.4/40/4 ppb
Vial Number: 1306
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal. Update: Dec 29 2020 02:07 pm
Sample Type: Sample
Dilution Factor: 1.00
Autodil Factor: Undiluted
Final Dil Factor: 1.00

| Tune # | Name |
|---|---|
| #1 | h2.u |
| #2 | he.u |
| #3 | norm.u |

QC Elements

| Element | Tune | ISTD | CPS | Corr Conc | Raw Conc | Units | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 7 Li | # 3 | 6 | 237293.8 | 0.0000 | 0.4472 | ppb | 11.90 | 50.00 | |
| 9 Be | # 3 | 6 | 5029.9 | 0.0000 | 0.3901 | ppb | 2.09 | 50.00 | |
| 11 B | # 3 | 6 | 14361.7 | 0.0000 | 0.0580 | ppb | 31.25 | 100.00 | |
| 23 Na | # 1 | 45 | 1185538.0 | 0.0000 | 80.0800 | ppb | 1.09 | 50000.00 | |
| 24 Mg | # 3 | 45 | 2440311.0 | 0.0000 | 90.1800 | ppb | 1.35 | 50000.00 | |
| 27 Al | # 3 | 45 | 3214050.0 | 0.0000 | 84.9400 | ppb | 1.98 | 50000.00 | |
| 28 Si | # 1 | 45 | 41472.0 | 0.0000 | 10.9600 | ppb | 1.77 | 5000.00 | |
| 31 P | # 3 | 45 | 41452.8 | 0.0000 | 0.8459 | ppb | 109.65 | 500.00 | |
| 39 K | # 2 | 45 | 333296.5 | 0.0000 | 82.7500 | ppb | 0.59 | 50000.00 | |
| 40 Ca | # 1 | 45 | 2620218.0 | 0.0000 | 128.1000 | ppb | 1.30 | 50000.00 | |
| 47 Ti | # 3 | 45 | 3053.8 | 0.0000 | 0.8772 | ppb | 4.85 | 500.00 | |
| 51 V | # 2 | 45 | 16122.7 | 0.0000 | 0.6970 | ppb | 0.95 | 500.00 | |
| 52 Cr | # 2 | 45 | 14326.7 | 0.0000 | 0.8128 | ppb | 0.97 | 500.00 | |
| 55 Mn | # 3 | 45 | 166304.9 | 0.0000 | 3.3550 | ppb | 2.26 | 3000.00 | |
| 56 Fe | # 1 | 45 | 2195072.0 | 0.0000 | 85.3800 | ppb | 0.97 | 50000.00 | |
| 59 Co | # 3 | 45 | 35846.4 | 0.0000 | 0.8871 | ppb | 1.16 | 500.00 | |
| 60 Ni | # 2 | 45 | 5306.8 | 0.0000 | 0.8670 | ppb | 2.86 | 500.00 | |
| 63 Cu | # 2 | 45 | 14333.4 | 0.0000 | 0.9304 | ppb | 0.35 | 500.00 | |
| 66 Zn | # 3 | 72 | 35006.5 | 0.0000 | 6.2950 | ppb | 0.64 | 500.00 | |
| 75 As | # 2 | 72 | 1471.6 | 0.0000 | 0.7843 | ppb | 3.36 | 500.00 | |
| 78 Se | # 1 | 72 | 649.6 | 0.0000 | 0.8336 | ppb | 3.09 | 500.00 | |
| 88 Sr | # 3 | 72 | 44658.4 | 0.0000 | 0.9077 | ppb | 1.75 | 500.00 | |
| 90 Zr | # 3 | 72 | 2218.0 | 0.0000 | 0.0564 | ppb | 9.11 | 50.00 | |
| 95 Mo | # 3 | 115 | 7622.3 | 0.0000 | 0.8220 | ppb | 2.01 | 500.00 | |
| 107 Ag | # 3 | 115 | 10227.3 | 0.0000 | 0.4578 | ppb | 1.27 | 50.00 | |
| 111 Cd | # 3 | 115 | 4157.9 | 0.0000 | 0.8552 | ppb | 2.89 | 500.00 | |
| 118 Sn | # 3 | 115 | 12362.4 | 0.0000 | 0.8571 | ppb | 1.49 | 500.00 | |
| 121 Sb | # 3 | 115 | 7955.8 | 0.0000 | 0.4797 | ppb | 5.99 | 500.00 | |
| 137 Ba | # 3 | 115 | 10347.5 | 0.0000 | 1.5110 | ppb | 1.44 | 1000.00 | |
| 182 W | # 3 | 159 | 1454.6 | 0.0000 | 0.0671 | ppb | 19.71 | 50.00 | |
| 201 Hg | # 3 | 159 | 46.7 | 0.0000 | 0.0150 | ppb | 35.01 | 25.00 | |
| 205 Tl | # 3 | 159 | 34243.4 | 0.0000 | 0.8864 | ppb | 1.37 | 500.00 | |
| 208 Pb | # 3 | 159 | 48431.6 | 0.0000 | 0.9277 | ppb | 3.83 | 500.00 | |
| 235 U | # 3 | 159 | 170.0 | 0.0000 | 0.0073 | ppb | 9.20 | 30.00 | |
| 238 U | # 3 | 159 | 50793.3 | 0.0000 | 0.8426 | ppb | 2.67 | 500.00 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li # 3 | 3616919.50 | 1.55 | 3394344.30 | 106.6 | 60 - 125 | |
| 45 Sc # 1 | 3074045.30 | 1.28 | 2921252.80 | 105.2 | 60 - 125 | |
| 45 Sc # 2 | 725152.88 | 0.49 | 704233.19 | 103.0 | 60 - 125 | |
| 45 Sc # 3 | 4645621.00 | 0.11 | 4437904.00 | 104.7 | 60 - 125 | |
| 72 Ge # 1 | 620034.00 | 2.10 | 595893.06 | 104.1 | 60 - 125 | |
| 72 Ge # 2 | 279947.75 | 0.38 | 270821.88 | 103.4 | 60 - 125 | |
| 72 Ge # 3 | 849811.63 | 0.16 | 815341.69 | 104.2 | 60 - 125 | |
| 115 In # 3 | 5291482.00 | 0.39 | 5098577.00 | 103.8 | 60 - 125 | |
| 159 Tb # 3 | 6901788.00 | 1.89 | 6539240.00 | 105.5 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures
0 :ISTD Failures
0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

**ICS-A QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16013.D\F6L16013.D# |
| Date Acquired: | Dec 29 2020 02:27 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICSA |
| Misc Info: | |
| Vial Number: | 1303 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | ICS-A |
| Dilution Factor: | 1.00 |

| QC Elements | | | | Conc | | |
|---|---|---|---|---|---|---|
| Element | Conc. | | CPS | RSD(%) | High Limit | Flag |
| 7 Li | 0.63 | ppb | 182594.2 | 13.15 | --- | |
| 9 Be | -0.01 | ppb | 112.2 | 43.40 | --- | |
| 11 B | 0.25 | ppb | 12072.9 | 13.25 | --- | |
| 23 Na | 100700.00 | ppb | 978113980.0 | 0.93 | 120000.00 | |
| 24 Mg | 98770.00 | ppb | 2178687000.0 | 1.07 | 120000.00 | |
| 27 Al | 93970.00 | ppb | 2866373900.0 | 0.62 | 120000.00 | |
| 28 Si | 3.41 | ppb | 16834.9 | 13.91 | --- | |
| 31 P | 89950.00 | ppb | 144808300.0 | 0.55 | --- | |
| 39 K | 99630.00 | ppb | 168199810.0 | 0.72 | 120000.00 | |
| 40 Ca | 102600.00 | ppb | 1645282900.0 | 1.40 | 120000.00 | |
| 47 Ti | 2087.00 | ppb | 5478783.0 | 0.75 | 2400.00 | |
| 51 V | 0.13 | ppb | 7174.7 | 2.90 | --- | |
| 52 Cr | 0.94 | ppb | 13518.1 | 1.34 | --- | |
| 55 Mn | 0.30 | ppb | 17143.2 | 0.87 | --- | |
| 56 Fe | 97840.00 | ppb | 2132677000.0 | 0.25 | 120000.00 | |
| 59 Co | 0.45 | ppb | 15434.1 | 2.87 | --- | |
| 60 Ni | 0.28 | ppb | 1856.1 | 4.91 | --- | |
| 63 Cu | 0.16 | ppb | 3530.2 | 4.84 | --- | |
| 66 Zn | 2.95 | ppb | 16316.2 | 2.25 | --- | |
| 75 As | 0.28 | ppb | 530.2 | 6.84 | --- | |
| 78 Se | 0.16 | ppb | 111.6 | 5.94 | --- | |
| 88 Sr | 0.91 | ppb | 38849.3 | 1.27 | --- | |
| 90 Zr | 0.08 | ppb | 2564.8 | 5.06 | --- | |
| 95 Mo | 2039.00 | ppb | 14129520.0 | 0.76 | 2400.00 | |
| 107 Ag | 0.01 | ppb | 316.7 | 6.68 | --- | |
| 111 Cd | 0.13 | ppb | 580.6 | 35.02 | --- | |
| 118 Sn | 0.05 | ppb | 1314.6 | 13.93 | --- | |
| 121 Sb | 0.03 | ppb | 476.7 | 4.78 | --- | |
| 137 Ba | 0.05 | ppb | 451.1 | 2.76 | --- | |
| 182 W | 0.16 | ppb | 2254.7 | 3.00 | --- | |
| 201 Hg | 0.00 | ppb | 21.1 | 91.82 | --- | |
| 205 Tl | -0.02 | ppb | 868.9 | 12.83 | --- | |
| 208 Pb | 0.02 | ppb | 2618.0 | 2.90 | --- | |
| 235 U | 0.00 | ppb | 21.1 | 37.53 | --- | |
| 238 U | 0.00 | ppb | 444.5 | 24.08 | --- | |

| ISTD Elements | | CPS | | | | |
|---|---|---|---|---|---|---|
| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
| 6 Li | 2704169.8 | 0.39 | 3394344.30 | 79.7 | 60 - 125 | |
| 45 Sc | 2670423.0 | 2.36 | 2921252.80 | 91.4 | 60 - 125 | |
| 45 Sc | 603514.9 | 0.94 | 704233.19 | 85.7 | 60 - 125 | |
| 45 Sc | 3853435.3 | 1.10 | 4437904.00 | 86.8 | 60 - 125 | |
| 72 Ge | 511199.1 | 2.38 | 595893.06 | 85.8 | 60 - 125 | |
| 72 Ge | 233391.7 | 0.72 | 270821.88 | 86.2 | 60 - 125 | |
| 72 Ge | 736981.9 | 1.14 | 815341.69 | 90.4 | 60 - 125 | |
| 115 In | 4081847.8 | 0.49 | 5098577.00 | 80.1 | 60 - 125 | |
| 159 Tb | 5600540.5 | 0.14 | 6539240.00 | 85.6 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

**ICS-AB QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16014.D\F6L16014.D# |
| Date Acquired: | Dec 29 2020 02:32 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICSAB |
| Misc Info: | |
| Vial Number: | 1304 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | ICS-AB |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 39.76 | ppb | 1213307.0 | 0.51 | 20.00 | 80 - 120 | Fail |
| 9 Be | 20.73 | ppb | 180380.7 | 0.18 | 20.00 | 80 - 120 | |
| 11 B | 20.58 | ppb | 145296.3 | 0.86 | 20.00 | 80 - 120 | |
| 23 Na | 98360.00 | ppb | 973840770.0 | 0.21 | 100000.00 | 80 - 120 | |
| 24 Mg | 98380.00 | ppb | 2183457000.0 | 1.09 | 100000.00 | 80 - 120 | |
| 27 Al | 94350.00 | ppb | 2895550000.0 | 1.23 | 100000.00 | 80 - 120 | |
| 28 Si | 230.50 | ppb | 605961.9 | 1.46 | 200.00 | 80 - 120 | |
| 31 P | 88210.00 | ppb | 142884700.0 | 0.74 | 100000.00 | 80 - 120 | |
| 39 K | 98570.00 | ppb | 164939300.0 | 0.79 | 100000.00 | 80 - 120 | |
| 40 Ca | 100900.00 | ppb | 1649245100.0 | 1.23 | 100000.00 | 80 - 120 | |
| 47 Ti | 2078.00 | ppb | 5487106.0 | 1.29 | 2000.00 | 80 - 120 | |
| 51 V | 20.44 | ppb | 230300.0 | 0.37 | 20.00 | 80 - 120 | |
| 52 Cr | 20.81 | ppb | 269330.0 | 0.33 | 20.00 | 80 - 120 | |
| 55 Mn | 19.99 | ppb | 801012.4 | 0.92 | 20.00 | 80 - 120 | |
| 56 Fe | 96720.00 | ppb | 2149738000.0 | 0.70 | 100000.00 | 80 - 120 | |
| 59 Co | 19.79 | ppb | 648146.2 | 0.81 | 20.00 | 80 - 120 | |
| 60 Ni | 19.12 | ppb | 83158.8 | 0.88 | 20.00 | 80 - 120 | |
| 63 Cu | 18.21 | ppb | 198198.5 | 0.19 | 20.00 | 80 - 120 | |
| 66 Zn | 22.90 | ppb | 98263.0 | 0.65 | 20.00 | 80 - 120 | |
| 75 As | 19.86 | ppb | 27561.5 | 0.34 | 20.00 | 80 - 120 | |
| 78 Se | 21.89 | ppb | 13878.6 | 0.98 | 20.00 | 80 - 120 | |
| 88 Sr | 20.88 | ppb | 855593.1 | 0.34 | 20.00 | 80 - 120 | |
| 90 Zr | 5.74 | ppb | 163369.3 | 0.44 | 20.00 | 80 - 120 | Fail |
| 95 Mo | 2016.00 | ppb | 14277580.0 | 0.68 | 2000.00 | 80 - 120 | |
| 107 Ag | 18.53 | ppb | 323271.2 | 0.16 | 20.00 | 80 - 120 | |
| 111 Cd | 19.64 | ppb | 73172.6 | 0.79 | 20.00 | 80 - 120 | |
| 118 Sn | 20.14 | ppb | 211639.6 | 0.38 | 20.00 | 80 - 120 | |
| 121 Sb | 20.32 | ppb | 260071.5 | 0.55 | 20.00 | 80 - 120 | |
| 137 Ba | 20.68 | ppb | 109313.6 | 0.48 | 20.00 | 80 - 120 | |
| 182 W | 22.45 | ppb | 259623.5 | 0.41 | 20.00 | 80 - 120 | |
| 201 Hg | 1.94 | ppb | 3209.4 | 1.91 | 2.00 | 80 - 120 | |
| 205 Tl | 19.24 | ppb | 583184.1 | 1.10 | 20.00 | 80 - 120 | |
| 208 Pb | 19.43 | ppb | 795068.9 | 1.10 | 20.00 | 80 - 120 | |
| 235 U | 0.14 | ppb | 2599.2 | 6.44 | 0.14 | 80 - 120 | |
| 238 U | 19.39 | ppb | 956234.6 | 1.86 | 19.86 | 80 - 120 | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2554672.8 | 1.35 | 3394344.30 | 75.3 | 60 - 125 | |
| 45 Sc | 2723388.0 | 3.08 | 2921252.80 | 93.2 | 60 - 125 | |
| 45 Sc | 598219.9 | 1.04 | 704233.19 | 84.9 | 60 - 125 | |
| 45 Sc | 3877217.5 | 1.09 | 4437904.00 | 87.4 | 60 - 125 | |
| 72 Ge | 516273.1 | 1.71 | 595893.06 | 86.6 | 60 - 125 | |
| 72 Ge | 231185.8 | 1.23 | 270821.88 | 85.4 | 60 - 125 | |
| 72 Ge | 724386.0 | 0.85 | 815341.69 | 88.8 | 60 - 125 | |
| 115 In | 4170602.0 | 0.92 | 5098577.00 | 81.8 | 60 - 125 | |
| 159 Tb | 5679471.0 | 0.29 | 6539240.00 | 86.9 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

2 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:

Analytes: Fail

ISTD: Pass

# Sample QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16015.D\F6L16015.D# |
| Date Acquired: | Dec 29 2020 02:36 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | MRLL2903 |
| Misc Info: | 500 ppb CAT |
| Vial Number: | 1307 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | Sample |
| Dilution Factor: | 1.00 |
| Autodil Factor: | Undiluted |
| Final Dil Factor: | 1.00 |

| Tune # | Name |
|---|---|
| #1 | h2.u |
| #2 | he.u |
| #3 | norm.u |

QC Elements

| Element | Tune | ISTD | CPS | Corr Conc | Raw Conc | Units | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|---|---|---|
| 7 Li | # 3 | 6 | 214548.9 | 0.0000 | 0.2049 | ppb | 31.84 | 50.00 | |
| 9 Be | # 3 | 6 | 130.0 | 0.0000 | -0.0074 | ppb | 23.91 | 50.00 | |
| 11 B | # 3 | 6 | 26235.4 | 0.0000 | 1.5110 | ppb | 5.87 | 100.00 | |
| 23 Na | # 1 | 45 | 6061929.0 | 0.0000 | 547.8000 | ppb | 3.12 | 50000.00 | |
| 24 Mg | # 3 | 45 | 14055850.0 | 0.0000 | 522.9000 | ppb | 0.38 | 50000.00 | |
| 27 Al | # 3 | 45 | 18281230.0 | 0.0000 | 490.9000 | ppb | 0.53 | 50000.00 | |
| 28 Si | # 1 | 45 | 15841.0 | 0.0000 | 2.5150 | ppb | 3.23 | 5000.00 | |
| 31 P | # 3 | 45 | 62734.6 | 0.0000 | 11.5500 | ppb | 19.83 | 500.00 | |
| 39 K | # 2 | 45 | 1126668.0 | 0.0000 | 515.4000 | ppb | 1.02 | 50000.00 | |
| 40 Ca | # 1 | 45 | 9643631.0 | 0.0000 | 538.8000 | ppb | 1.81 | 50000.00 | |
| 47 Ti | # 3 | 45 | 1292.3 | 0.0000 | 0.3172 | ppb | 7.89 | 500.00 | |
| 51 V | # 2 | 45 | 6322.9 | 0.0000 | -0.0034 | ppb | 291.58 | 500.00 | |
| 52 Cr | # 2 | 45 | 1670.8 | 0.0000 | 0.0100 | ppb | 32.15 | 500.00 | |
| 55 Mn | # 3 | 45 | 6156.0 | 0.0000 | -0.0044 | ppb | 54.75 | 3000.00 | |
| 56 Fe | # 1 | 45 | 13548670.0 | 0.0000 | 568.9000 | ppb | 1.52 | 50000.00 | |
| 59 Co | # 3 | 45 | 857.8 | 0.0000 | -0.0058 | ppb | 20.53 | 500.00 | |
| 60 Ni | # 2 | 45 | 634.5 | 0.0000 | -0.0169 | ppb | 18.12 | 500.00 | |
| 63 Cu | # 2 | 45 | 1792.8 | 0.0000 | -0.0184 | ppb | 22.95 | 500.00 | |
| 66 Zn | # 3 | 72 | 4764.3 | 0.0000 | 0.0639 | ppb | 33.17 | 500.00 | |
| 75 As | # 2 | 72 | 145.1 | 0.0000 | -0.0028 | ppb | 52.62 | 500.00 | |
| 78 Se | # 1 | 72 | 28.4 | 0.0000 | 0.0193 | ppb | 7.27 | 500.00 | |
| 88 Sr | # 3 | 72 | 1969.1 | 0.0000 | 0.0198 | ppb | 6.07 | 500.00 | |
| 90 Zr | # 3 | 72 | 721.2 | 0.0000 | 0.0120 | ppb | 18.47 | 50.00 | |
| 95 Mo | # 3 | 115 | 3501.7 | 0.0000 | 0.3672 | ppb | 8.39 | 500.00 | |
| 107 Ag | # 3 | 115 | 1540.1 | 0.0000 | 0.0661 | ppb | 6.35 | 50.00 | |
| 111 Cd | # 3 | 115 | 45.1 | 0.0000 | -0.0161 | ppb | 36.98 | 500.00 | |
| 118 Sn | # 3 | 115 | 797.8 | 0.0000 | -0.0126 | ppb | 35.87 | 500.00 | |
| 121 Sb | # 3 | 115 | 375.6 | 0.0000 | 0.0128 | ppb | 8.23 | 500.00 | |
| 137 Ba | # 3 | 115 | 342.2 | 0.0000 | 0.0172 | ppb | 13.08 | 1000.00 | |
| 182 W | # 3 | 159 | 879.0 | 0.0000 | 0.0266 | ppb | 11.56 | 50.00 | |
| 201 Hg | # 3 | 159 | 30.0 | 0.0000 | 0.0068 | ppb | 112.71 | 25.00 | |
| 205 Tl | # 3 | 159 | 941.2 | 0.0000 | -0.0199 | ppb | 4.47 | 500.00 | |
| 208 Pb | # 3 | 159 | 1951.3 | 0.0000 | -0.0092 | ppb | 3.27 | 500.00 | |
| 235 U | # 3 | 159 | 13.3 | 0.0000 | 0.0002 | ppb | 84.49 | 30.00 | |
| 238 U | # 3 | 159 | 485.6 | 0.0000 | 0.0027 | ppb | 28.69 | 500.00 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li # 3 | 3401275.30 | 2.48 | 3394344.30 | 100.2 | 60 - 125 | |
| 45 Sc # 1 | 2908032.50 | 3.06 | 2921252.80 | 99.5 | 60 - 125 | |
| 45 Sc # 2 | 675144.56 | 0.39 | 704233.19 | 95.9 | 60 - 125 | |
| 45 Sc # 3 | 4681433.50 | 1.59 | 4437904.00 | 105.5 | 60 - 125 | |
| 72 Ge # 1 | 580697.44 | 2.53 | 595893.06 | 97.4 | 60 - 125 | |
| 72 Ge # 2 | 261884.22 | 0.42 | 270821.88 | 96.7 | 60 - 125 | |
| 72 Ge # 3 | 828206.94 | 0.45 | 815341.69 | 101.6 | 60 - 125 | |
| 115 In # 3 | 5236015.50 | 1.27 | 5098577.00 | 102.7 | 60 - 125 | |
| 159 Tb # 3 | 6828900.50 | 1.43 | 6539240.00 | 104.4 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures
0 :ISTD Failures

0 :Max. Number of Failures Allowed
0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

**CCV QC Report**

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16016.D\F6L16016.D#
Date Acquired: Dec 29 2020 02:41 pm
Operator: THuang
Sample Name: CCV1
Misc Info:
Vial Number: 1206
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C
Last Cal Update: Dec 29 2020 02:07 pm
Sample Type: CCV
Total Dil Factor: 1.00

**QC Elements**

| Element | Conc. | RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|
| 7 Li | 25.82 ppb | 1.84 | 25.00 | 90 - 110 | |
| 9 Be | 24.79 ppb | 1.14 | 25.00 | 90 - 110 | |
| 11 B | 51.53 ppb | 0.88 | 50.00 | 90 - 110 | |
| 23 Na | 24620.00 ppb | 1.17 | 25000.00 | 90 - 110 | |
| 24 Mg | 25850.00 ppb | 0.57 | 25000.00 | 90 - 110 | |
| 27 Al | 24590.00 ppb | 1.31 | 25000.00 | 90 - 110 | |
| 28 Si | 2262.00 ppb | 1.15 | 2500.00 | 90 - 110 | |
| 31 P | 268.70 ppb | 1.49 | 250.00 | 90 - 110 | |
| 39 K | 24690.00 ppb | 1.09 | 25000.00 | 90 - 110 | |
| 40 Ca | 24930.00 ppb | 0.79 | 25000.00 | 90 - 110 | |
| 47 Ti | 247.40 ppb | 0.57 | 250.00 | 90 - 110 | |
| 51 V | 254.20 ppb | 0.92 | 250.00 | 90 - 110 | |
| 52 Cr | 250.00 ppb | 0.33 | 250.00 | 90 - 110 | |
| 55 Mn | 1465.00 ppb | 0.82 | 1500.00 | 90 - 110 | |
| 56 Fe | 24940.00 ppb | 0.31 | 25000.00 | 90 - 110 | |
| 59 Co | 237.70 ppb | 0.85 | 250.00 | 90 - 110 | |
| 60 Ni | 243.30 ppb | 0.71 | 250.00 | 90 - 110 | |
| 63 Cu | 239.70 ppb | 0.44 | 250.00 | 90 - 110 | |
| 66 Zn | 257.60 ppb | 1.23 | 250.00 | 90 - 110 | |
| 75 As | 248.70 ppb | 0.54 | 250.00 | 90 - 110 | |
| 78 Se | 257.80 ppb | 0.26 | 250.00 | 90 - 110 | |
| 88 Sr | 256.80 ppb | 1.86 | 250.00 | 90 - 110 | |
| 90 Zr | 0.31 ppb | 1.88 | 25.00 | 90 - 110 | Fail |
| 95 Mo | 255.10 ppb | 0.89 | 250.00 | 90 - 110 | |
| 107 Ag | 25.27 ppb | 0.42 | 25.00 | 90 - 110 | |
| 111 Cd | 255.90 ppb | 0.60 | 250.00 | 90 - 110 | |
| 118 Sn | 255.70 ppb | 0.12 | 250.00 | 90 - 110 | |
| 121 Sb | 51.74 ppb | 0.92 | 50.00 | 90 - 110 | |
| 137 Ba | 513.30 ppb | 1.64 | 500.00 | 90 - 110 | |
| 182 W | 57.87 ppb | 1.01 | 25.00 | 90 - 110 | Fail |
| 201 Hg | 2.61 ppb | 2.02 | 2.50 | 90 - 110 | |
| 205 Tl | 245.00 ppb | 1.22 | 250.00 | 90 - 110 | |
| 208 Pb | 245.10 ppb | 0.44 | 250.00 | 90 - 110 | |
| 235 U | 1.77 ppb | 1.08 | 1.80 | 90 - 110 | |
| 238 U | 249.50 ppb | 1.38 | 250.00 | 90 - 110 | |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3081403.80 | 0.59 | 3394344.30 | 90.8 | 60 - 125 | |
| 45 Sc | 2773635.50 | 3.35 | 2921252.80 | 94.9 | 60 - 125 | |
| 45 Sc | 626351.25 | 0.91 | 704233.19 | 88.9 | 60 - 125 | |
| 45 Sc | 4317219.00 | 0.24 | 4437904.00 | 97.3 | 60 - 125 | |
| 72 Ge | 533180.38 | 2.34 | 595893.06 | 89.5 | 60 - 125 | |
| 72 Ge | 240675.94 | 0.48 | 270821.88 | 88.9 | 60 - 125 | |
| 72 Ge | 769230.63 | 0.91 | 815341.69 | 94.3 | 60 - 125 | |
| 115 In | 4608532.50 | 0.68 | 5098577.00 | 90.4 | 60 - 125 | |
| 159 Tb | 6351575.50 | 0.46 | 6539240.00 | 97.1 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Fail**
**ISTD: Pass**

# CCB QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16017.D\F6L16017.D# |
| Date Acquired: | Dec 29 2020 02:45 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | CCB1 |
| Misc Info: | |
| Vial Number: | 1102 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62017\A\IF6A01.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 02:07 pm |
| Sample Type: | CCB |
| Dilution Factor: | 1.00 |

QC Elements

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.0954 | ppb | 211504.2 | 113.30 | 0.20 | |
| 9 Be | -0.0067 | ppb | 138.9 | 18.62 | 0.10 | |
| 11 B | 0.2369 | ppb | 15127.9 | 23.21 | 5.00 | |
| 23 Na | 9.9570 | ppb | 375405.8 | 5.40 | 40.00 | |
| 24 Mg | 4.5580 | ppb | 157619.6 | 11.25 | 10.00 | |
| 27 Al | 3.8970 | ppb | 225461.4 | 11.95 | 20.00 | |
| 28 Si | 1.4440 | ppb | 12699.1 | 15.62 | 20.00 | |
| 31 P | 0.0425 | ppb | 38471.1 | 1528.00 | 10.00 | |
| 39 K | 4.1480 | ppb | 158228.0 | 30.23 | 20.00 | |
| 40 Ca | 9.6040 | ppb | 404462.7 | 4.64 | 25.00 | |
| 47 Ti | 0.0548 | ppb | 435.6 | 16.36 | 0.50 | |
| 51 V | 0.0701 | ppb | 7067.3 | 11.04 | 0.50 | |
| 52 Cr | 0.0448 | ppb | 2125.1 | 8.51 | 0.20 | |
| 55 Mn | 0.1723 | ppb | 14028.2 | 11.14 | 0.20 | |
| 56 Fe | 10.5600 | ppb | 296766.4 | 3.60 | 10.00 | Pass TH 12/29/20 |
| 59 Co | 0.0205 | ppb | 1812.4 | 16.35 | 0.20 | |
| 60 Ni | 0.0264 | ppb | 825.6 | 36.66 | 0.20 | |
| 63 Cu | -0.0063 | ppb | 1895.2 | 95.28 | 0.40 | |
| 66 Zn | 0.1433 | ppb | 4976.6 | 16.31 | 2.00 | |
| 75 As | 0.0577 | ppb | 234.9 | 29.58 | 0.20 | |
| 78 Se | 0.1096 | ppb | 90.9 | 13.25 | 0.20 | |
| 88 Sr | 0.0342 | ppb | 2563.7 | 23.46 | 0.20 | |
| 90 Zr | -0.0016 | ppb | 271.1 | 22.31 | 2.00 | |
| 95 Mo | 0.0726 | ppb | 860.1 | 16.85 | 0.40 | |
| 107 Ag | 0.0036 | ppb | 168.9 | 14.30 | 0.20 | |
| 111 Cd | 0.0226 | ppb | 220.5 | 33.22 | 0.20 | |
| 118 Sn | 0.0558 | ppb | 1657.9 | 16.92 | 0.20 | |
| 121 Sb | 0.0305 | ppb | 644.5 | 8.61 | 0.40 | |
| 137 Ba | 0.0599 | ppb | 610.0 | 18.98 | 0.20 | |
| 182 W | 0.0423 | ppb | 1091.2 | 2.19 | 1.00 | |
| 201 Hg | 0.0092 | ppb | 34.4 | 10.54 | 0.10 | |
| 205 Tl | 0.0272 | ppb | 2635.9 | 21.82 | 0.20 | |
| 208 Pb | 0.0244 | ppb | 3581.5 | 23.81 | 0.10 | |
| 235 U | 0.0001 | ppb | 11.1 | 98.43 | 1.00 | |
| 238 U | 0.0389 | ppb | 2619.3 | 16.65 | 0.10 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3414686.0 | 1.67 | 3394344.30 | 100.6 | 60 - 125 | |
| 45 Sc | 2870586.5 | 3.17 | 2921252.80 | 98.3 | 60 - 125 | |
| 45 Sc | 659463.4 | 0.41 | 704233.19 | 93.6 | 60 - 125 | |
| 45 Sc | 4479997.5 | 1.41 | 4437904.00 | 100.9 | 60 - 125 | |
| 72 Ge | 569627.8 | 2.49 | 595893.06 | 95.6 | 60 - 125 | |
| 72 Ge | 256643.0 | 0.31 | 270821.88 | 94.8 | 60 - 125 | |
| 72 Ge | 802068.8 | 0.69 | 815341.69 | 98.4 | 60 - 125 | |
| 115 In | 5113084.5 | 0.27 | 5098577.00 | 100.3 | 60 - 125 | |
| 159 Tb | 6789017.0 | 1.55 | 6539240.00 | 103.8 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

## CCB QC Report

Data File: C:\DATA\IF62020\L\IF6L16.B\F6L16021.D\F6L16021.D#
Date Acquired: Dec 29 2020 03:04 pm
Acq. Method: EM6020Hg.M
Operator: THuang
Sample Name: IML011WB
Misc Info:
Vial Number: 2104
Current Method: C:\ICPCHEM\1\METHODS\EM6020Hg.M
Calibration File: C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C
Last Cal. Update: Dec 29 2020 03:34 pm
Sample Type: MBW
Dilution Factor: 1.00

QC Elements

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.2618 | ppb | 211271.5 | 35.62 | 1.00 | |
| 9 Be | -0.0110 | ppb | 85.6 | 3.22 | 0.50 | |
| 11 B | 0.7195 | ppb | 18825.4 | 5.25 | 5.00 | |
| 23 Na | 2.6370 | ppb | 289490.8 | 28.56 | 50.00 | |
| 24 Mg | 1.4320 | ppb | 76327.7 | 3.45 | 50.00 | |
| 27 Al | 0.2325 | ppb | 94130.1 | 45.59 | 50.00 | |
| 28 Si | -0.1026 | ppb | 8210.3 | 82.82 | 25.00 | |
| 31 P | -1.1370 | ppb | 35787.3 | 55.86 | 25.00 | |
| 39 K | -4.7370 | ppb | 140234.4 | 11.56 | 50.00 | |
| 40 Ca | 6.2870 | ppb | 336094.3 | 4.05 | 50.00 | |
| 47 Ti | 0.0840 | ppb | 517.8 | 8.74 | 1.00 | |
| 51 V | -0.0481 | ppb | 5570.9 | 13.59 | 0.50 | |
| 52 Cr | 0.0382 | ppb | 2008.6 | 8.00 | 0.50 | |
| 55 Mn | 0.0388 | ppb | 7777.8 | 3.55 | 0.50 | |
| 56 Fe | 2.4620 | ppb | 103317.8 | 4.59 | 50.00 | |
| 59 Co | -0.0123 | ppb | 565.6 | 4.85 | 0.50 | |
| 60 Ni | 0.0422 | ppb | 890.7 | 15.35 | 0.50 | |
| 63 Cu | 0.2988 | ppb | 5460.4 | 3.63 | 0.50 | |
| 66 Zn | 1.3070 | ppb | 10112.7 | 2.48 | 10.00 | |
| 75 As | -0.0082 | ppb | 132.2 | 10.27 | 0.50 | |
| 78 Se | 0.0041 | ppb | 16.9 | 209.62 | 0.50 | |
| 88 Sr | 0.0415 | ppb | 2844.8 | 4.04 | 1.00 | |
| 90 Zr | 0.0064 | ppb | 512.3 | 21.78 | 2.50 | |
| 95 Mo | 0.0036 | ppb | 255.6 | 26.68 | 1.00 | |
| 107 Ag | 0.0466 | ppb | 1064.5 | 0.88 | 0.50 | |
| 111 Cd | -0.0382 | ppb | -55.5 | 19.48 | 0.50 | |
| 118 Sn | -0.0009 | ppb | 910.1 | 268.05 | 0.50 | |
| 121 Sb | 0.0131 | ppb | 363.4 | 4.29 | 0.50 | |
| 137 Ba | 0.0419 | ppb | 483.4 | 23.90 | 0.50 | |
| 182 W | -0.0016 | ppb | 472.2 | 100.73 | 1.00 | |
| 201 Hg | 0.0010 | ppb | 17.8 | 769.68 | --- | |
| 205 Tl | -0.0309 | ppb | 525.6 | 3.76 | 0.50 | |
| 208 Pb | 0.0068 | ppb | 2653.6 | 13.51 | 0.50 | |
| 235 U | 0.0000 | ppb | 10.0 | 316.31 | --- | |
| 238 U | 0.0000 | ppb | 317.8 | 3934.30 | 0.50 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3317319.0 | 1.71 | 3394344.30 | 97.7 | 60 - 125 | |
| 45 Sc | 2779050.3 | 2.31 | 2921252.80 | 95.1 | 60 - 125 | |
| 45 Sc | 651982.0 | 1.23 | 704233.19 | 92.6 | 60 - 125 | |
| 45 Sc | 4420558.0 | 1.05 | 4437904.00 | 99.6 | 60 - 125 | |
| 72 Ge | 558108.4 | 2.40 | 595893.06 | 93.7 | 60 - 125 | |
| 72 Ge | 253410.8 | 0.67 | 270821.88 | 93.6 | 60 - 125 | |
| 72 Ge | 788529.4 | 0.83 | 815341.69 | 96.7 | 60 - 125 | |
| 115 In | 5002453.5 | 0.21 | 5098577.00 | 98.1 | 60 - 125 | |
| 159 Tb | 6619195.5 | 0.67 | 6539240.00 | 101.2 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:
Analytes: Pass
ISTD: Pass

**LCS QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16022.D\F6L16022.D# |
| Date Acquired: | Dec 29 2020 03:08 pm |
| Operator: | THuang |
| Sample Name: | IML011WL |
| Misc Info: | |
| Vial Number: | 2105 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | LCS |
| Final Dil Factor: | 1.00 |

**Analyte Elements**

| Element | CPS Mean | Conc. | | RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 1192206.00 | 29.78 | ppb | 2.11 | 30.00 | 80 - 120 | |
| 9 Be | 312409.19 | 28.56 | ppb | 1.19 | 30.00 | 80 - 120 | |
| 11 B | 266725.59 | 30.72 | ppb | 1.17 | 30.00 | 80 - 120 | |
| 23 Na | 31889420.00 | 3155.00 | ppb | 1.22 | 3000.00 | 80 - 120 | |
| 24 Mg | 82361536.00 | 3321.00 | ppb | 1.41 | 3000.00 | 80 - 120 | |
| 27 Al | 107205000.00 | 3125.00 | ppb | 1.29 | 3000.00 | 80 - 120 | |
| 28 Si | 12997.35 | 1.74 | ppb | 8.77 | 3000.00 | 80 - 120 | Fail |
| 31 P | 40192.23 | 1.70 | ppb | 39.03 | 300.00 | 80 - 120 | Fail |
| 39 K | 5628344.00 | 3075.00 | ppb | 1.55 | 3000.00 | 80 - 120 | |
| 40 Ca | 52240728.00 | 3142.00 | ppb | 1.89 | 3000.00 | 80 - 120 | |
| 47 Ti | 87242.10 | 29.49 | ppb | 1.27 | 30.00 | 80 - 120 | |
| 51 V | 366081.00 | 30.73 | ppb | 0.10 | 30.00 | 80 - 120 | |
| 52 Cr | 428234.81 | 31.08 | ppb | 0.79 | 30.00 | 80 - 120 | |
| 55 Mn | 1349337.00 | 30.22 | ppb | 0.43 | 30.00 | 80 - 120 | |
| 56 Fe | 73004656.00 | 3241.00 | ppb | 1.33 | 3000.00 | 80 - 120 | |
| 59 Co | 1099401.00 | 30.06 | ppb | 1.29 | 30.00 | 80 - 120 | |
| 60 Ni | 145223.30 | 31.40 | ppb | 0.24 | 30.00 | 80 - 120 | |
| 63 Cu | 370670.69 | 32.06 | ppb | 0.79 | 30.00 | 80 - 120 | |
| 66 Zn | 289914.19 | 65.30 | ppb | 0.38 | 60.00 | 80 - 120 | |
| 75 As | 43990.83 | 29.73 | ppb | 0.44 | 30.00 | 80 - 120 | |
| 78 Se | 21155.47 | 31.14 | ppb | 0.58 | 30.00 | 80 - 120 | |
| 88 Sr | 1369501.00 | 31.48 | ppb | 0.63 | 30.00 | 80 - 120 | |
| 90 Zr | 500.03 | 0.01 | ppb | 28.92 | 20.00 | 80 - 120 | Fail |
| 95 Mo | 237874.20 | 28.98 | ppb | 0.71 | 30.00 | 80 - 120 | |
| 107 Ag | 626218.50 | 30.98 | ppb | 1.62 | 30.00 | 80 - 120 | |
| 111 Cd | 131234.70 | 30.43 | ppb | 0.39 | 30.00 | 80 - 120 | |
| 118 Sn | 369603.00 | 30.40 | ppb | 0.37 | 30.00 | 80 - 120 | |
| 121 Sb | 442780.00 | 29.87 | ppb | 1.46 | 30.00 | 80 - 120 | |
| 137 Ba | 183956.00 | 30.07 | ppb | 2.22 | 30.00 | 80 - 120 | |
| 182 W | 594.48 | 0.01 | ppb | 62.63 | 30.00 | 80 - 120 | Fail |
| 201 Hg | 32.22 | 0.01 | ppb | 62.66 | 2.50 | 80 - 120 | Fail |
| 205 Tl | 1051422.00 | 30.20 | ppb | 2.19 | 30.00 | 80 - 120 | |
| 208 Pb | 1458174.00 | 31.01 | ppb | 0.87 | 30.00 | 80 - 120 | |
| 235 U | 4108.57 | 0.20 | ppb | 4.38 | 0.21 | 80 - 120 | |
| 238 U | 1691023.00 | 29.82 | ppb | 2.07 | 29.79 | 80 - 120 | |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3212404.30 | 1.00 | 3394344.30 | 94.6 | 60 - 125 | |
| 45 Sc | 2757896.80 | 1.62 | 2921252.80 | 94.4 | 60 - 125 | |
| 45 Sc | 637843.50 | 0.37 | 704233.19 | 90.6 | 60 - 125 | |
| 45 Sc | 4330550.50 | 0.17 | 4437904.00 | 97.6 | 60 - 125 | |
| 72 Ge | 553537.75 | 1.60 | 595893.06 | 92.9 | 60 - 125 | |
| 72 Ge | 246839.70 | 0.76 | 270821.88 | 91.1 | 60 - 125 | |
| 72 Ge | 769366.75 | 0.70 | 815341.69 | 94.4 | 60 - 125 | |
| 115 In | 4831221.00 | 1.14 | 5098577.00 | 94.8 | 60 - 125 | |
| 159 Tb | 6531229.00 | 1.24 | 6539240.00 | 99.9 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

5 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

**Data Results:**

| | |
|---|---|
| **Analytes:** | Fail |
| **ISTD:** | Pass |

LCS QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16023.D\F6L16023.D# |
| Date Acquired: | Dec 29 2020 03:13 pm |
| Operator: | THuang |
| Sample Name: | IML011WC |
| Misc Info: | |
| Vial Number: | 2106 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | LCS |
| Final Dil Factor: | 1.00 |

**Analyte Elements**

| Element | CPS Mean | Conc. | | RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 1196830.00 | 29.88 | ppb | 1.36 | 30.00 | 80 - 120 | |
| 9 Be | 311842.09 | 28.47 | ppb | 0.95 | 30.00 | 80 - 120 | |
| 11 B | 266987.69 | 30.71 | ppb | 1.31 | 30.00 | 80 - 120 | |
| 23 Na | 30831020.00 | 3010.00 | ppb | 0.55 | 3000.00 | 80 - 120 | |
| 24 Mg | 79112080.00 | 3189.00 | ppb | 1.06 | 3000.00 | 80 - 120 | |
| 27 Al | 102518700.00 | 2987.00 | ppb | 1.84 | 3000.00 | 80 - 120 | |
| 28 Si | 14617.68 | 2.29 | ppb | 5.91 | 3000.00 | 80 - 120 | Fail |
| 31 P | 35385.00 | -0.96 | ppb | 100.15 | 300.00 | 80 - 120 | Fail |
| 39 K | 5414940.00 | 2940.00 | ppb | 1.17 | 3000.00 | 80 - 120 | |
| 40 Ca | 50381432.00 | 2990.00 | ppb | 1.39 | 3000.00 | 80 - 120 | |
| 47 Ti | 87003.90 | 29.40 | ppb | 0.77 | 30.00 | 80 - 120 | |
| 51 V | 368368.81 | 30.76 | ppb | 0.43 | 30.00 | 80 - 120 | |
| 52 Cr | 428830.41 | 30.96 | ppb | 1.05 | 30.00 | 80 - 120 | |
| 55 Mn | 1357586.00 | 30.39 | ppb | 1.72 | 30.00 | 80 - 120 | |
| 56 Fe | 69884096.00 | 3062.00 | ppb | 0.36 | 3000.00 | 80 - 120 | |
| 59 Co | 1097432.00 | 30.00 | ppb | 1.20 | 30.00 | 80 - 120 | |
| 60 Ni | 146030.41 | 31.41 | ppb | 0.74 | 30.00 | 80 - 120 | |
| 63 Cu | 373528.81 | 32.13 | ppb | 0.78 | 30.00 | 80 - 120 | |
| 66 Zn | 303475.00 | 68.33 | ppb | 0.34 | 60.00 | 80 - 120 | |
| 75 As | 44278.35 | 29.87 | ppb | 0.26 | 30.00 | 80 - 120 | |
| 78 Se | 21212.22 | 31.39 | ppb | 0.42 | 30.00 | 80 - 120 | |
| 88 Sr | 1373878.00 | 31.54 | ppb | 2.16 | 30.00 | 80 - 120 | |
| 90 Zr | 587.81 | 0.01 | ppb | 21.47 | 20.00 | 80 - 120 | Fail |
| 95 Mo | 238136.20 | 28.90 | ppb | 0.59 | 30.00 | 80 - 120 | |
| 107 Ag | 624337.31 | 30.78 | ppb | 0.66 | 30.00 | 80 - 120 | |
| 111 Cd | 132463.59 | 30.60 | ppb | 0.60 | 30.00 | 80 - 120 | |
| 118 Sn | 371401.81 | 30.43 | ppb | 0.44 | 30.00 | 80 - 120 | |
| 121 Sb | 444397.50 | 29.87 | ppb | 0.78 | 30.00 | 80 - 120 | |
| 137 Ba | 184903.91 | 30.11 | ppb | 0.68 | 30.00 | 80 - 120 | |
| 182 W | 505.58 | 0.00 | ppb | 178.19 | 30.00 | 80 - 120 | Fail |
| 201 Hg | 12.22 | 0.00 | ppb | 52.07 | 2.50 | 80 - 120 | Fail |
| 205 Tl | 1071180.00 | 30.89 | ppb | 1.01 | 30.00 | 80 - 120 | |
| 208 Pb | 1476239.00 | 31.53 | ppb | 0.85 | 30.00 | 80 - 120 | |
| 235 U | 4208.62 | 0.20 | ppb | 3.07 | 0.21 | 80 - 120 | |
| 238 U | 1712258.00 | 30.33 | ppb | 0.67 | 29.79 | 80 - 120 | |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3216854.80 | 2.11 | 3394344.30 | 94.8 | 60 - 125 | |
| 45 Sc | 2794380.50 | 2.40 | 2921252.80 | 95.7 | 60 - 125 | |
| 45 Sc | 641206.81 | 0.55 | 704233.19 | 91.1 | 60 - 125 | |
| 45 Sc | 4332151.00 | 1.16 | 4437904.00 | 97.6 | 60 - 125 | |
| 72 Ge | 550626.44 | 1.82 | 595893.06 | 92.4 | 60 - 125 | |
| 72 Ge | 247296.30 | 0.48 | 270821.88 | 91.3 | 60 - 125 | |
| 72 Ge | 770122.25 | 0.94 | 815341.69 | 94.5 | 60 - 125 | |
| 115 In | 4848663.50 | 0.69 | 5098577.00 | 95.1 | 60 - 125 | |
| 159 Tb | 6503536.00 | 0.84 | 6539240.00 | 99.5 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

| | |
|---|---|
| 5 :Element Failures | 0 :Max. Number of Failures Allowed |
| 0 :ISTD Failures | 0 :Max. Number of ISTD Failures Allowed |

**Data Results:**

| | |
|---|---|
| **Analytes:** | Fail |
| **ISTD:** | Pass |

**CCV QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16028.D\F6L16028.D# |
| Date Acquired: | Dec 29 2020 03:38 pm |
| Operator: | THuang |
| Sample Name: | CCV2 |
| Misc Info: | |
| Vial Number: | 1206 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal Update: | Dec 29 2020 03:34 pm |
| Sample Type: | CCV |
| Total Dil Factor: | 1.00 |

**QC Elements**

| Element | Conc. | RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|
| 7 Li | 26.05 ppb | 1.17 | 25.00 | 90 - 110 | |
| 9 Be | 25.09 ppb | 1.15 | 25.00 | 90 - 110 | |
| 11 B | 52.34 ppb | 1.53 | 50.00 | 90 - 110 | |
| 23 Na | 25060.00 ppb | 1.59 | 25000.00 | 90 - 110 | |
| 24 Mg | 25980.00 ppb | 0.89 | 25000.00 | 90 - 110 | |
| 27 Al | 24360.00 ppb | 0.22 | 25000.00 | 90 - 110 | |
| 28 Si | 2330.00 ppb | 0.42 | 2500.00 | 90 - 110 | |
| 31 P | 255.80 ppb | 1.23 | 250.00 | 90 - 110 | |
| 39 K | 24940.00 ppb | 0.36 | 25000.00 | 90 - 110 | |
| 40 Ca | 25190.00 ppb | 0.40 | 25000.00 | 90 - 110 | |
| 47 Ti | 248.00 ppb | 0.92 | 250.00 | 90 - 110 | |
| 51 V | 250.00 ppb | 0.26 | 250.00 | 90 - 110 | |
| 52 Cr | 245.20 ppb | 0.77 | 250.00 | 90 - 110 | |
| 55 Mn | 1463.00 ppb | 1.72 | 1500.00 | 90 - 110 | |
| 56 Fe | 24880.00 ppb | 0.96 | 25000.00 | 90 - 110 | |
| 59 Co | 239.50 ppb | 0.76 | 250.00 | 90 - 110 | |
| 60 Ni | 237.50 ppb | 0.47 | 250.00 | 90 - 110 | |
| 63 Cu | 233.80 ppb | 0.70 | 250.00 | 90 - 110 | |
| 66 Zn | 259.80 ppb | 1.40 | 250.00 | 90 - 110 | |
| 75 As | 249.30 ppb | 0.29 | 250.00 | 90 - 110 | |
| 78 Se | 255.80 ppb | 0.38 | 250.00 | 90 - 110 | |
| 88 Sr | 258.00 ppb | 0.58 | 250.00 | 90 - 110 | |
| 90 Zr | 0.30 ppb | 1.77 | 25.00 | 90 - 110 | Fail |
| 95 Mo | 253.90 ppb | 0.76 | 250.00 | 90 - 110 | |
| 107 Ag | 25.26 ppb | 0.59 | 25.00 | 90 - 110 | |
| 111 Cd | 255.50 ppb | 0.82 | 250.00 | 90 - 110 | |
| 118 Sn | 255.40 ppb | 0.47 | 250.00 | 90 - 110 | |
| 121 Sb | 51.54 ppb | 1.31 | 50.00 | 90 - 110 | |
| 137 Ba | 516.20 ppb | 1.32 | 500.00 | 90 - 110 | |
| 182 W | 57.42 ppb | 0.49 | 25.00 | 90 - 110 | Fail |
| 201 Hg | 2.60 ppb | 1.70 | 2.50 | 90 - 110 | |
| 205 Tl | 241.10 ppb | 0.51 | 250.00 | 90 - 110 | |
| 208 Pb | 244.00 ppb | 0.82 | 250.00 | 90 - 110 | |
| 235 U | 1.73 ppb | 0.62 | 1.80 | 90 - 110 | |
| 238 U | 244.40 ppb | 0.90 | 250.00 | 90 - 110 | |

**ISTD Elements**

| Element | CPS Mean | RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3071105.50 | 1.50 | 3394344.30 | 90.5 | 60 - 125 | |
| 45 Sc | 2761322.50 | 2.05 | 2921252.80 | 94.5 | 60 - 125 | |
| 45 Sc | 643635.06 | 0.71 | 704233.19 | 91.4 | 60 - 125 | |
| 45 Sc | 4314159.50 | 0.94 | 4437904.00 | 97.2 | 60 - 125 | |
| 72 Ge | 534400.63 | 2.11 | 595893.06 | 89.7 | 60 - 125 | |
| 72 Ge | 243616.27 | 1.01 | 270821.88 | 90.0 | 60 - 125 | |
| 72 Ge | 762292.06 | 0.87 | 815341.69 | 93.5 | 60 - 125 | |
| 115 In | 4610725.50 | 1.09 | 5098577.00 | 90.4 | 60 - 125 | |
| 159 Tb | 6415381.00 | 0.78 | 6539240.00 | 98.1 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

2 :Element Failures 0 :Max. Number of Failures Allowed
0 :ISTD Failures 0 :Max. Number of ISTD Failures Allowed

**Data Results:**
**Analytes: Fail**
**ISTD: Pass**

# CCB QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16029.D\F6L16029.D# |
| Date Acquired: | Dec 29 2020 03:42 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | CCB2 |
| Misc Info: | |
| Vial Number: | 1102 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | CCB |
| Dilution Factor: | 1.00 |

QC Elements

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.0837 | ppb | 209683.3 | 34.13 | 0.20 | |
| 9 Be | -0.0046 | ppb | 162.2 | 77.38 | 0.10 | |
| 11 B | 0.2790 | ppb | 15401.5 | 7.08 | 5.00 | |
| 23 Na | 6.5870 | ppb | 336220.5 | 14.15 | 40.00 | |
| 24 Mg | 2.1180 | ppb | 94251.3 | 27.75 | 10.00 | |
| 27 Al | 1.9700 | ppb | 155814.9 | 25.55 | 20.00 | |
| 28 Si | 1.2680 | ppb | 12074.1 | 22.56 | 20.00 | |
| 31 P | -1.0720 | ppb | 36080.6 | 51.85 | 10.00 | |
| 39 K | 2.5290 | ppb | 157497.0 | 89.32 | 20.00 | |
| 40 Ca | 9.8830 | ppb | 404278.3 | 3.67 | 25.00 | |
| 47 Ti | 0.0210 | ppb | 328.9 | 113.50 | 0.50 | |
| 51 V | 0.1029 | ppb | 7572.2 | 11.42 | 0.50 | |
| 52 Cr | 0.0629 | ppb | 2418.0 | 15.40 | 0.20 | |
| 55 Mn | 0.0971 | ppb | 10483.0 | 32.39 | 0.20 | |
| 56 Fe | 10.3800 | ppb | 288644.5 | 6.21 | 10.00 | Fail |
| 59 Co | 0.0099 | ppb | 1404.6 | 68.31 | 0.20 | |
| 60 Ni | 0.0237 | ppb | 824.7 | 52.24 | 0.20 | |
| 63 Cu | -0.0039 | ppb | 1952.1 | 365.60 | 0.40 | |
| 66 Zn | 0.1548 | ppb | 5012.1 | 12.09 | 2.00 | |
| 75 As | 0.0704 | ppb | 255.1 | 17.70 | 0.20 | |
| 78 Se | 0.1415 | ppb | 112.7 | 5.82 | 0.20 | |
| 88 Sr | 0.0195 | ppb | 1888.0 | 36.52 | 0.20 | |
| 90 Zr | -0.0018 | ppb | 264.5 | 50.64 | 2.00 | |
| 95 Mo | 0.0297 | ppb | 484.5 | 34.50 | 0.40 | |
| 107 Ag | 0.0026 | ppb | 145.6 | 40.46 | 0.20 | |
| 111 Cd | 0.0208 | ppb | 211.2 | 52.70 | 0.20 | |
| 118 Sn | 0.0334 | ppb | 1362.3 | 19.50 | 0.20 | |
| 121 Sb | 0.0317 | ppb | 660.0 | 5.48 | 0.40 | |
| 137 Ba | 0.0351 | ppb | 447.8 | 29.94 | 0.20 | |
| 182 W | 0.0328 | ppb | 950.1 | 17.76 | 1.00 | |
| 201 Hg | 0.0042 | ppb | 24.4 | 117.96 | 0.10 | |
| 205 Tl | 0.0115 | ppb | 2049.1 | 57.06 | 0.20 | |
| 208 Pb | 0.0128 | ppb | 2983.6 | 56.16 | 0.10 | |
| 235 U | 0.0002 | ppb | 14.4 | 35.05 | 1.00 | |
| 238 U | 0.0275 | ppb | 1928.0 | 26.64 | 0.10 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 3391668.0 | 2.64 | 3394344.30 | 99.9 | 60 - 125 | |
| 45 Sc | 2837153.8 | 2.83 | 2921252.80 | 97.1 | 60 - 125 | |
| 45 Sc | 668982.1 | 0.81 | 704233.19 | 95.0 | 60 - 125 | |
| 45 Sc | 4442731.5 | 1.06 | 4437904.00 | 100.1 | 60 - 125 | |
| 72 Ge | 565872.4 | 2.23 | 595893.06 | 95.0 | 60 - 125 | |
| 72 Ge | 257260.3 | 0.79 | 270821.88 | 95.0 | 60 - 125 | |
| 72 Ge | 799394.0 | 0.34 | 815341.69 | 98.0 | 60 - 125 | |
| 115 In | 5083416.0 | 0.44 | 5098577.00 | 99.7 | 60 - 125 | |
| 159 Tb | 6718338.5 | 0.70 | 6539240.00 | 102.7 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed

0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

Data Results:

Analytes: Fail

ISTD: Pass

**ICS-A QC Report**

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16054.D\F6L16054.D# |
| Date Acquired: | Dec 29 2020 05:39 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICSA2 |
| Misc Info: | |
| Vial Number: | 1303 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | ICS-A |
| Dilution Factor: | 1.00 |

**QC Elements**

| Element | Conc. | | CPS | Conc RSD(%) | High Limit | Flag |
|---|---|---|---|---|---|---|
| 7 Li | 0.63 | ppb | 184252.7 | 2.29 | --- | |
| 9 Be | -0.01 | ppb | 73.3 | 9.37 | --- | |
| 11 B | 0.40 | ppb | 13266.1 | 8.39 | --- | |
| 23 Na | 99280.00 | ppb | 944073470.0 | 1.29 | 120000.00 | |
| 24 Mg | 98170.00 | ppb | 2207568900.0 | 0.56 | 120000.00 | |
| 27 Al | 94050.00 | ppb | 2924279000.0 | 0.62 | 120000.00 | |
| 28 Si | 2.68 | ppb | 14649.4 | 24.03 | --- | |
| 31 P | 89420.00 | ppb | 146750900.0 | 0.20 | --- | |
| 39 K | 100200.00 | ppb | 164878210.0 | 0.66 | 120000.00 | |
| 40 Ca | 102300.00 | ppb | 1606342000.0 | 0.91 | 120000.00 | |
| 47 Ti | 2076.00 | ppb | 5555892.0 | 0.62 | 2400.00 | |
| 51 V | 0.12 | ppb | 6791.4 | 5.33 | --- | |
| 52 Cr | 0.93 | ppb | 13061.3 | 0.94 | --- | |
| 55 Mn | 0.28 | ppb | 16703.8 | 4.63 | --- | |
| 56 Fe | 99240.00 | ppb | 2118829100.0 | 0.55 | 120000.00 | |
| 59 Co | 0.43 | ppb | 15271.7 | 2.29 | --- | |
| 60 Ni | 0.18 | ppb | 1400.7 | 4.17 | --- | |
| 63 Cu | 0.14 | ppb | 3272.4 | 3.13 | --- | |
| 66 Zn | 2.92 | ppb | 16270.6 | 2.64 | --- | |
| 75 As | 0.25 | ppb | 471.1 | 5.96 | --- | |
| 78 Se | 0.13 | ppb | 92.7 | 19.22 | --- | |
| 88 Sr | 0.94 | ppb | 40298.8 | 0.44 | --- | |
| 90 Zr | 0.08 | ppb | 2475.9 | 2.59 | --- | |
| 95 Mo | 1998.00 | ppb | 14252320.0 | 0.63 | 2400.00 | |
| 107 Ag | 0.01 | ppb | 266.7 | 14.79 | --- | |
| 111 Cd | 0.20 | ppb | 848.3 | 6.91 | --- | |
| 118 Sn | 0.04 | ppb | 1161.2 | 11.67 | --- | |
| 121 Sb | 0.03 | ppb | 495.6 | 23.83 | --- | |
| 137 Ba | 0.06 | ppb | 493.4 | 9.18 | --- | |
| 182 W | 0.17 | ppb | 2445.9 | 3.32 | --- | |
| 201 Hg | 0.01 | ppb | 23.3 | 3.22 | --- | |
| 205 Tl | -0.02 | ppb | 682.3 | 11.37 | --- | |
| 208 Pb | 0.01 | ppb | 2510.2 | 14.95 | --- | |
| 235 U | 0.00 | ppb | 18.9 | 44.50 | --- | |
| 238 U | 0.00 | ppb | 372.2 | 26.77 | --- | |

**ISTD Elements**

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2729031.8 | 0.96 | 3394344.30 | 80.4 | 60 - 125 | |
| 45 Sc | 2616054.3 | 2.89 | 2921252.80 | 89.6 | 60 - 125 | |
| 45 Sc | 588478.1 | 0.82 | 704233.19 | 83.6 | 60 - 125 | |
| 45 Sc | 3928181.3 | 0.39 | 4437904.00 | 88.5 | 60 - 125 | |
| 72 Ge | 502491.9 | 1.90 | 595893.06 | 84.3 | 60 - 125 | |
| 72 Ge | 227315.2 | 1.03 | 270821.88 | 83.9 | 60 - 125 | |
| 72 Ge | 739840.6 | 0.84 | 815341.69 | 90.7 | 60 - 125 | |
| 115 In | 4200981.5 | 0.69 | 5098577.00 | 82.4 | 60 - 125 | |
| 159 Tb | 5742159.5 | 1.30 | 6539240.00 | 87.8 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

0 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Nnumber of ISTD Failures Allowed

**Data Results:**

| | |
|---|---|
| Analytes: | Pass |
| ISTD: | Pass |

ICS-AB QC Report

| | |
|---|---|
| Data File: | C:\DATA\IF62020\L\IF6L16.B\F6L16055.D\F6L16055.D# |
| Date Acquired: | Dec 29 2020 05:43 pm |
| Acq. Method: | EM6020Hg.M |
| Operator: | THuang |
| Sample Name: | ICSAB2 |
| Misc Info: | |
| Vial Number: | 1304 |
| Current Method: | C:\ICPCHEM\1\METHODS\EM6020Hg.M |
| Calibration File: | C:\DATA\IF62020\L\IF6L16.B\EM6020Hg.C |
| Last Cal. Update: | Dec 29 2020 03:34 pm |
| Sample Type: | ICS-AB |
| Dilution Factor: | 1.00 |

QC Elements

| Element | Conc. | | CPS | Conc RSD(%) | Expected | QC Range(%) | Flag |
|---|---|---|---|---|---|---|---|
| 7 Li | 20.64 | ppb | 749245.8 | 3.25 | 20.00 | 80 - 120 | |
| 9 Be | 19.03 | ppb | 175996.2 | 0.39 | 20.00 | 80 - 120 | |
| 11 B | 19.44 | ppb | 146503.1 | 2.56 | 20.00 | 80 - 120 | |
| 23 Na | 97800.00 | ppb | 935963780.0 | 1.63 | 100000.00 | 80 - 120 | |
| 24 Mg | 97770.00 | ppb | 2218961900.0 | 0.69 | 100000.00 | 80 - 120 | |
| 27 Al | 93110.00 | ppb | 2922252000.0 | 0.30 | 100000.00 | 80 - 120 | |
| 28 Si | 228.70 | ppb | 581488.3 | 0.34 | 200.00 | 80 - 120 | |
| 31 P | 87960.00 | ppb | 145704000.0 | 0.10 | 100000.00 | 80 - 120 | |
| 39 K | 99780.00 | ppb | 161568990.0 | 0.05 | 100000.00 | 80 - 120 | |
| 40 Ca | 101000.00 | ppb | 1596972000.0 | 0.50 | 100000.00 | 80 - 120 | |
| 47 Ti | 2067.00 | ppb | 5583564.0 | 0.55 | 2000.00 | 80 - 120 | |
| 51 V | 20.45 | ppb | 222880.9 | 0.23 | 20.00 | 80 - 120 | |
| 52 Cr | 20.61 | ppb | 258090.9 | 0.68 | 20.00 | 80 - 120 | |
| 55 Mn | 19.67 | ppb | 806039.9 | 0.21 | 20.00 | 80 - 120 | |
| 56 Fe | 97720.00 | ppb | 2100114900.0 | 0.94 | 100000.00 | 80 - 120 | |
| 59 Co | 19.36 | ppb | 648314.3 | 0.40 | 20.00 | 80 - 120 | |
| 60 Ni | 18.80 | ppb | 79167.1 | 0.44 | 20.00 | 80 - 120 | |
| 63 Cu | 17.83 | ppb | 187907.1 | 0.11 | 20.00 | 80 - 120 | |
| 66 Zn | 22.88 | ppb | 98863.4 | 1.16 | 20.00 | 80 - 120 | |
| 75 As | 19.80 | ppb | 26746.9 | 0.13 | 20.00 | 80 - 120 | |
| 78 Se | 21.74 | ppb | 13363.7 | 0.81 | 20.00 | 80 - 120 | |
| 88 Sr | 21.07 | ppb | 869174.7 | 0.96 | 20.00 | 80 - 120 | |
| 90 Zr | 5.70 | ppb | 163337.9 | 1.13 | 20.00 | 80 - 120 | Fail |
| 95 Mo | 2014.00 | ppb | 14430990.0 | 2.03 | 2000.00 | 80 - 120 | |
| 107 Ag | 18.33 | ppb | 323763.6 | 1.33 | 20.00 | 80 - 120 | |
| 111 Cd | 19.30 | ppb | 72786.4 | 0.58 | 20.00 | 80 - 120 | |
| 118 Sn | 20.21 | ppb | 215045.9 | 0.87 | 20.00 | 80 - 120 | |
| 121 Sb | 20.35 | ppb | 263656.5 | 1.26 | 20.00 | 80 - 120 | |
| 137 Ba | 21.22 | ppb | 113507.0 | 1.89 | 20.00 | 80 - 120 | |
| 182 W | 22.29 | ppb | 265127.6 | 1.38 | 20.00 | 80 - 120 | |
| 201 Hg | 1.95 | ppb | 3317.2 | 0.78 | 2.00 | 80 - 120 | |
| 205 Tl | 19.34 | ppb | 602725.5 | 0.96 | 20.00 | 80 - 120 | |
| 208 Pb | 19.37 | ppb | 815176.2 | 0.43 | 20.00 | 80 - 120 | |
| 235 U | 0.14 | ppb | 2649.2 | 1.40 | 0.14 | 80 - 120 | |
| 238 U | 19.66 | ppb | 996652.9 | 0.87 | 19.86 | 80 - 120 | |

ISTD Elements

| Element | CPS Mean | CPS RSD(%) | Ref Value | Rec(%) | QC Range(%) | Flag |
|---|---|---|---|---|---|---|
| 6 Li | 2716215.3 | 1.44 | 3394344.30 | 80.0 | 60 - 125 | |
| 45 Sc | 2633086.5 | 2.69 | 2921252.80 | 90.1 | 60 - 125 | |
| 45 Sc | 578865.1 | 1.25 | 704233.19 | 82.2 | 60 - 125 | |
| 45 Sc | 3964813.8 | 0.81 | 4437904.00 | 89.3 | 60 - 125 | |
| 72 Ge | 500528.3 | 1.56 | 595893.06 | 84.0 | 60 - 125 | |
| 72 Ge | 225014.2 | 0.93 | 270821.88 | 83.1 | 60 - 125 | |
| 72 Ge | 729415.4 | 1.52 | 815341.69 | 89.5 | 60 - 125 | |
| 115 In | 4222038.0 | 1.13 | 5098577.00 | 82.8 | 60 - 125 | |
| 159 Tb | 5839583.5 | 1.01 | 6539240.00 | 89.3 | 60 - 125 | |

ISTD Ref File : C:\DATA\IF62020\L\IF6L16.B\F6L16004.D\F6L16004.D#

1 :Element Failures — 0 :Max. Number of Failures Allowed
0 :ISTD Failures — 0 :Max. Number of ISTD Failures Allowed

Data Results:
Analytes: Fail
ISTD: Pass

EMAX LABORATORIES, INC.

# DIGESTION LOG
*for*
# ICP-MS METALS

**Note:** For samples, relevant QCs/Standards digested, refer to attached digestion sequence.

**Comments:**

Digestion Vessel Lot # SMSA-04-05-06

ALL SAMPLES PAK2

Book #: EIM-083
Batch: IML011W
Matrix: WATER
Digestor ID: E

| SOP # | Rev. # |
|---|---|
| ☐ EMAX-200.8 | 6 |
| ☑ EMAX-6020 | 13 |
| ☐ EMAX-6020CA | 2 |
| ☐ EMAX- | |

| Start | Temp | End | Temp |
|---|---|---|---|
| | 92.1 °C | | 91.4 °C |

| Standards | ID | Amount Added (ml/g) |
|---|---|---|
| LCS-1 | SM64-007-06-29 | .15 |
| LCS-2 | ↓ -06-30 | .15 |
| MS | SAME SPIKE SOLN AS LCS 1,2 | LCS 1,2 |
| Blank Soil (Bead) | N/A | N/A |
| **Reagent** | **Lot# / ID** | **Amount Added (ml)** |
| $HNO_3$ | SWIA-009-09-01 | .5+1.0 |
| HCl | ↓ -09-06 | .25+.25 |
| $H_2O_2$ | N/A | N/A |
| $HNO_3$(1:1) | ↓ | ↓ |
| Au | SMSA-04-05-07 | .1 |
| pH Strip (0-14) | HC857466 | N/A |
| Digestate Location | METALS | |
| Extract Location | N/A | |
| ☑ Reagent Water ID: | SWIA-009-10-04 | |
| ☑ Thermometer ID: | 200450144/E32 | |
| ☑ Pipette ID: | 742766331 | |
| ☐ Pipette ID: | | |
| ☐ Pipette ID: | | |
| ☐ $HNO_3$ dispenser checked @ 5.0 ml with Class A volumetric flask | | |
| ☐ HCl dispenser checked @ 5.0 ml with Class A volumetric flask | | |

Prepared By: CK

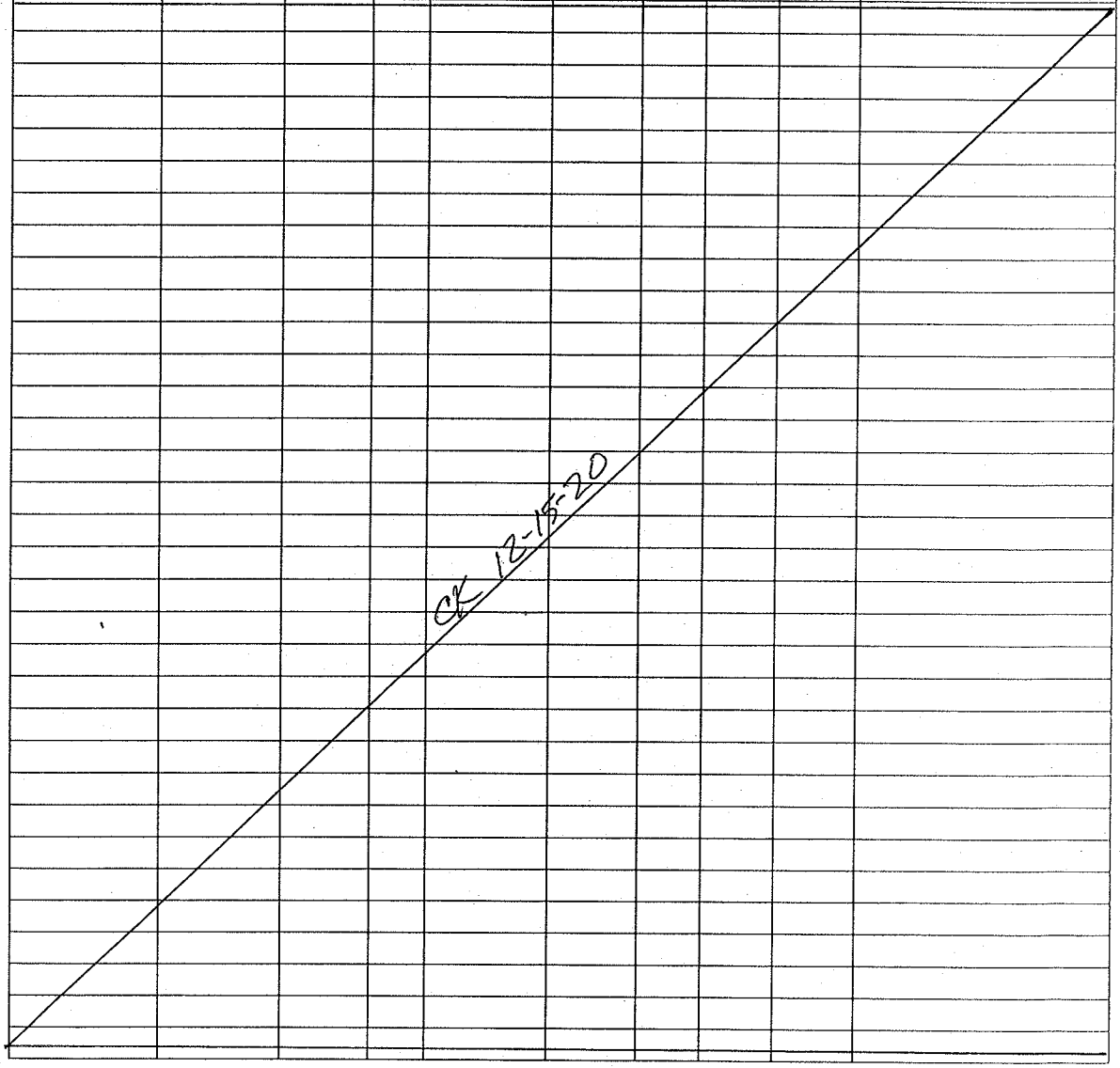
Standard Added By: CK Witnessed By: LY

Extract Rcvd By: LY Checked By: CK

EMAX LABORATORIES

# DIGESTION LOG FOR METALS

| PrepBatchID | LabSampleID | Aliquot | Unit | DateTime | Vd(ml) | ExpAmt | ExpVd(ml) | PrepFctr | Comments |
|---|---|---|---|---|---|---|---|---|---|
| 20IML011W01 | IML011WB | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | |
| 20IML011W02 | IML011WL | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | |
| 20IML011W03 | IML011WC | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | |
| 20IML011W04 | L101-02 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W05 | L101-02M | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W06 | L101-02S | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W07 | L101-04 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W08 | L101-06 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W09 | L101-08 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W10 | L101-09 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W11 | L101-10 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W12 | L101-11 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W13 | L101-12 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W14 | L101-13 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W15 | L110-04 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W16 | L110-07 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |
| 20IML011W17 | L110-16 | 50 | ml | 12/15/20 10:18 | 50 | 50 | 50 | 1 | DISSOLVED |




Vd=digestate volume PrepFctr=(ExpAmt/Aliquot)*(Vd/ExpVd)

☑ Digestion Started @ 12/15/20 11:22 Prepared By: CKaing

☑ Digestion Ended @ 12/15/20 13:57 Checked By: CK

Comments: Date 12-15-20

LABORATORY REPORT FOR

ARCADIS

PG&E TOPOCK-GMP

WET CHEMICAL ANALYSES

SDG#: 20L101

CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD E120.1
SPECIFIC CONDUCTANCE

A total of nine(9) water samples were received on 12/10/20 to be analyzed for Specific Conductance in accordance with Method E120.1 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as specified by the method. All calibration requirements were within acceptance criteria.

Matrix QC Sample
Sample duplicate was analyzed and RPD was within expected value.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

E120.1
SPECIFIC CONDUCTANCE

Client : ARCADIS
Project : PG&E TOPOCK-GMP
Batch No. : 20L101

Matrix : WATER
InstrumentID : D4

| CLIENT SAMPLE ID | EMAX SAMPLE ID | RESULTS (umhos/cm) | PREP FACTOR | MOIST (%) | RL (umhos/cm) | MDL (umhos/cm) | ANALYSIS DATETIME | PREPARATION DATETIME | DATA FILE ID | CAL REF | PREP BATCH | COLLECTION DATETIME | RECEIVED DATETIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-54-085-Q420 | L101-02 | 7600 | 1 | NA | 2.00 | 2.00 | 12/14/2011:08 | NA | 20ECL00202 | 20ECL002 | ECL002W | 12/09/2009:06 | 12/10/20 |
| MW-54-085-Q420DUP | L101-02D | 7610 | 1 | NA | 2.00 | 2.00 | 12/14/2011:09 | NA | 20ECL00203 | 20ECL002 | ECL002W | 12/09/2009:06 | 12/10/20 |
| MW-54-140-Q420 | L101-04 | 10800 | 1 | NA | 2.00 | 2.00 | 12/14/2011:10 | NA | 20ECL00204 | 20ECL002 | ECL002W | 12/09/2008:22 | 12/10/20 |
| MW-54-195-Q420 | L101-06 | 16800 | 1 | NA | 2.00 | 2.00 | 12/14/2011:11 | NA | 20ECL00205 | 20ECL002 | ECL002W | 12/09/2007:36 | 12/10/20 |
| MW-55-045-Q420 | L101-08 | 1190 | 1 | NA | 2.00 | 2.00 | 12/14/2011:12 | NA | 20ECL00206 | 20ECL002 | ECL002W | 12/09/2009:23 | 12/10/20 |
| MW-55-120-Q420 | L101-09 | 6460 | 1 | NA | 2.00 | 2.00 | 12/14/2011:13 | NA | 20ECL00207 | 20ECL002 | ECL002W | 12/09/2008:42 | 12/10/20 |
| MW-56D-Q420 | L101-10 | 16800 | 1 | NA | 2.00 | 2.00 | 12/14/2011:14 | NA | 20ECL00208 | 20ECL002 | ECL002W | 12/09/2011:11 | 12/10/20 |
| MW-56M-Q420 | L101-11 | 9910 | 1 | NA | 2.00 | 2.00 | 12/14/2011:15 | NA | 20ECL00209 | 20ECL002 | ECL002W | 12/09/2010:29 | 12/10/20 |
| MW-56S-Q420 | L101-12 | 4380 | 1 | NA | 2.00 | 2.00 | 12/14/2011:16 | NA | 20ECL00210 | 20ECL002 | ECL002W | 12/09/2011:41 | 12/10/20 |
| MW-924-Q420 | L101-13 | 9730 | 1 | NA | 2.00 | 2.00 | 12/14/2011:17 | NA | 20ECL00211 | 20ECL002 | ECL002W | 12/09/2010:39 | 12/10/20 |

EMAX QUALITY CONTROL DATA
SAMPLE DUPLICATE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E120.1

MATRIX : WATER

| | | |
|---|---|---|
| DILUTION FACTOR: | 1 | 1 |
| SAMPLE ID : | MW-54-085-Q420 | |
| LAB SAMPLE ID : | L101-02 | L101-02D |
| LAB FILE ID : | 20ECL00202 | 20ECL00203 |
| DATE PREPARED : | NA | NA |
| DATE ANALYZED : | 12/14/2011:08 | 12/14/2011:09 |
| PREP BATCH : | ECL002W | ECL002W |
| CALIBRATION REF: | 20ECL002 | 20ECL002 |

ACCESSION:

| PARAMETER | PARENT RESULT (umhos/cm) | DUP RESULT (umhos/cm) | RPD (%) | MAX RPD (%) |
|---|---|---|---|---|
| Specific Conductivity | 7600 | 7610 | 0 | 5 |

EMAX LABORATORIES, INC.

FileID: 20ECL002W

# SPECIFIC CONDUCTANCE ANALYSIS LOG

| PrepBatchID | LabSampleID | Aliquot (ml) | Temp (°C) | AnalysisDateTime | Found Conc. | Conductivity | Unit | Notes |
|---|---|---|---|---|---|---|---|---|
| 20ECL00201 | L008-01 | 20 | 25.0 | 12/14/20 11:07 | 3650 | 3650 | uS/cm | |
| 20ECL00202 | L101-02 | 20 | 25.0 | 12/14/20 11:08 | 7600 | 7600 | uS/cm | |
| 20ECL00203 | L101-02D | 20 | 25.0 | 12/14/20 11:09 | 7610 | 7610 | uS/cm | |
| 20ECL00204 | L101-04 | 20 | 25.0 | 12/14/20 11:10 | 10790 | 10800 | uS/cm | |
| 20ECL00205 | L101-06 | 20 | 25.0 | 12/14/20 11:11 | 16830 | 16800 | uS/cm | |
| 20ECL00206 | L101-08 | 20 | 25.0 | 12/14/20 11:12 | 1190 | 1190 | uS/cm | |
| 20ECL00207 | L101-09 | 20 | 25.0 | 12/14/20 11:13 | 6460 | 6460 | uS/cm | |
| 20ECL00208 | L101-10 | 20 | 25.0 | 12/14/20 11:14 | 16800 | 16800 | uS/cm | |
| 20ECL00209 | L101-11 | 20 | 25.0 | 12/14/20 11:15 | 9910 | 9910 | uS/cm | |
| 20ECL00210 | L101-12 | 20 | 25.0 | 12/14/20 11:16 | 4380 | 4380 | uS/cm | |
| 20ECL00211 | L101-13 | 20 | 25.0 | 12/14/20 11:17 | 9730 | 9730 | uS/cm | |
| 20ECL00212 | L404-02 | 20 | 25.0 | 12/14/20 11:18 | 730 | 730 | uS/cm | |
| 20ECL00213 | L404-04 | 20 | 25.0 | 12/14/20 11:19 | 2430 | 2430 | uS/cm | |

YA 12/14/20

Calibration of Conductivity Meter — InstrumentID: D4

| CAL Standard ID | | Conc.(µS/cm) | Reading | DateTime |
|---|---|---|---|---|
| ICAL1 | SW1-02-06-2 | 0.56 | 0.56 | 12/14/20 11:02 |
| ICAL2 | SW1-02-06-0 | 99.5 | 99.5 | 12/14/20 11:03 |
| ICAL3 | SW1-02-06-0 | 996 | 996 | 12/14/20 11:03 |
| ICAL4 | SW1-02-06-0 | 9978 | 9980 | 12/14/20 11:04 |
| CCS | SW1-02-06-0 | 1408 | 1408 | 12/14/20 11:05 |
| ICV | SW1-02-02-2 | 470 | 478 | 12/14/20 11:06 |

Calibration Temp (°C): 25.0 Thermometer ID: 111862324

☑ Verified Cell Constant (K) @ 1 S/cm

LOQ = 0.56 uS/cm

CV Acceptance Limits: 446 498

| QC Check | Result(µS/cm) | Expected Val | QC Check |
|---|---|---|---|
| CCS | 1408 | 1408 | %Rec=100 |
| ICV | 478 | 446-498 | PASS |
| L101-02D | 7610 | 7600 | RPD=0 |

YA 12/14/20

☑ Sample(s) is/are filtered upon receipt

☐ Sample(s) is/are analyzed upon receipt

pH strip Lot#: HC904495 Snapseal Lot#: 21520008

0.45 micron filter Lot#: 91758103

Comment:

Conductivity reading is automatically compensated to 25°C.

☑ EMAX-2510B Rev. 6 Analyzed By: YAquin

☐ EMAX-120.1 Rev. 8 Checked By: YA

☐ EMAX-9050 Rev. 4 Date: 12/14/20

CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD E218.6
HEXAVALENT CHROMIUM

A total of thirteen(13) water samples were received on 12/10/20 to be analyzed for Hexavalent Chromium in accordance with Method E218.6 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Hexavalent Chromium was not detected in HCL005WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. HCL005WL/HCL005WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, two(2) sets of MS/MSD and eleven(11) sets of MS were analyzed.
- Hexavalent Chromium was within MS QC limits in L101-02M/-02S.
- Hexavalent Chromium was within MS QC limits in L101-08M/-08S.
Percent recovery for Hexavalent Chromium was within MS QC limits in L101-01M,-03M, -04M, -05M, -06M, -07M, -09M, -10M, -11M, -12M and -13M.
Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

Samples L101-04, -06, -10, -11 and -13 were reported from 5X dilution due to matrix interference.

# SAMPLE RESULTS

METHOD E218.6
HEXAVALENT CHROMIUM

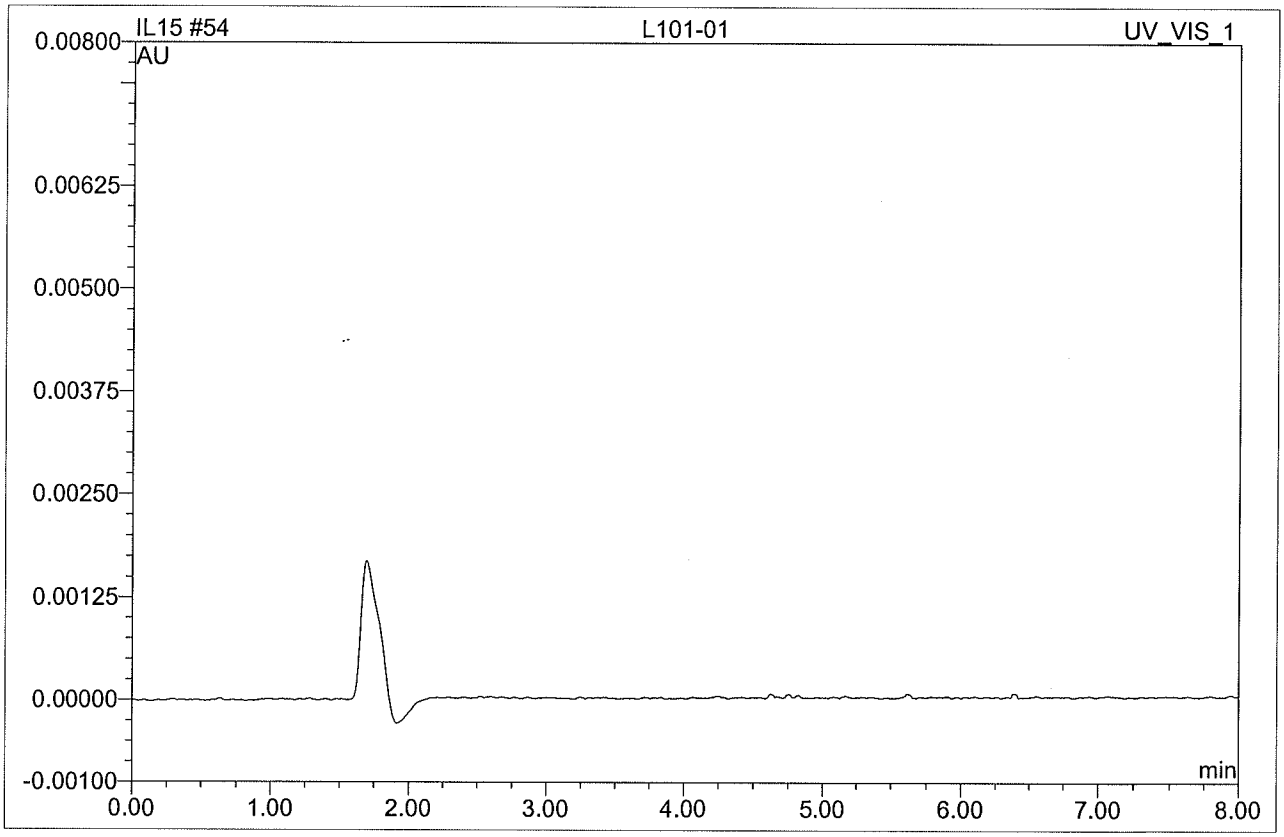
Client : ARCADIS
Project : PG&E TOPOCK-GMP
Batch No. : 20L101

Matrix : WATER
InstrumentID : 59

| CLIENT SAMPLE ID | EMAX SAMPLE ID | RESULTS (ug/L) | DIL'N. FACTOR | MOIST (%) | LOQ (ug/L) | LOD (ug/L) | ANALYSIS DATETIME | PREPARATION DATETIME | DATA FILE ID | CAL REF | PREP BATCH | COLLECTION DATETIME | RECEIVED DATETIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MBLK1W | HCL005WB | ND | 1 | NA | 0.2 | 0.05 | 12/15/2014:34 | NA | IL15015 | IL15013 | HCL005W | NA | NA |
| LCS1W | HCL005WL | 2.03 | 1 | NA | 0.2 | 0.05 | 12/15/2014:45 | NA | IL15016 | IL15013 | HCL005W | NA | NA |
| LCD1W | HCL005WC | 2.02 | 1 | NA | 0.2 | 0.05 | 12/15/2014:55 | NA | IL15017 | IL15013 | HCL005W | NA | NA |
| MW-54-085-Q420 | L101-02 | ND | 1 | NA | 0.2 | 0.05 | 12/15/2015:06 | NA | IL15018 | IL15013 | HCL005W | 12/09/2009:06 | 12/10/20 |
| MW-54-085-Q420MS | L101-02M | 0.952 | 1 | NA | 0.2 | 0.05 | 12/15/2015:16 | NA | IL15019 | IL15013 | HCL005W | 12/09/2009:06 | 12/10/20 |
| MW-54-085-Q420MSD | L101-02S | 0.946 | 1 | NA | 0.2 | 0.05 | 12/15/2015:26 | NA | IL15020 | IL15013 | HCL005W | 12/09/2009:06 | 12/10/20 |
| MW-55-045-Q420 | L101-08 | ND | 1 | NA | 0.2 | 0.05 | 12/15/2016:39 | NA | IL15027 | IL15025 | HCL005W | 12/09/2009:23 | 12/10/20 |
| MW-55-045-Q420MS | L101-08M | 0.997 | 1 | NA | 0.2 | 0.05 | 12/15/2016:50 | NA | IL15028 | IL15025 | HCL005W | 12/09/2009:23 | 12/10/20 |
| MW-55-045-Q420MSD | L101-08S | 0.994 | 1 | NA | 0.2 | 0.05 | 12/15/2017:00 | NA | IL15029 | IL15025 | HCL005W | 12/09/2009:23 | 12/10/20 |
| MW-55-120-Q420 | L101-09 | 7.51 | 1 | NA | 0.2 | 0.05 | 12/15/2017:11 | NA | IL15030 | IL15025 | HCL005W | 12/09/2008:42 | 12/10/20 |
| MW-55-120-Q420MS | L101-09M | 9.48 | 1 | NA | 0.2 | 0.05 | 12/15/2017:21 | NA | IL15031 | IL15025 | HCL005W | 12/09/2008:42 | 12/10/20 |
| MW-56S-Q420 | L101-12 | ND | 1 | NA | 0.2 | 0.05 | 12/15/2018:34 | NA | IL15038 | IL15036 | HCL005W | 12/09/2011:41 | 12/10/20 |
| MW-56S-Q420MS | L101-12M | 0.960 | 1 | NA | 0.2 | 0.05 | 12/15/2018:44 | NA | IL15039 | IL15036 | HCL005W | 12/09/2011:41 | 12/10/20 |
| MW-54-140-Q420 | L101-04I | ND | 5 | NA | 1 | 0.25 | 12/15/2019:15 | NA | IL15042 | IL15036 | HCL005W | 12/09/2008:22 | 12/10/20 |
| MW-54-140-Q420MS | L101-04M | 5.03 | 5 | NA | 1 | 0.25 | 12/15/2019:26 | NA | IL15043 | IL15036 | HCL005W | 12/09/2008:22 | 12/10/20 |
| MW-54-195-Q420 | L101-06I | ND | 5 | NA | 1 | 0.25 | 12/15/2019:36 | NA | IL15044 | IL15036 | HCL005W | 12/09/2007:36 | 12/10/20 |
| MW-54-195-Q420MS | L101-06M | 5.13 | 5 | NA | 1 | 0.25 | 12/15/2019:47 | NA | IL15045 | IL15036 | HCL005W | 12/09/2007:36 | 12/10/20 |
| MW-56D-Q420 | L101-10I | ND | 5 | NA | 1 | 0.25 | 12/15/2019:57 | NA | IL15046 | IL15036 | HCL005W | 12/09/2011:11 | 12/10/20 |
| MW-56D-Q420MS | L101-10M | 5.09 | 5 | NA | 1 | 0.25 | 12/15/2020:07 | NA | IL15047 | IL15036 | HCL005W | 12/09/2011:11 | 12/10/20 |
| MW-56M-Q420 | L101-11I | ND | 5 | NA | 1 | 0.25 | 12/15/2020:39 | NA | IL15050 | IL15048 | HCL005W | 12/09/2010:29 | 12/10/20 |
| MW-56M-Q420MS | L101-11M | 4.92 | 5 | NA | 1 | 0.25 | 12/15/2020:49 | NA | IL15051 | IL15048 | HCL005W | 12/09/2010:29 | 12/10/20 |
| MW-924-Q420 | L101-13I | ND | 5 | NA | 1 | 0.25 | 12/15/2020:59 | NA | IL15052 | IL15048 | HCL005W | 12/09/2010:39 | 12/10/20 |
| MW-924-Q420MS | L101-13M | 5.03 | 5 | NA | 1 | 0.25 | 12/15/2021:10 | NA | IL15053 | IL15048 | HCL005W | 12/09/2010:39 | 12/10/20 |
| MW-54-085-EB-Q420 | L101-01 | ND | 1 | NA | 0.2 | 0.05 | 12/15/2021:20 | NA | IL15054 | IL15048 | HCL005W | 12/09/2008:40 | 12/10/20 |
| MW-54-085-EB-Q420MS | L101-01M | 1.04 | 1 | NA | 0.2 | 0.05 | 12/15/2021:31 | NA | IL15055 | IL15048 | HCL005W | 12/09/2008:40 | 12/10/20 |
| MW-54-140-EB-Q420 | L101-03 | ND | 1 | NA | 0.2 | 0.05 | 12/15/2021:41 | NA | IL15056 | IL15048 | HCL005W | 12/09/2007:50 | 12/10/20 |
| MW-54-140-EB-Q420MS | L101-03M | 0.969 | 1 | NA | 0.2 | 0.05 | 12/15/2021:51 | NA | IL15057 | IL15048 | HCL005W | 12/09/2007:50 | 12/10/20 |
| MW-54-195-EB-Q420 | L101-05 | ND | 1 | NA | 0.2 | 0.05 | 12/15/2022:02 | NA | IL15058 | IL15048 | HCL005W | 12/09/2007:00 | 12/10/20 |
| MW-54-195-EB-Q420MS | L101-05M | 1.00 | 1 | NA | 0.2 | 0.05 | 12/15/2022:12 | NA | IL15059 | IL15048 | HCL005W | 12/09/2007:00 | 12/10/20 |
| MW-55-045-EB-Q420 | L101-07 | ND | 1 | NA | 0.2 | 0.05 | 12/15/2022:43 | NA | IL15062 | IL15060 | HCL005W | 12/09/2008:55 | 12/10/20 |
| MW-55-045-EB-Q420MS | L101-07M | 0.992 | 1 | NA | 0.2 | 0.05 | 12/15/2022:54 | NA | IL15063 | IL15060 | HCL005W | 12/09/2008:55 | 12/10/20 |

# IL15 054 L101-01

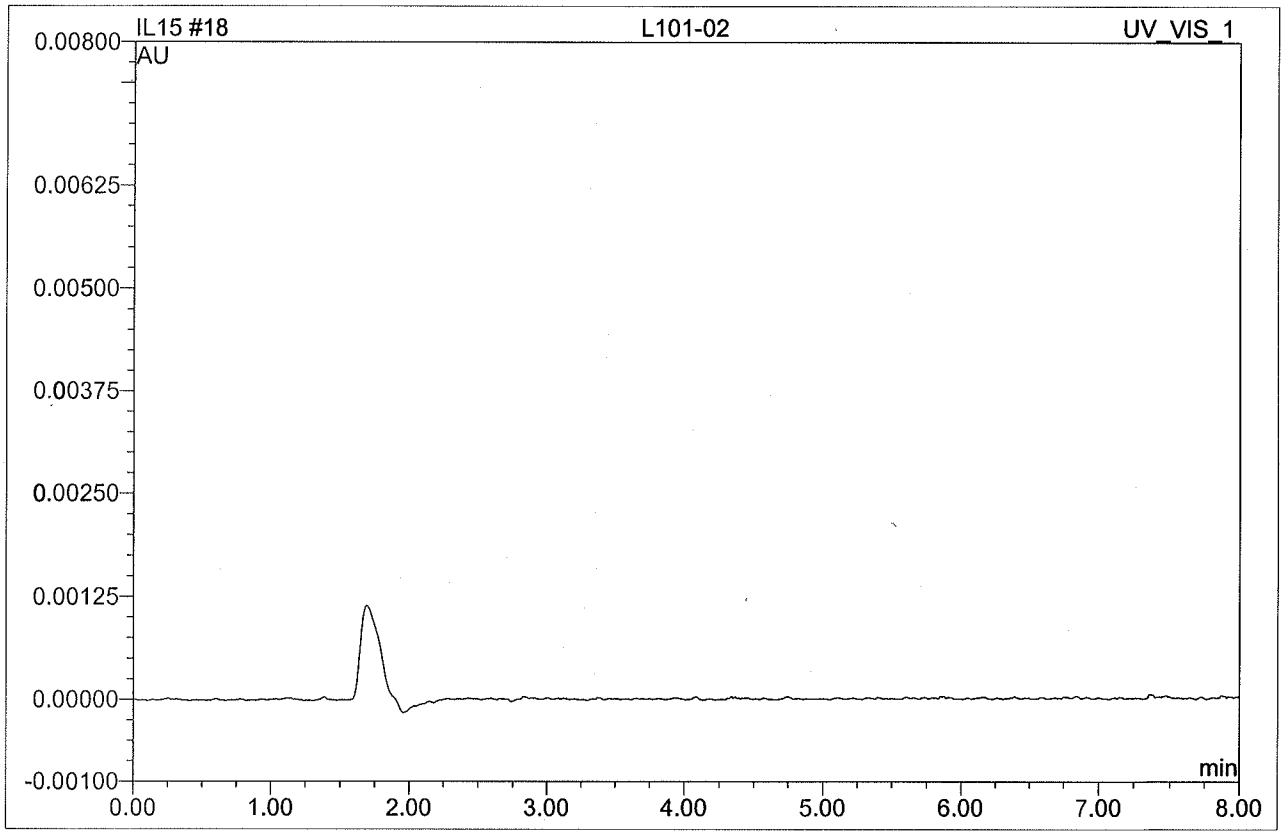
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-01** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 21:20** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 018 L101-02

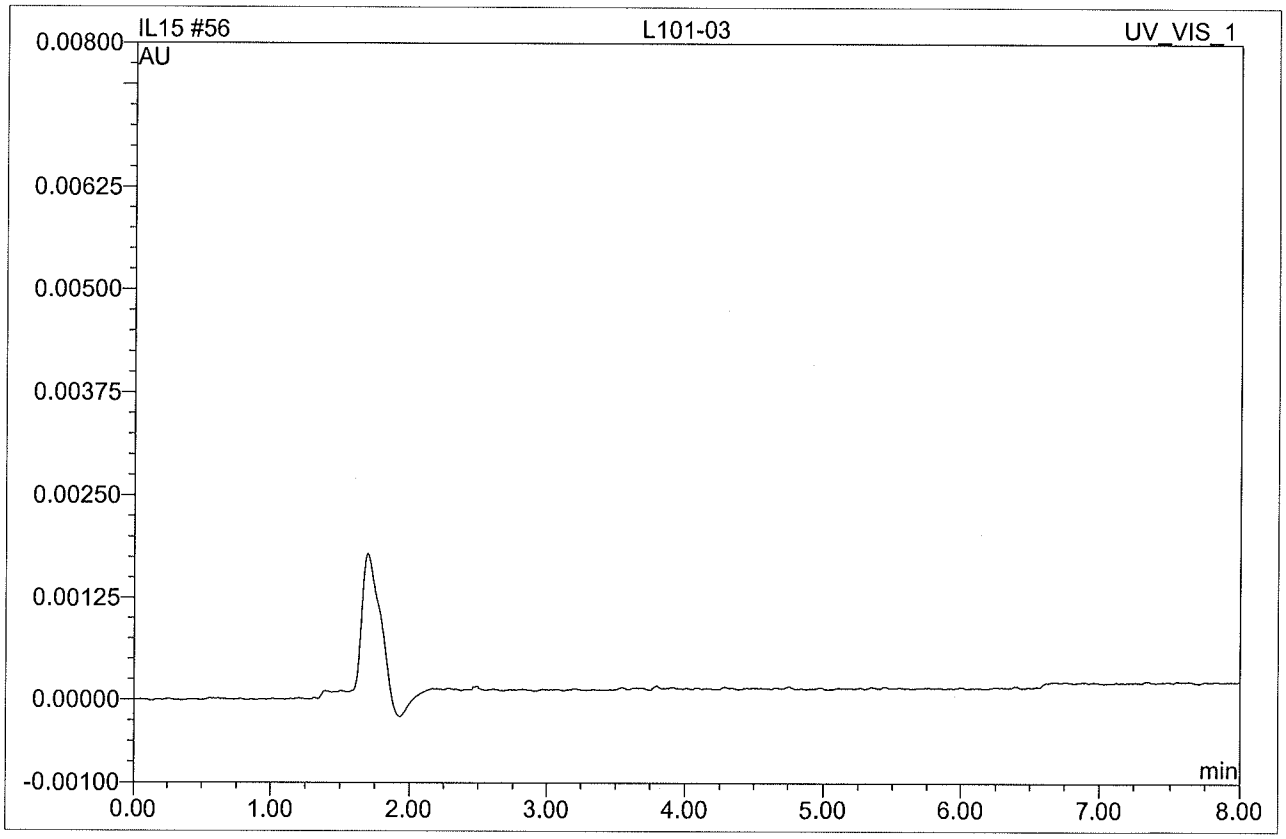
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-02** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 15:06** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 056 L101-03

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-03** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 21:41** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

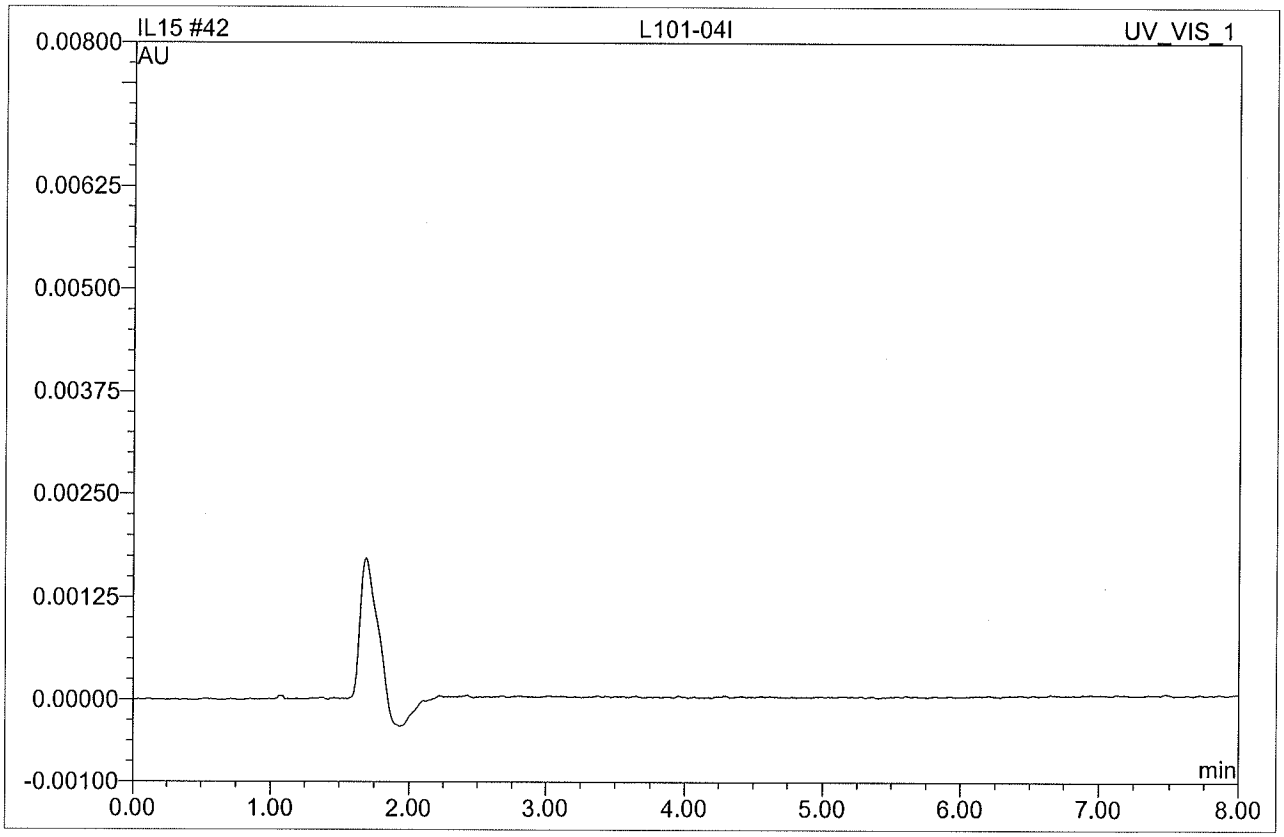



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 042 L101-04I

1mLto5mL

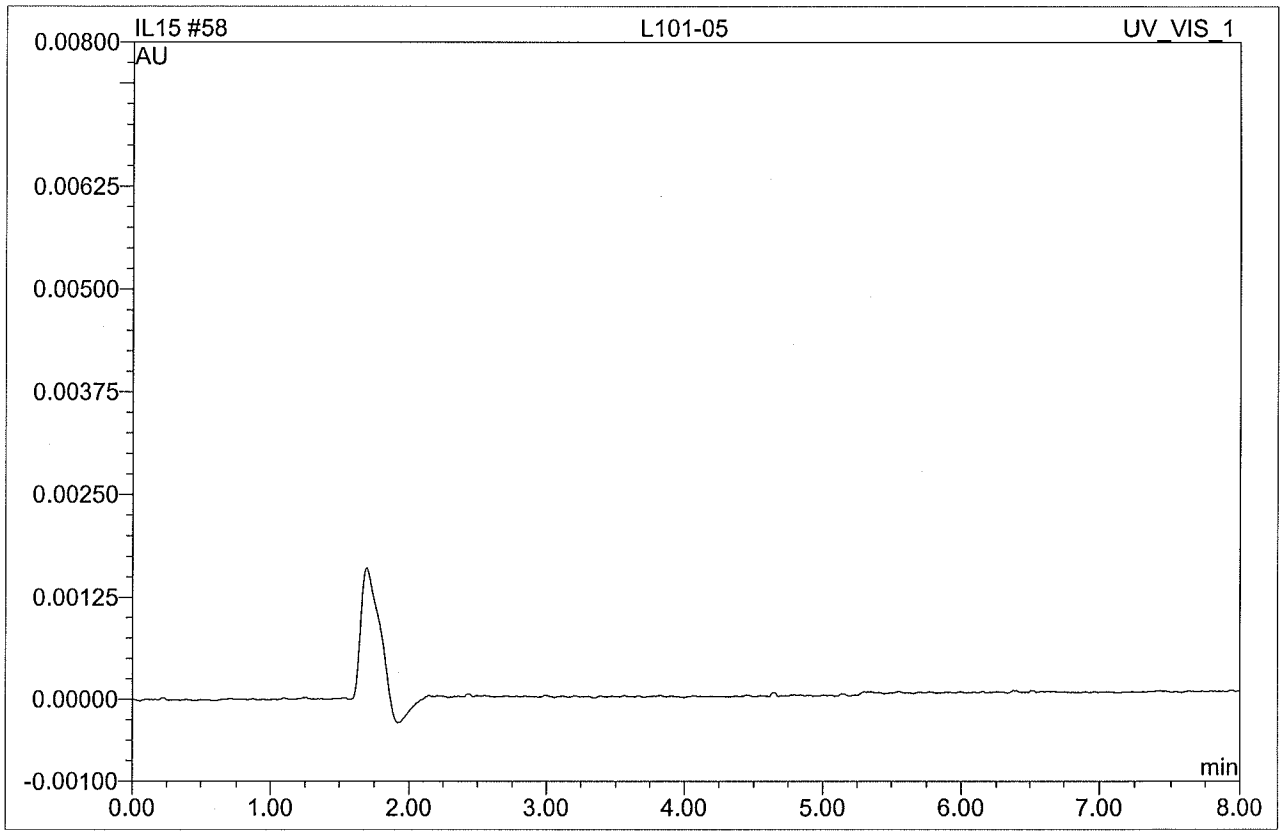
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-04I** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 19:15** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 058 L101-05

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-05** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 22:02** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

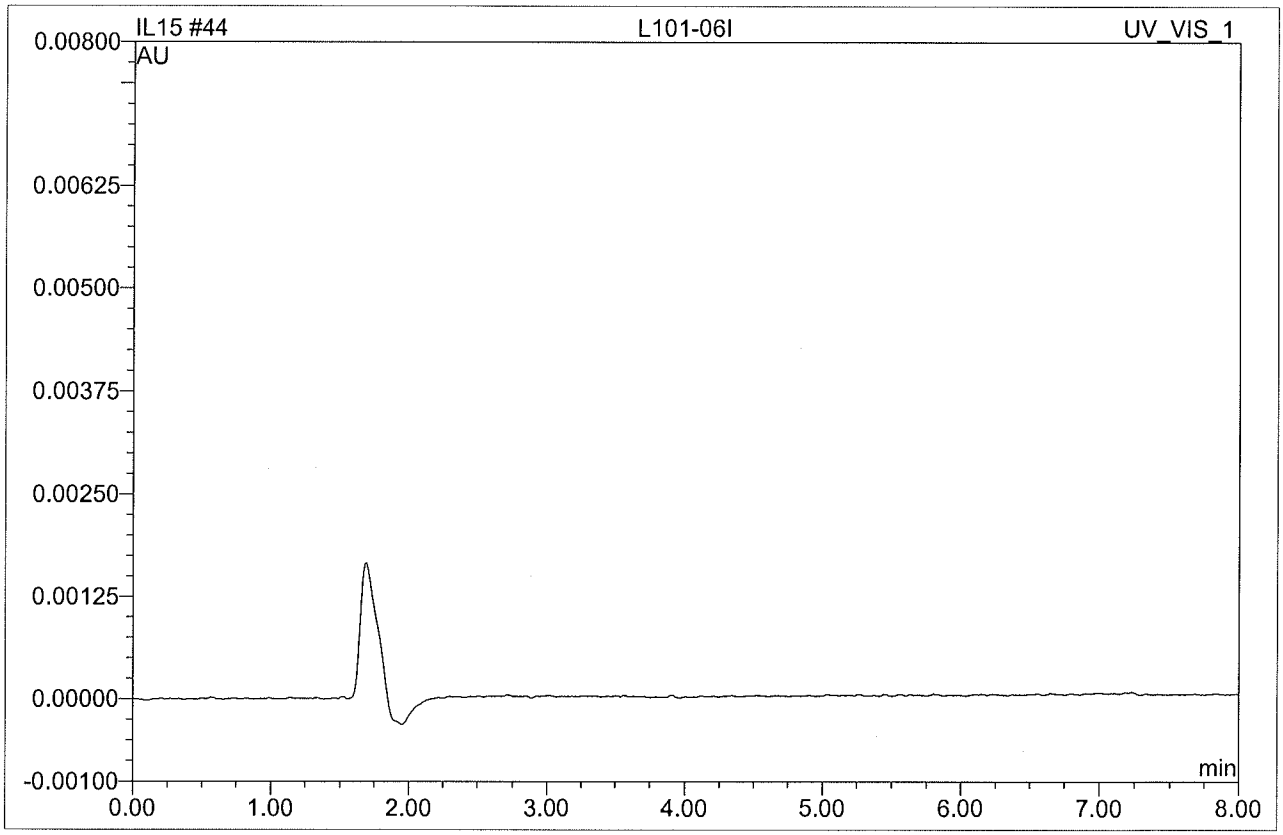



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 044 L101-06I

1mLto5mL

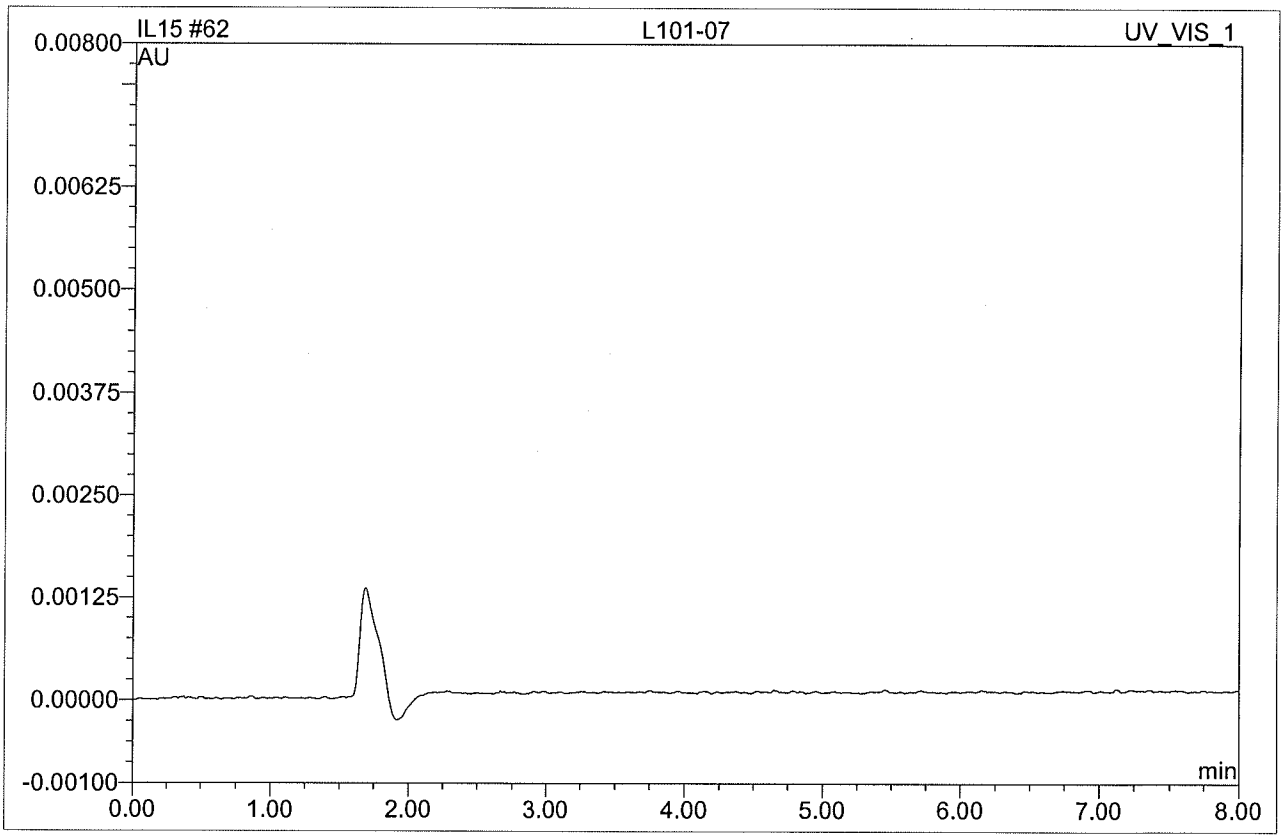
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-06I** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 19:36** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 062 L101-07

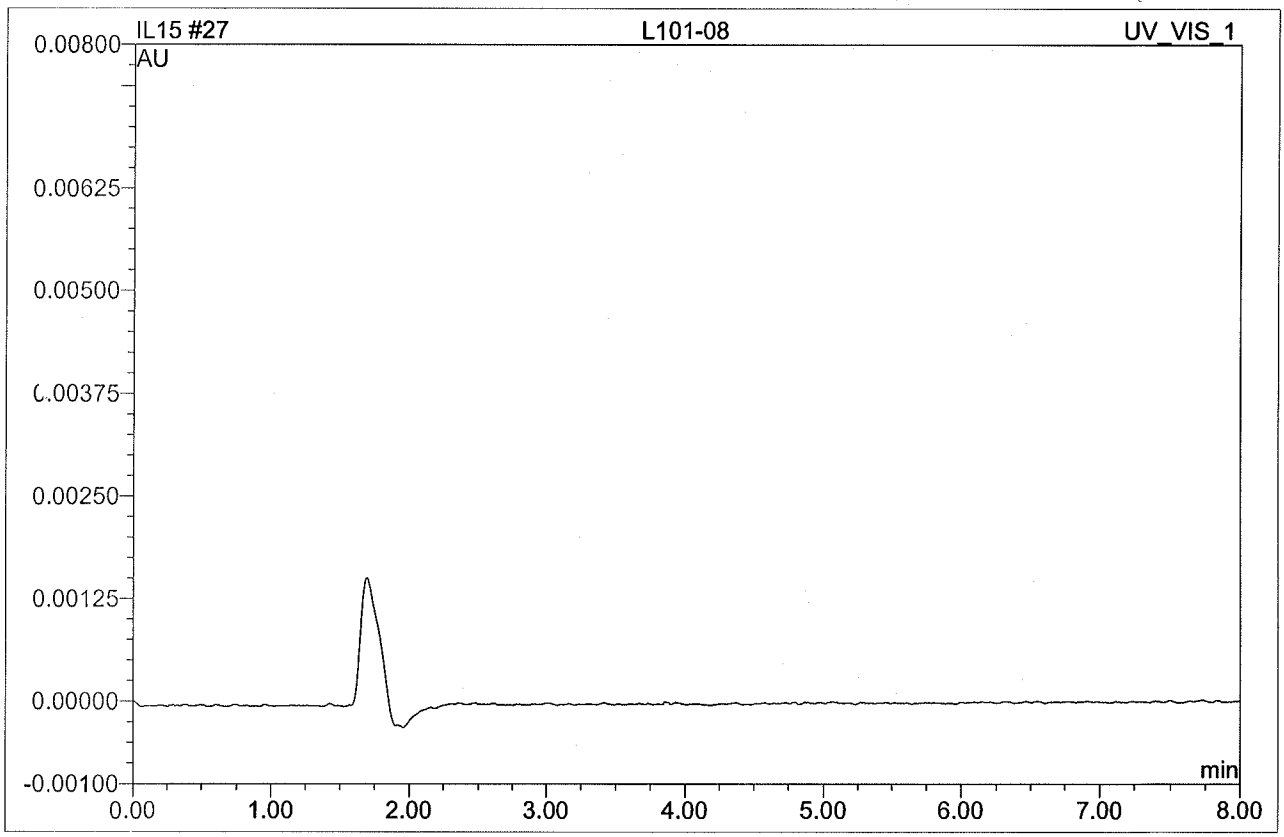
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-07** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 22:43** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 027 L101-08

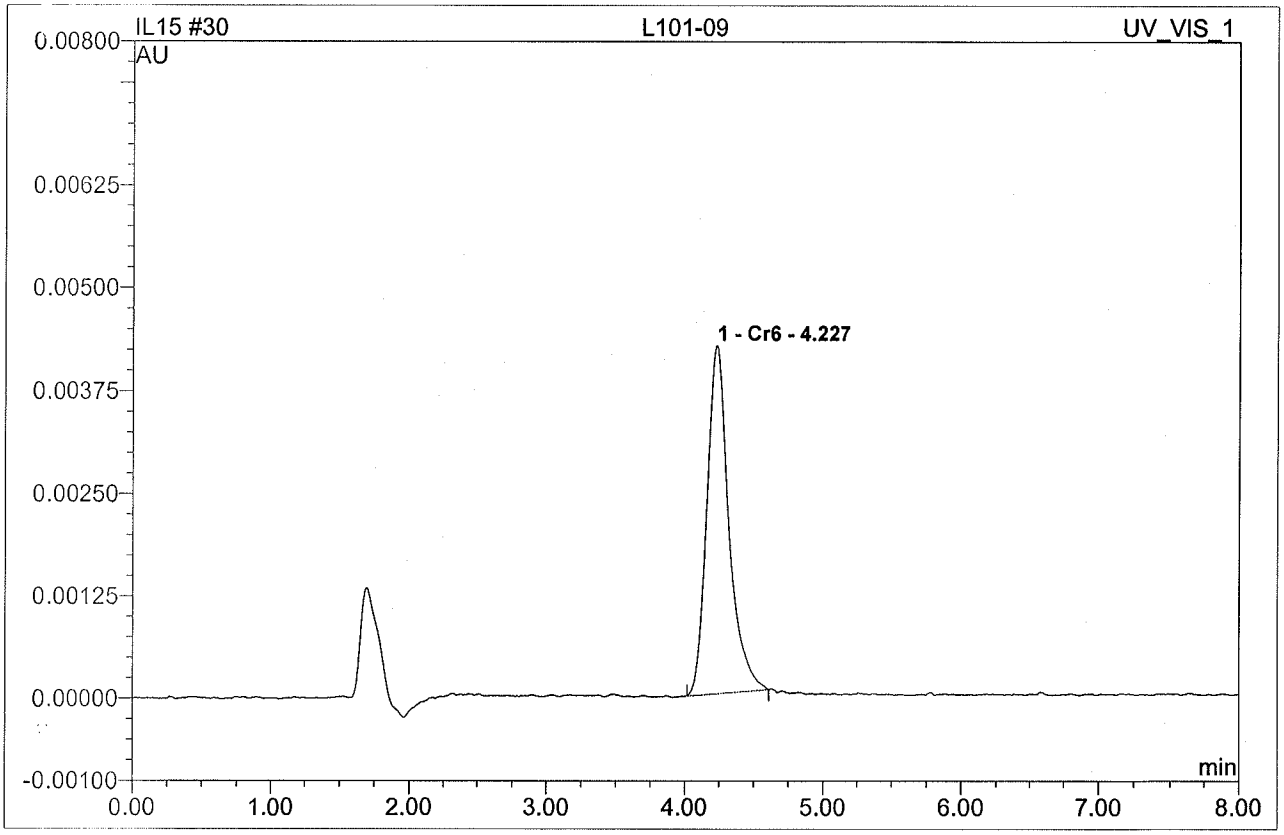
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-08** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 16:39** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 030 L101-09

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-09** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 17:11** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

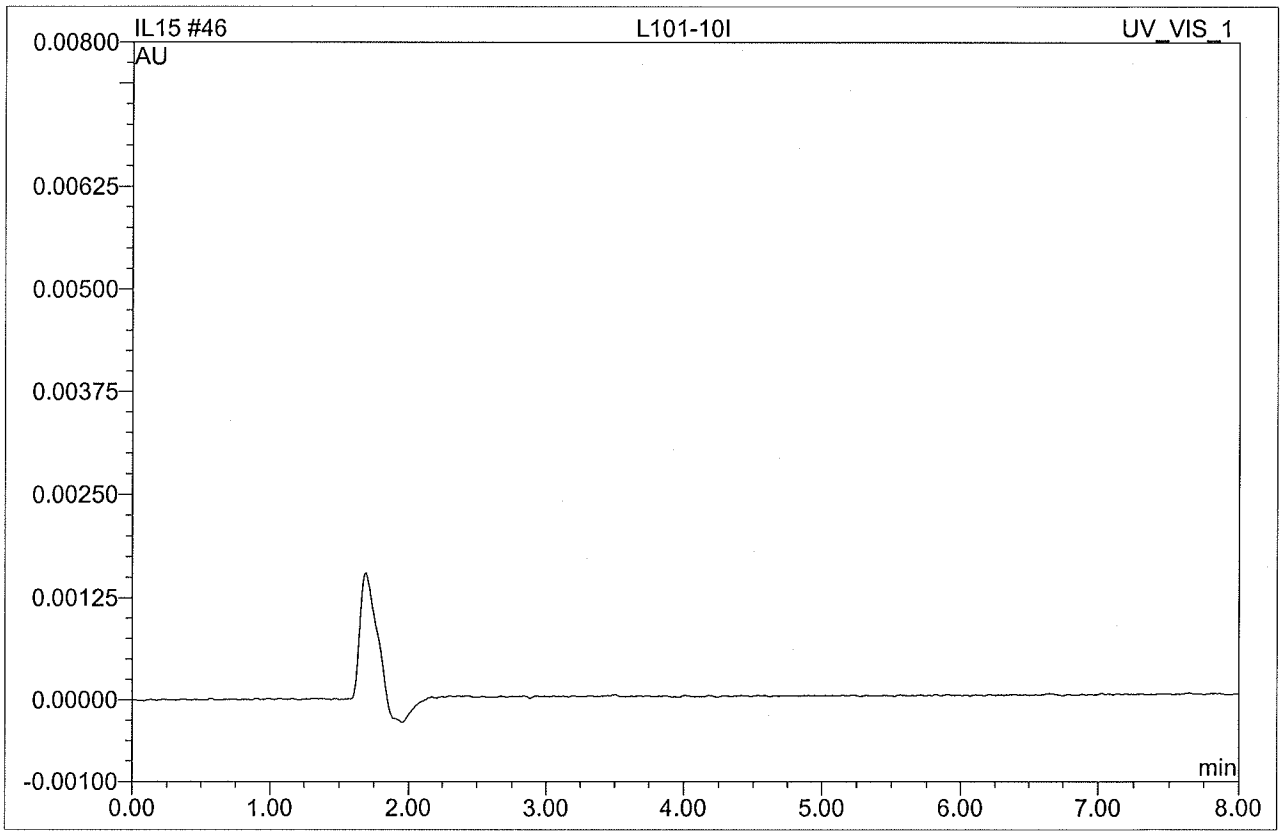



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.23 | Cr6 | 0.0042410 | 0.0007904 | 100.00 | 7.515 | BMB |
| **Total:** | | | 0.004 | 0.001 | 100.00 | 7.515 | |

# IL15 046 L101-10I

1mLto5mL

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-10I** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 19:57** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

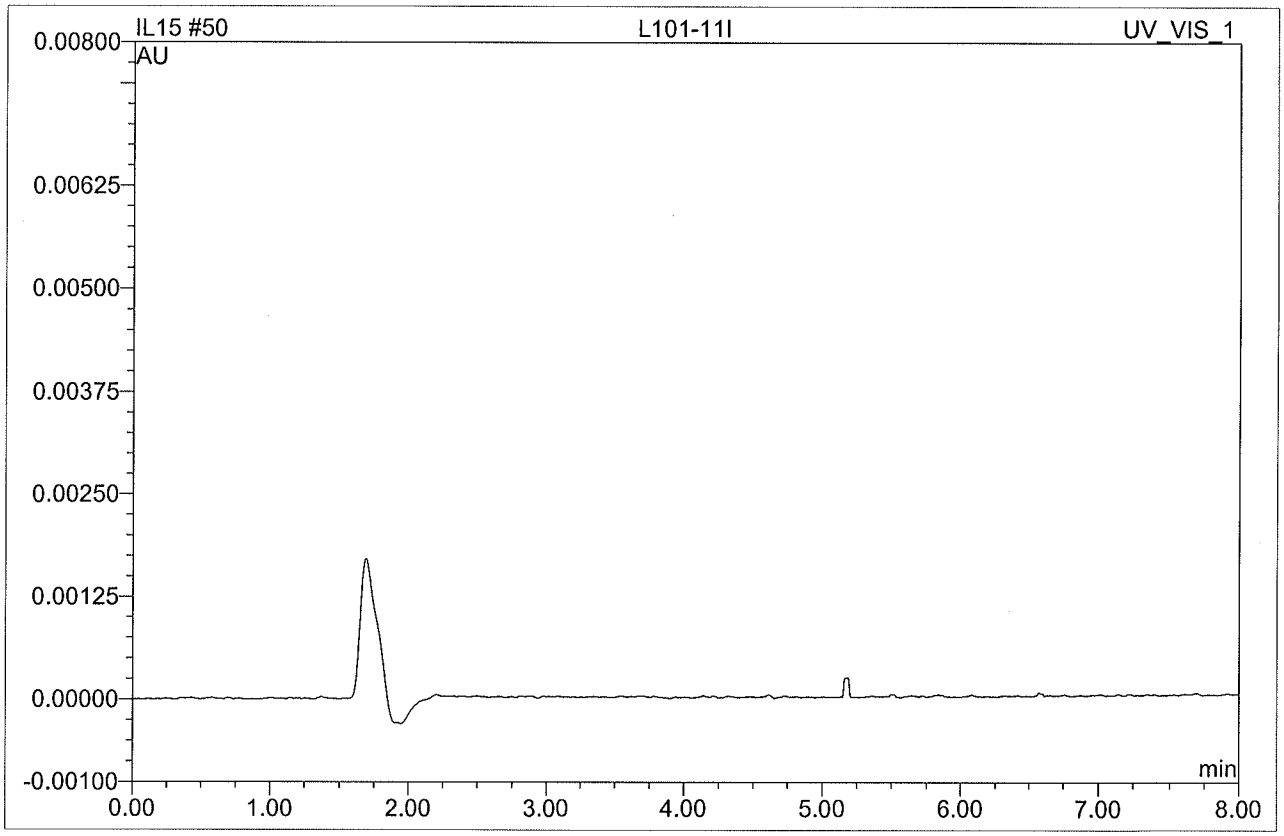



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 050 L101-11I

1mLto5mL

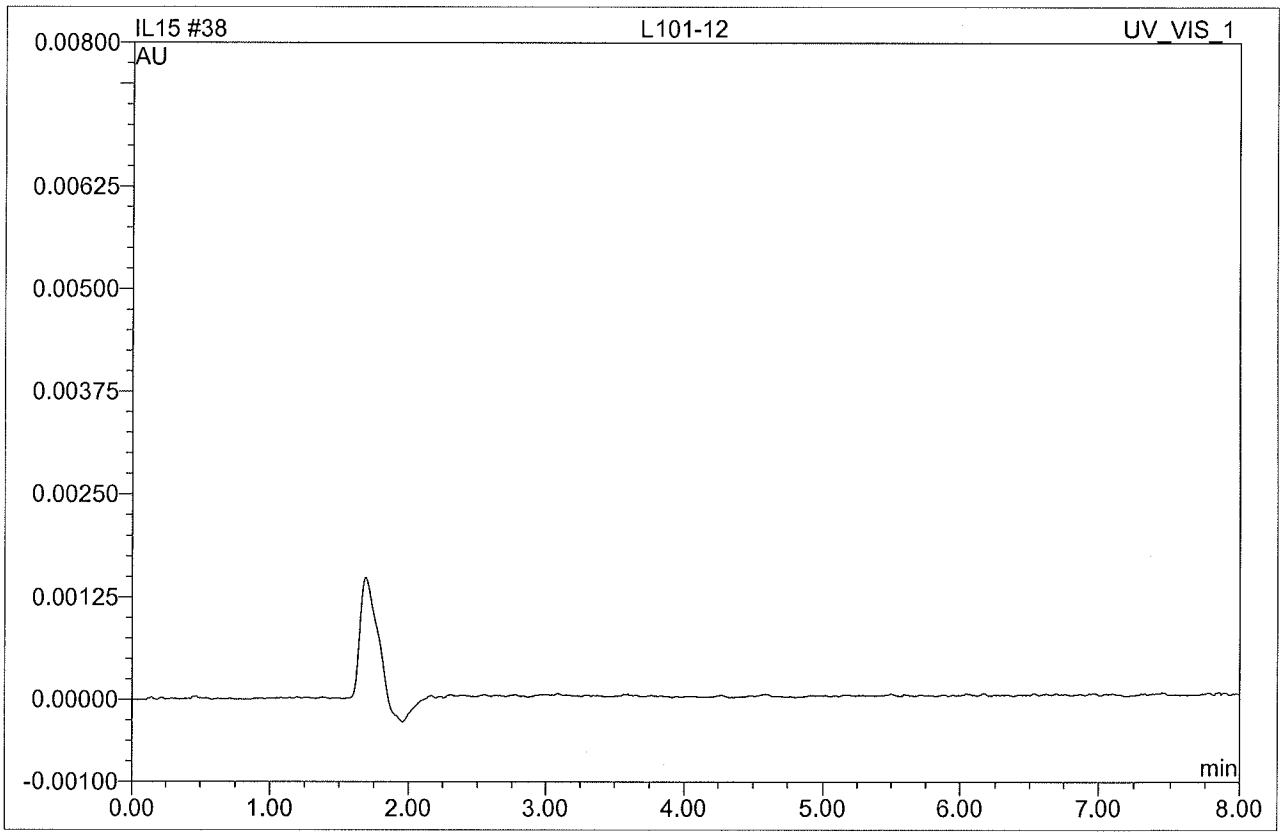
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-11I** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 20:39** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 038 L101-12

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-12** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 18:34** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

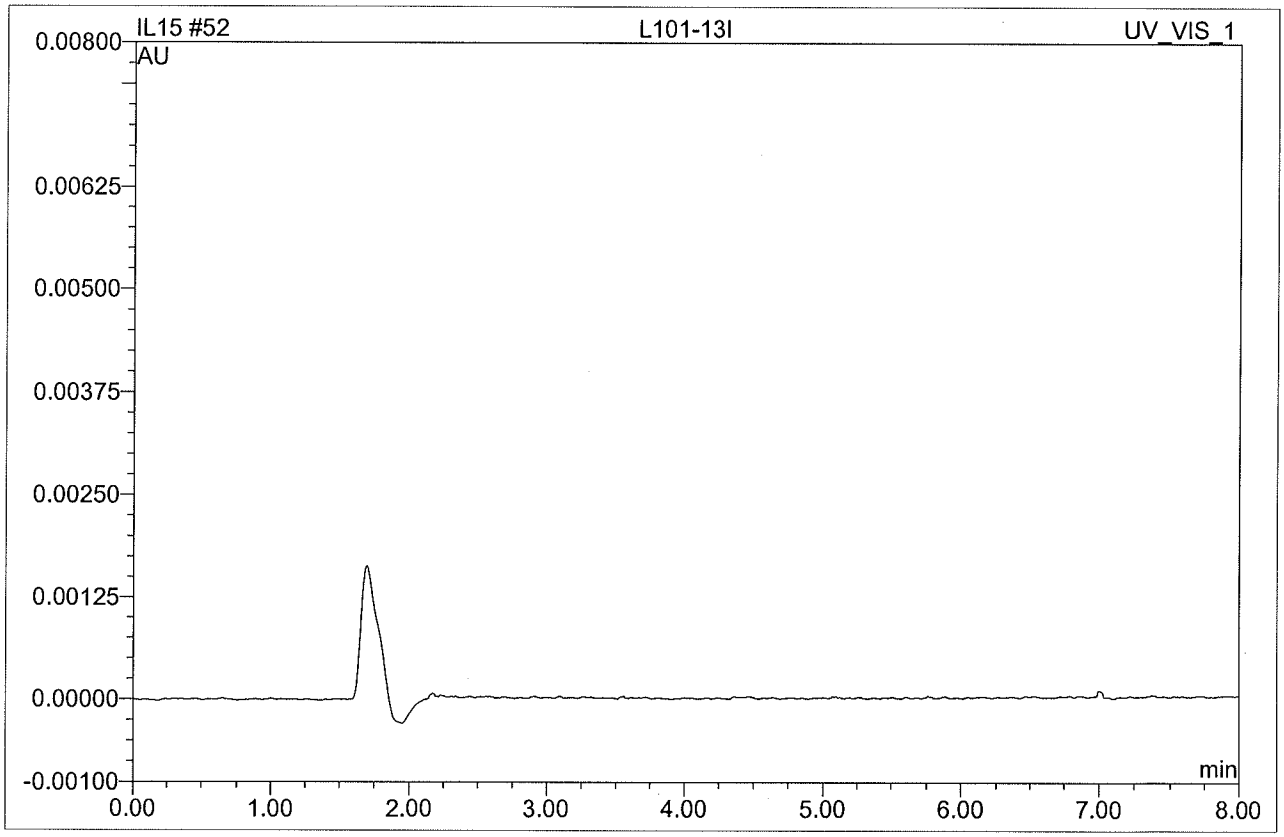



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 052 L101-13I

1mLto5mL

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-13I** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 20:59** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# QC SUMMARIES

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | | |
|---|---|---|---|
| MATRIX | : WATER | | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 | 1 |
| SAMPLE ID | : MBLK1W | LCS1W | LCD1W |
| LAB SAMPLE ID | : HCL005WB | HCL005WL | HCL005WC |
| LAB FILE ID | : IL15015 | IL15016 | IL15017 |
| DATE PREPARED | : NA | NA | NA |
| DATE ANALYZED | : 12/15/2014:34 | 12/15/2014:45 | 12/15/2014:55 |
| PREP BATCH | : HCL005W | HCL005W | HCL005W |
| CALIBRATION REF | : IL15013 | IL15013 | IL15013 |

ACCESSION:

| PARAMETERS | MBResult (ug/L) | SpkAmt (ug/L) | LCSResult (ug/L) | LCSRec (%) | SpikeAmt (ug/L) | LCDResult (ug/L) | LCDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 2.00 | 2.03 | 102 | 2.00 | 2.02 | 101 | 0 | 90-110 | 20 |

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | | |
|---|---|---|---|
| MATRIX | : WATER | | % MOISTURE: NA |
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID | : MW-54-085-Q420 | MW-54-085-Q420MS | MW-54-085-Q420MSD |
| LAB SAMPLE ID | : L101-02 | L101-02M | L101-02S |
| LAB FILE ID | : IL15018 | IL15019 | IL15020 |
| DATE PREPARED | : NA | NA | NA |
| DATE ANALYZED | : 12/15/2015:06 | 12/15/2015:16 | 12/15/2015:26 |
| PREP BATCH | : HCL005W | HCL005W | HCL005W |
| CALIBRATION REF: | IL15013 | IL15013 | IL15013 |

ACCESSION:

| PARAMETERS | PSResult (ug/L) | SpkAmt (ug/L) | MSResult (ug/L) | MSRec (%) | SpikeAmt (ug/L) | MSDResult (ug/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 1.00 | 0.952 | 95.2 | 1.00 | 0.946 | 94.6 | 1 | 90-110 | 20 |

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | | |
|---|---|---|---|
| MATRIX | : WATER | | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 | 1 |
| SAMPLE ID | : MW-55-045-Q420 | MW-55-045-Q420MS | MW-55-045-Q420MSD |
| LAB SAMPLE ID | : L101-08 | L101-08M | L101-08S |
| LAB FILE ID | : IL15027 | IL15028 | IL15029 |
| DATE PREPARED | : NA | NA | NA |
| DATE ANALYZED | : 12/15/2016:39 | 12/15/2016:50 | 12/15/2017:00 |
| PREP BATCH | : HCL005W | HCL005W | HCL005W |
| CALIBRATION REF | : IL15025 | IL15025 | IL15025 |

ACCESSION:

| PARAMETERS | PSResult (ug/L) | SpkAmt (ug/L) | MSResult (ug/L) | MSRec (%) | SpikeAmt (ug/L) | MSDResult (ug/L) | MSDRec (%) | RPD (%) | QCLimit (%) | MaxRPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 1.00 | 0.997 | 99.7 | 1.00 | 0.994 | 99.4 | 0 | 90-110 | 20 |

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 |
| SAMPLE ID | : MW-54-085-EB-Q420 | MW-54-085-EB-Q420MS |
| LAB SAMPLE ID | : L101-01 | L101-01M |
| LAB FILE ID | : IL15054 | IL15055 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2021:20 | 12/15/2021:31 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15048 | IL15048 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 1.00 | 1.04 | 104 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 |
| SAMPLE ID | : MW-54-140-EB-Q420 | MW-54-140-EB-Q420MS |
| LAB SAMPLE ID | : L101-03 | L101-03M |
| LAB FILE ID | : IL15056 | IL15057 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2021:41 | 12/15/2021:51 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15048 | IL15048 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 1.00 | 0.969 | 96.9 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 5 | 5 |
| SAMPLE ID | : MW-54-140-Q420 | MW-54-140-Q420MS |
| LAB SAMPLE ID | : L101-04I | L101-04M |
| LAB FILE ID | : IL15042 | IL15043 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2019:15 | 12/15/2019:26 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15036 | IL15036 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 5.00 | 5.03 | 101 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 |
| SAMPLE ID | : MW-54-195-EB-Q420 | MW-54-195-EB-Q420MS |
| LAB SAMPLE ID | : L101-05 | L101-05M |
| LAB FILE ID | : IL15058 | IL15059 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2022:02 | 12/15/2022:12 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15048 | IL15048 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 1.00 | 1.00 | 100 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 5 | 5 |
| SAMPLE ID | : MW-54-195-Q420 | MW-54-195-Q420MS |
| LAB SAMPLE ID | : L101-06I | L101-06M |
| LAB FILE ID | : IL15044 | IL15045 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2019:36 | 12/15/2019:47 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15036 | IL15036 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 5.00 | 5.13 | 103 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 |
| SAMPLE ID | : MW-55-045-EB-Q420 | MW-55-045-EB-Q420MS |
| LAB SAMPLE ID | : L101-07 | L101-07M |
| LAB FILE ID | : IL15062 | IL15063 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2022:43 | 12/15/2022:54 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15060 | IL15060 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 1.00 | 0.992 | 99.2 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 |
| SAMPLE ID | : MW-55-120-Q420 | MW-55-120-Q420MS |
| LAB SAMPLE ID | : L101-09 | L101-09M |
| LAB FILE ID | : IL15030 | IL15031 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2017:11 | 12/15/2017:21 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15025 | IL15025 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | 7.51 | 2.00 | 9.48 | 98.5 | 90-110 |

PS: Parent Sample MS: Matrix Spike
* Out of QC limits

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

MATRIX : WATER % MOISTURE: NA
DILUTION FACTOR: 5 5
SAMPLE ID : MW-56D-Q420 MW-56D-Q420MS
LAB SAMPLE ID : L101-10I L101-10M
LAB FILE ID : IL15046 IL15047
DATE PREPARED : NA NA
DATE ANALYZED : 12/15/2019:57 12/15/2020:07
PREP BATCH : HCL005W HCL005W
CALIBRATION REF: IL15036 IL15036

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 5.00 | 5.09 | 102 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 5 | 5 |
| SAMPLE ID | : MW-56M-Q420 | MW-56M-Q420MS |
| LAB SAMPLE ID | : L101-11I | L101-11M |
| LAB FILE ID | : IL15050 | IL15051 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2020:39 | 12/15/2020:49 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15048 | IL15048 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 5.00 | 4.92 | 98.4 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 1 | 1 |
| SAMPLE ID | : MW-56S-Q420 | MW-56S-Q420MS |
| LAB SAMPLE ID | : L101-12 | L101-12M |
| LAB FILE ID | : IL15038 | IL15039 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2018:34 | 12/15/2018:44 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15036 | IL15036 |

ACCESSION:

| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 1.00 | 0.960 | 96.0 | 90-110 |

PS: Parent Sample MS: Matrix Spike

EMAX QUALITY CONTROL DATA
MATRIX SPIKE SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E218.6

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE: NA |
| DILUTION FACTOR | : 5 | 5 |
| SAMPLE ID | : MW-924-Q420 | MW-924-Q420MS |
| LAB SAMPLE ID | : L101-13I | L101-13M |
| LAB FILE ID | : IL15052 | IL15053 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/15/2020:59 | 12/15/2021:10 |
| PREP BATCH | : HCL005W | HCL005W |
| CALIBRATION REF | : IL15048 | IL15048 |

ACCESSION:

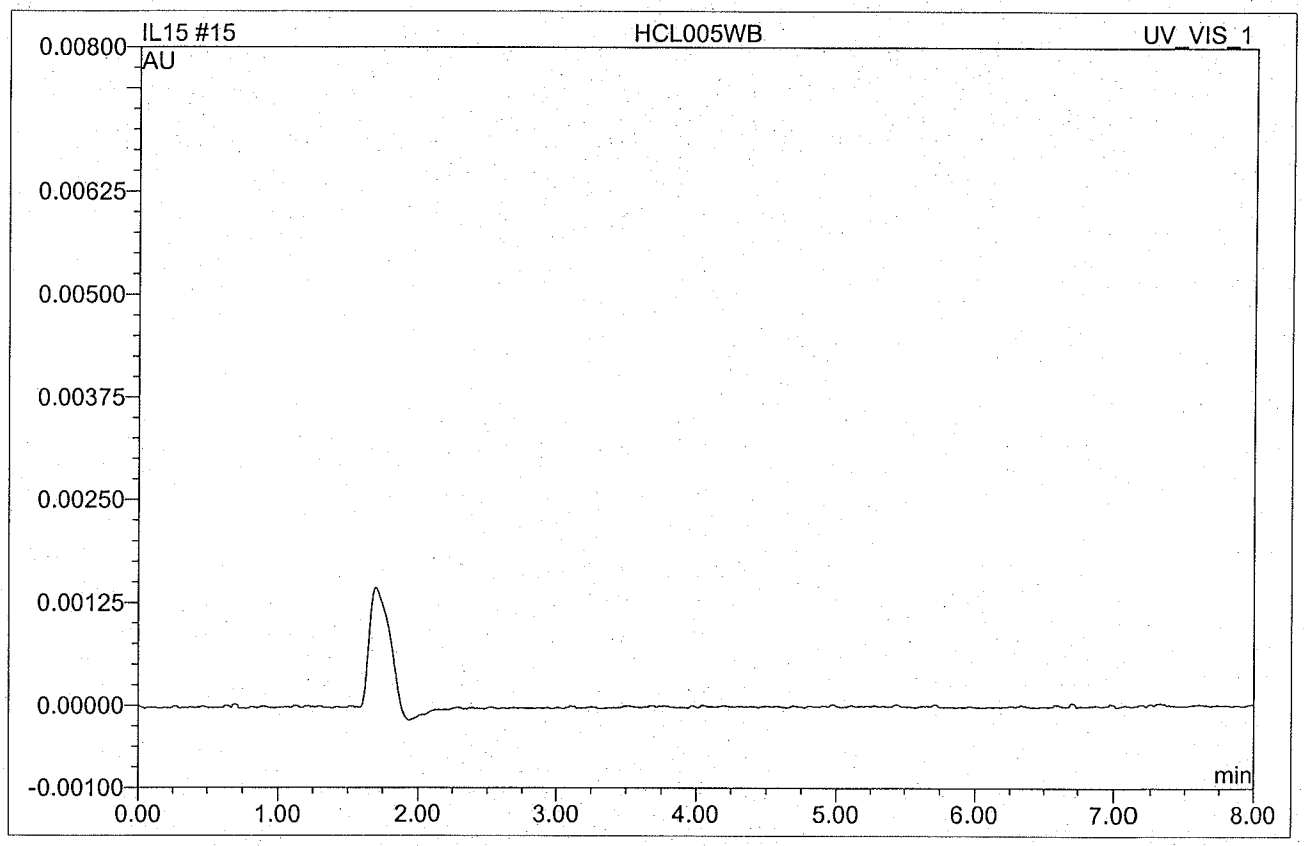
| PARAMETER | PSResult (ug/L) | SPIKE AMT (ug/L) | MSResult (ug/L) | MSRec (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| HEXAVALENT CHROMIUM | ND | 5.00 | 5.03 | 101 | 90-110 |

PS: Parent Sample MS: Matrix Spike

# QC DATA

# IL15 015 HCL005WB

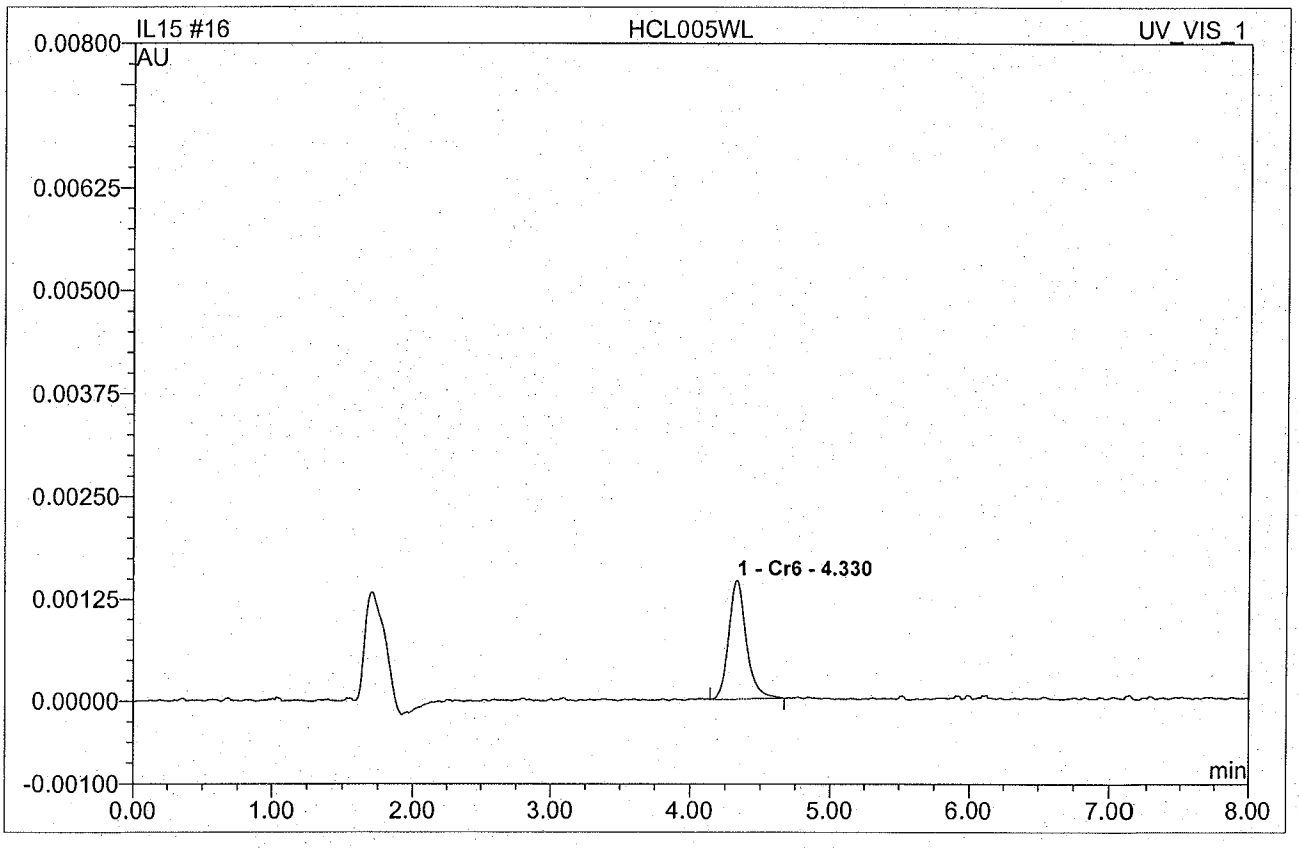
| | | | |
|---|---|---|---|
| *Sample Name:* | **HCL005WB** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 14:34** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 016 HCL005WL

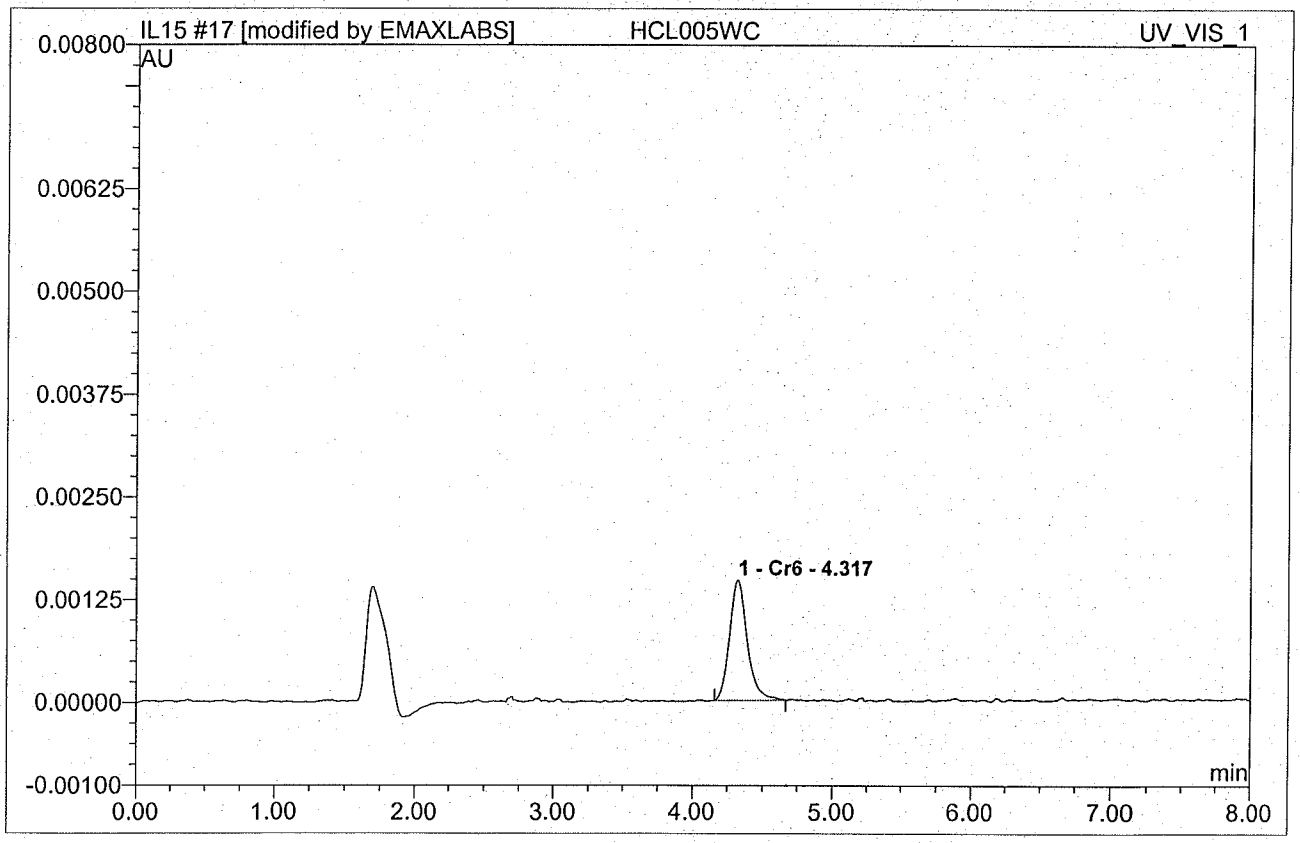
| | | | |
|---|---|---|---|
| *Sample Name:* | **HCL005WL** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 14:45** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.33 | Cr6 | 0.0014490 | 0.0002108 | 100.00 | 2.025 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 2.025 | |

# IL15 017 HCL005WC

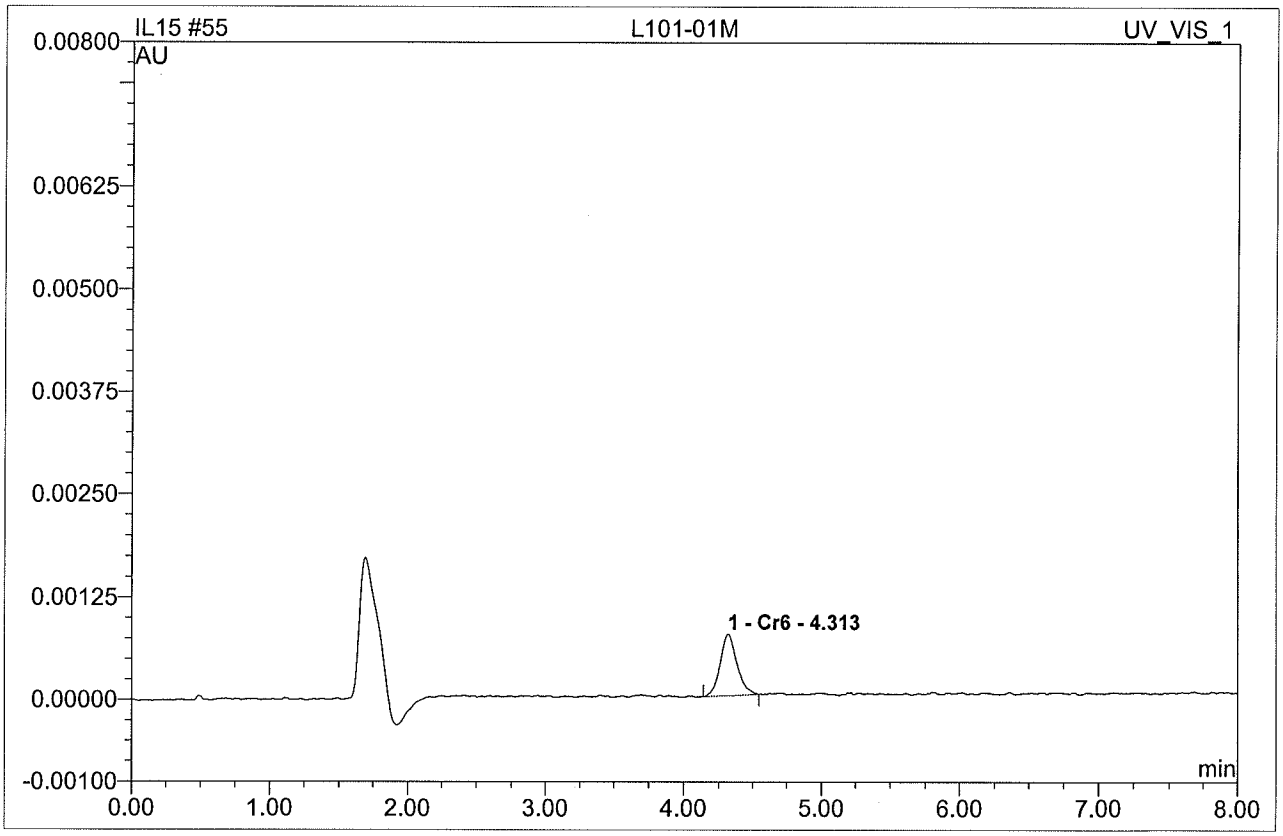
| | | | |
|---|---|---|---|
| *Sample Name:* | **HCL005WC** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 14:55** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.32 | Cr6 | 0.0014610 | 0.0002107 | 100.00 | 2.024 | BMB* |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 2.024 | |

# IL15 055 L101-01M

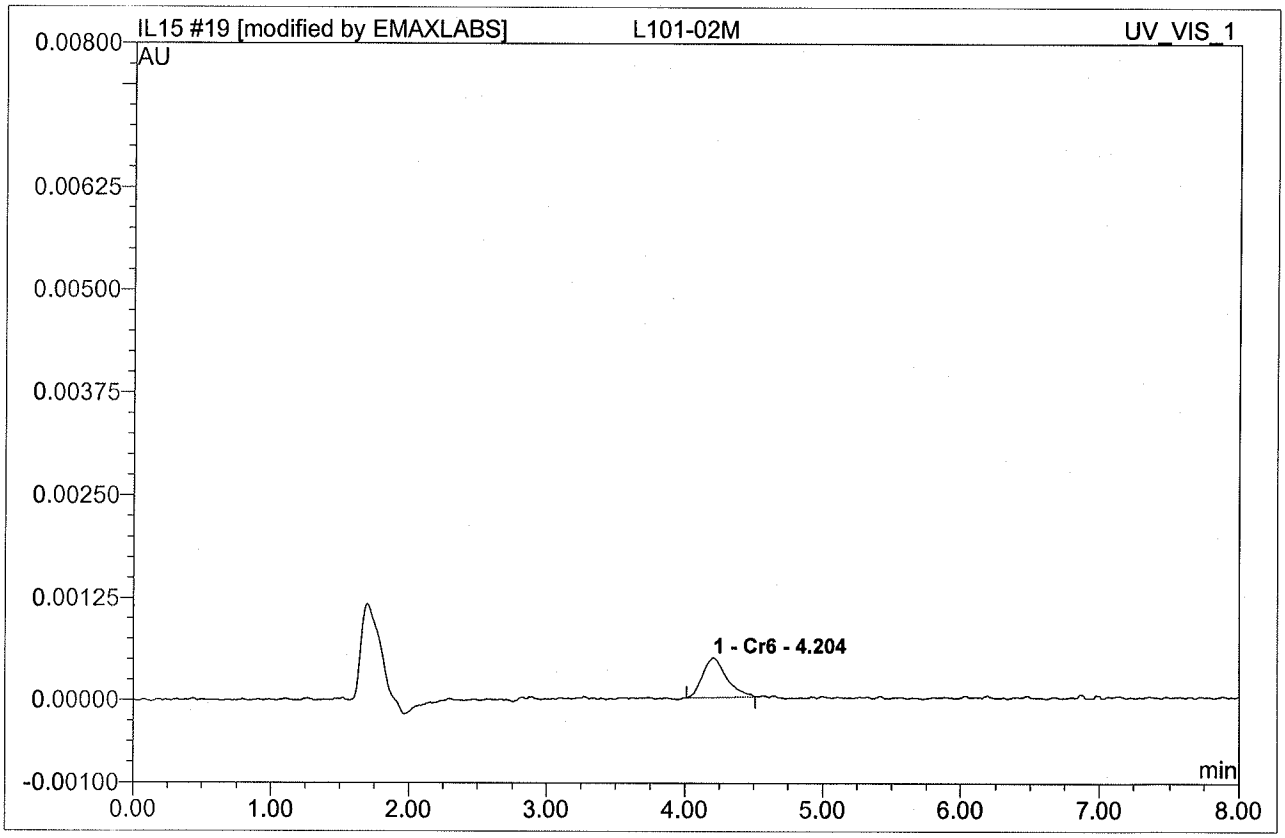
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-01M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 21:31** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.31 | Cr6 | 0.0007460 | 0.0001066 | 100.00 | 1.039 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 1.039 | |

# IL15 019 L101-02M

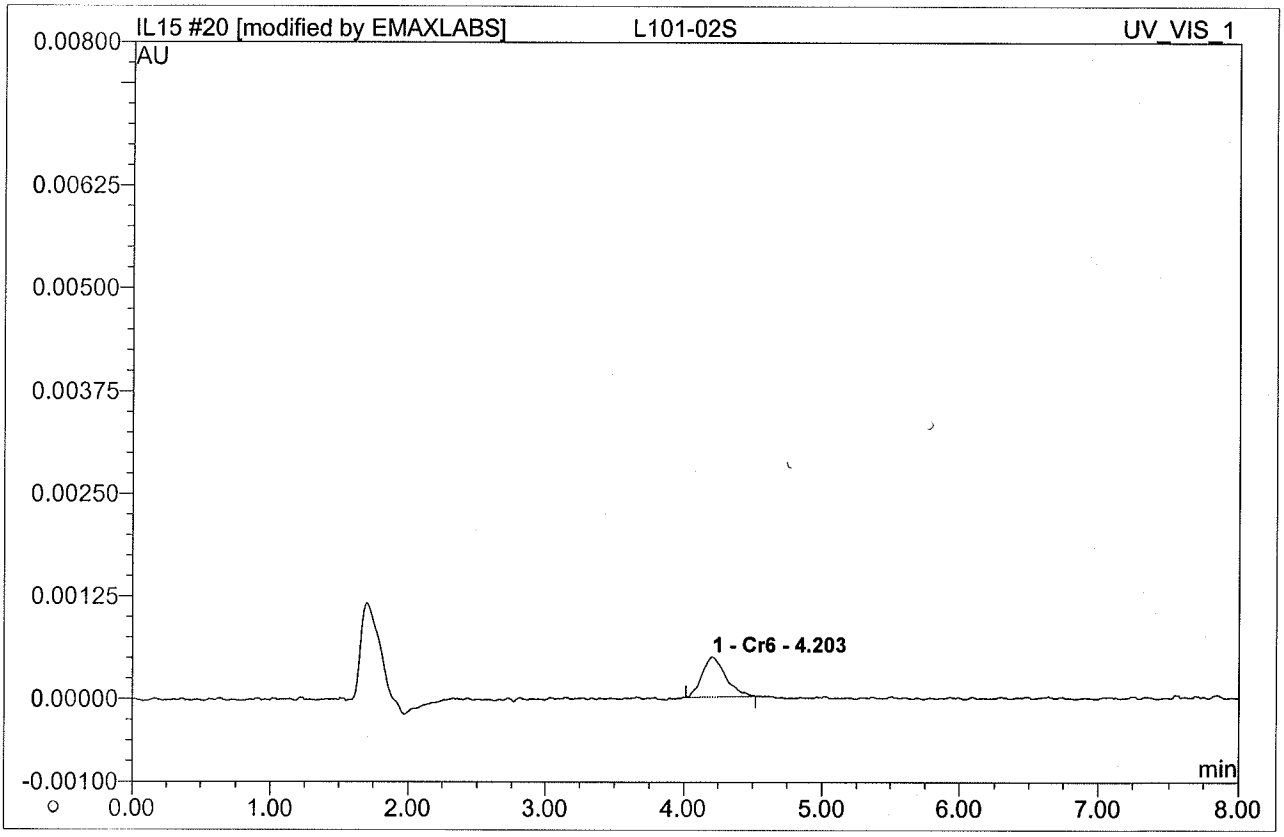
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-02M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 15:16** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.20 | Cr6 | 0.0004840 | 0.0000974 | 100.00 | 0.952 | BMB* |
| **Total:** | | | 0.000 | 0.000 | 100.00 | 0.952 | |

# IL15 020 L101-02S

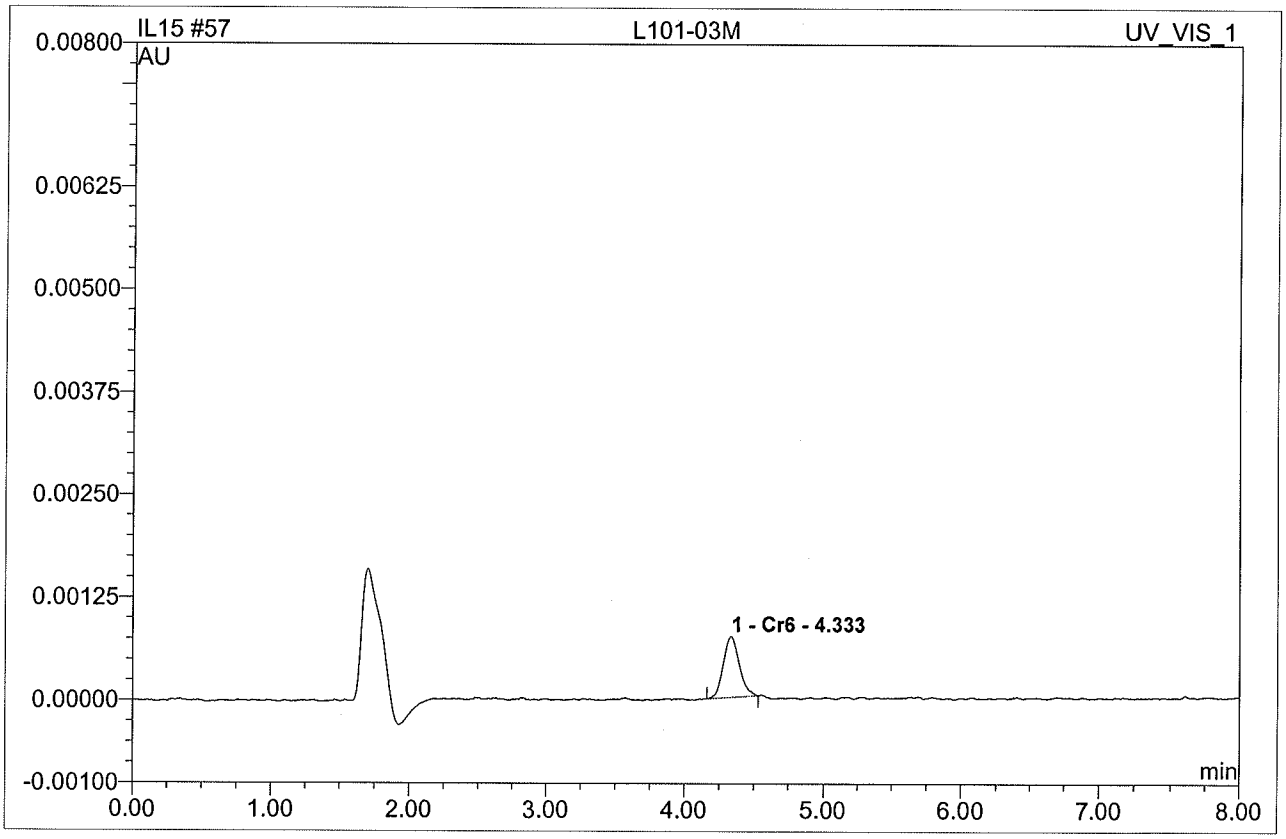
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-02S** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 15:26** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.20 | Cr6 | 0.0004870 | 0.0000968 | 100.00 | 0.946 | BMB* |
| **Total:** | | | 0.000 | 0.000 | 100.00 | 0.946 | |

# IL15 057 L101-03M

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-03M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 21:51** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

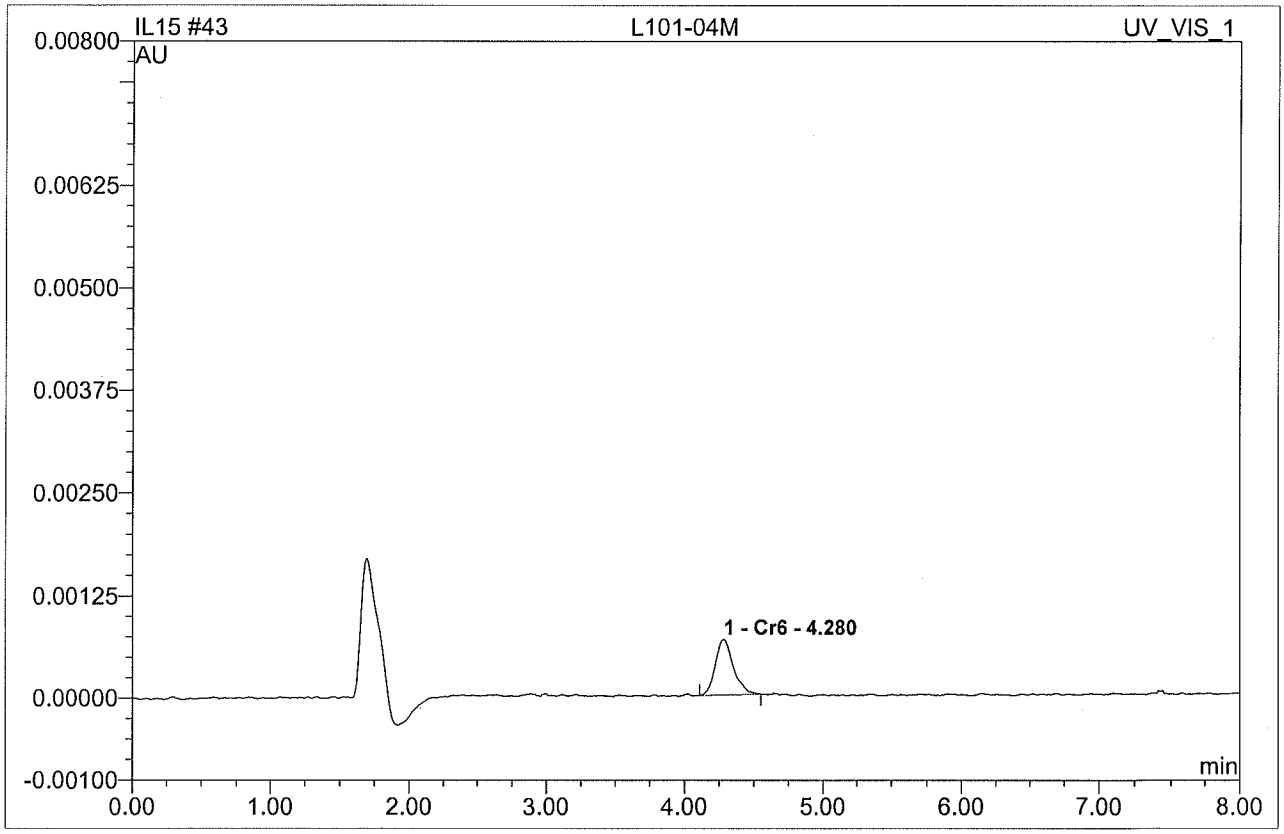



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.33 | Cr6 | 0.0007370 | 0.0000992 | 100.00 | 0.969 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 0.969 | |

# IL15 043 L101-04M

1mLto5mL

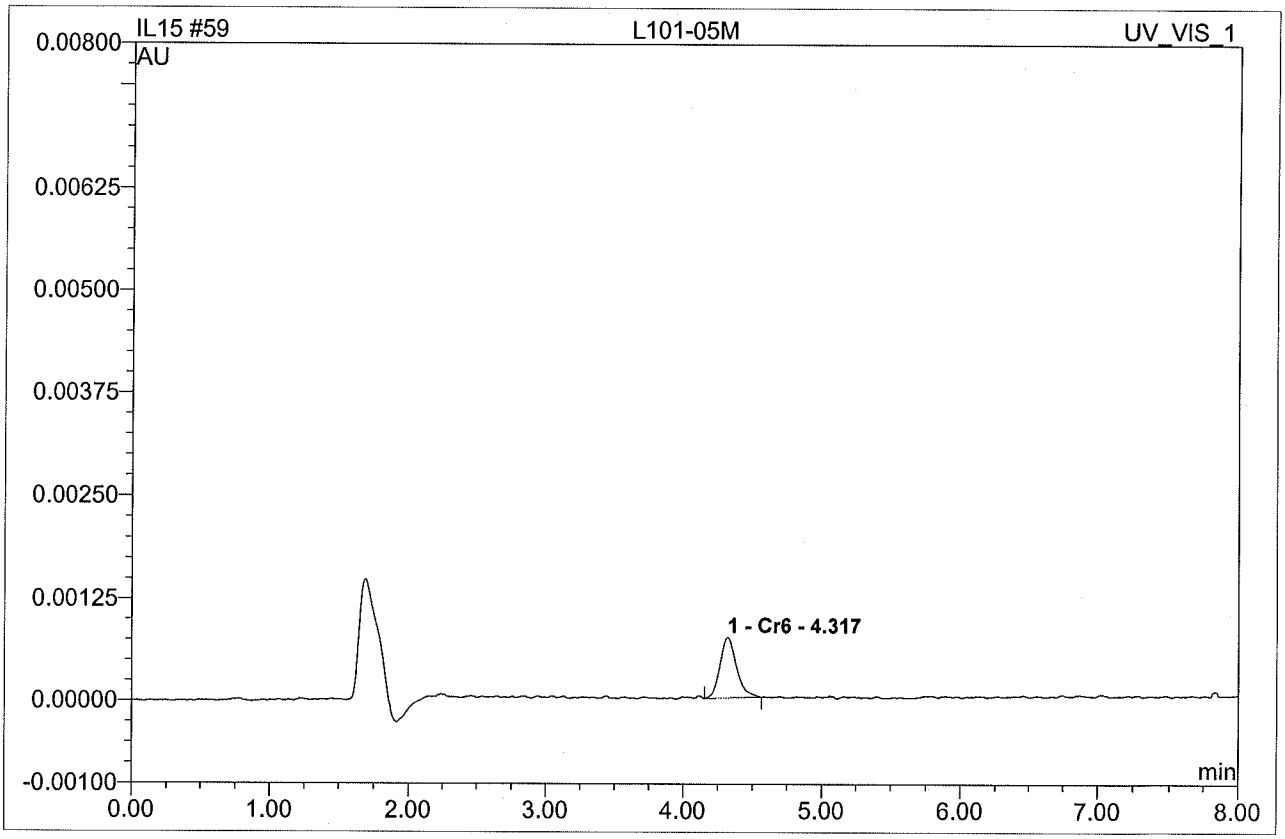
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-04M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 19:26** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.28 | Cr6 | 0.0006780 | 0.0001032 | 100.00 | 5.034 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 5.034 | |

# IL15 059 L101-05M

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-05M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 22:12** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

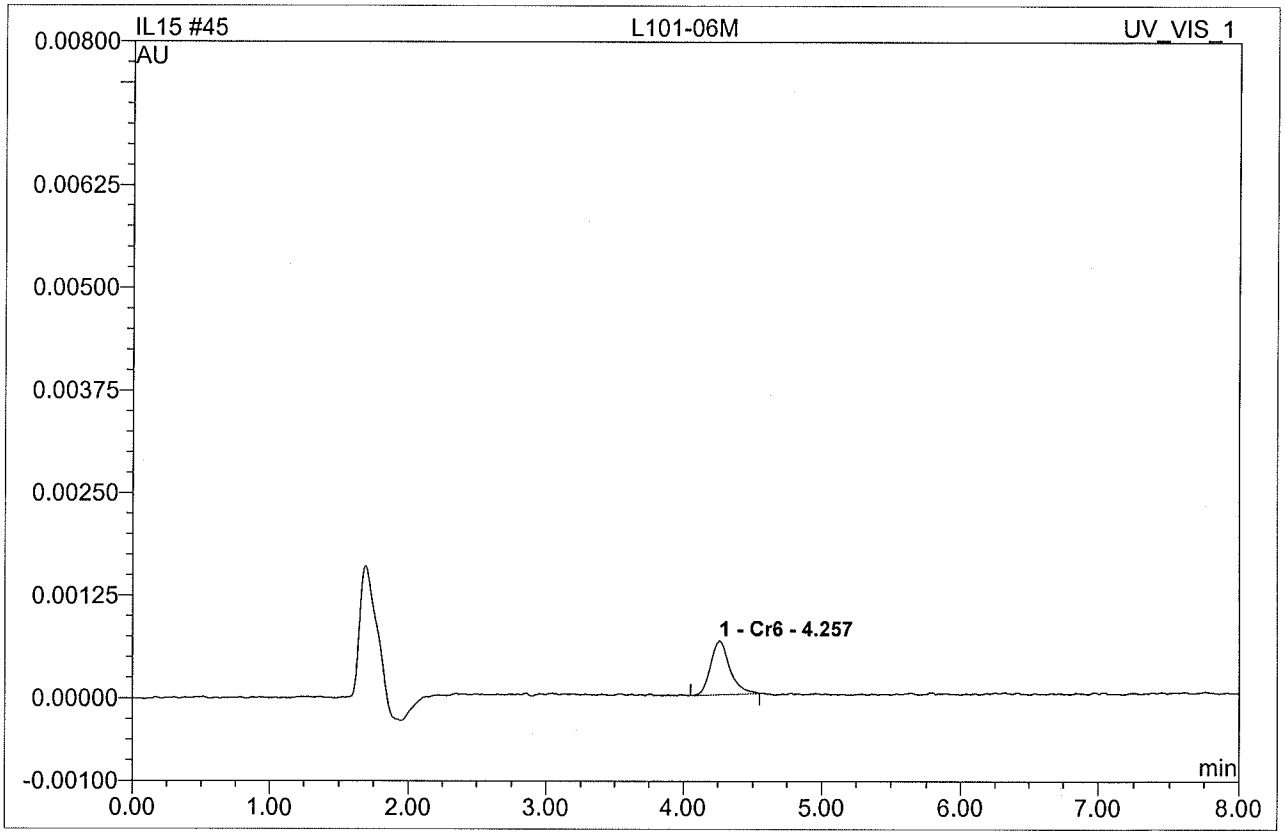



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.32 | Cr6 | 0.0007380 | 0.0001027 | 100.00 | 1.002 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 1.002 | |

# IL15 045 L101-06M

1mLto5mL

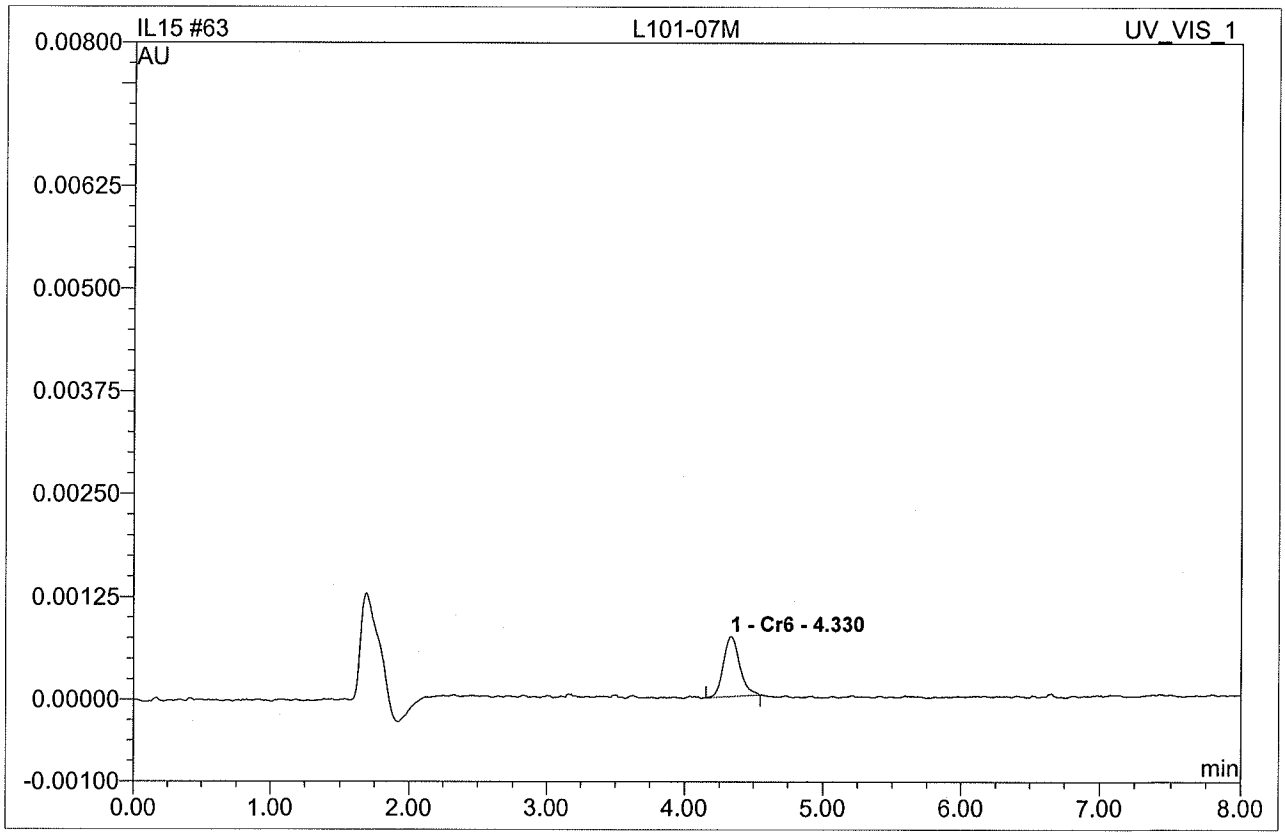
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-06M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 19:47** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.26 | Cr6 | 0.0006540 | 0.0001054 | 100.00 | 5.134 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 5.134 | |

# IL15 063 L101-07M

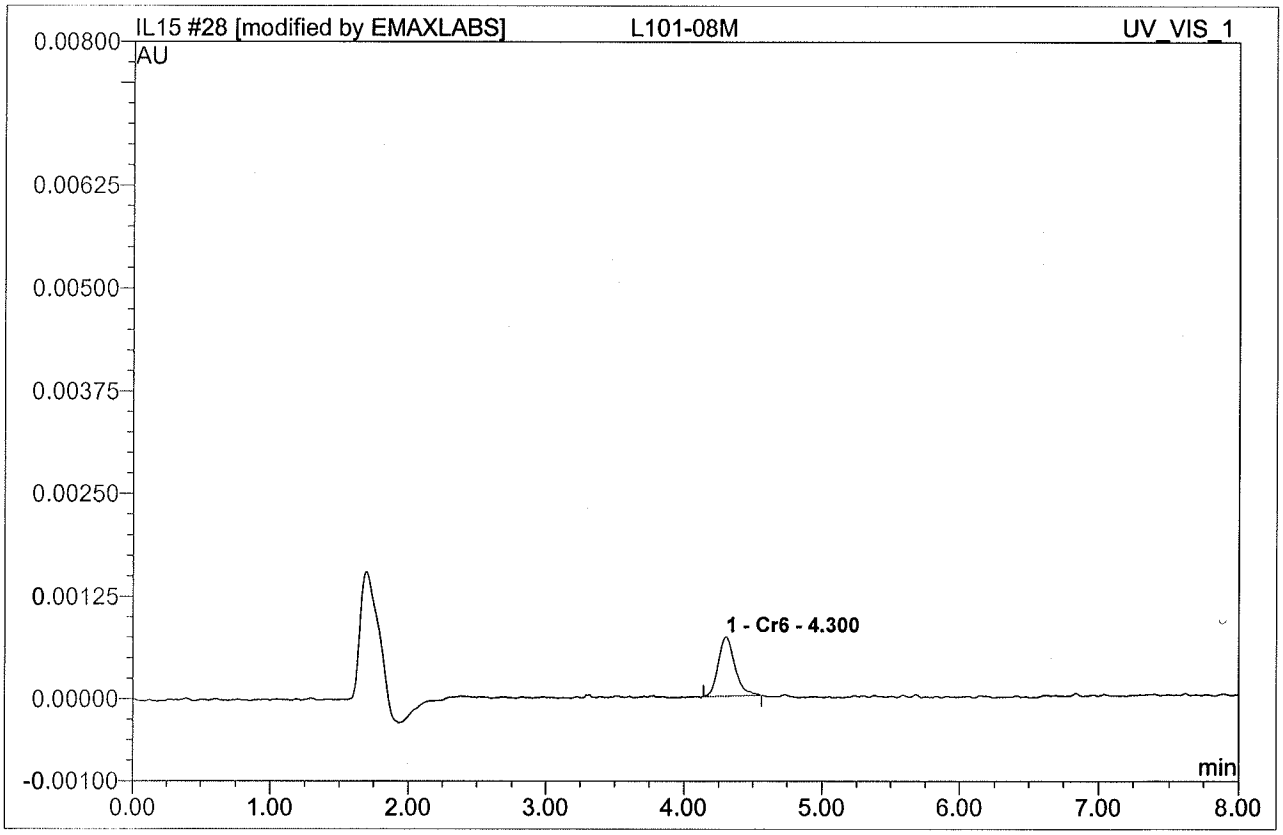
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-07M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 22:54** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.33 | Cr6 | 0.0007320 | 0.0001017 | 100.00 | 0.992 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 0.992 | |

# IL15 028 L101-08M

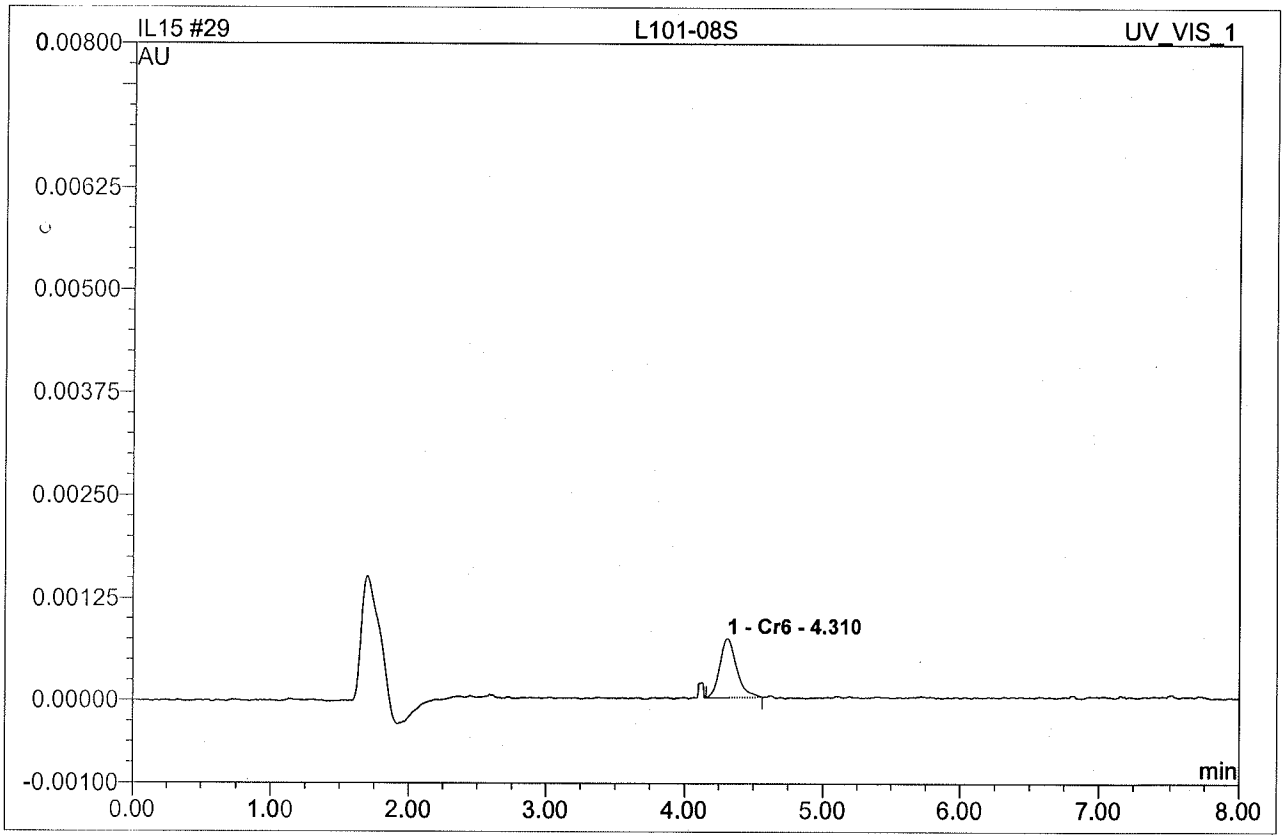
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-08M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 16:50** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.30 | Cr6 | 0.0007230 | 0.0001022 | 100.00 | 0.997 | BMB* |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 0.997 | |

# IL15 029 L101-08S

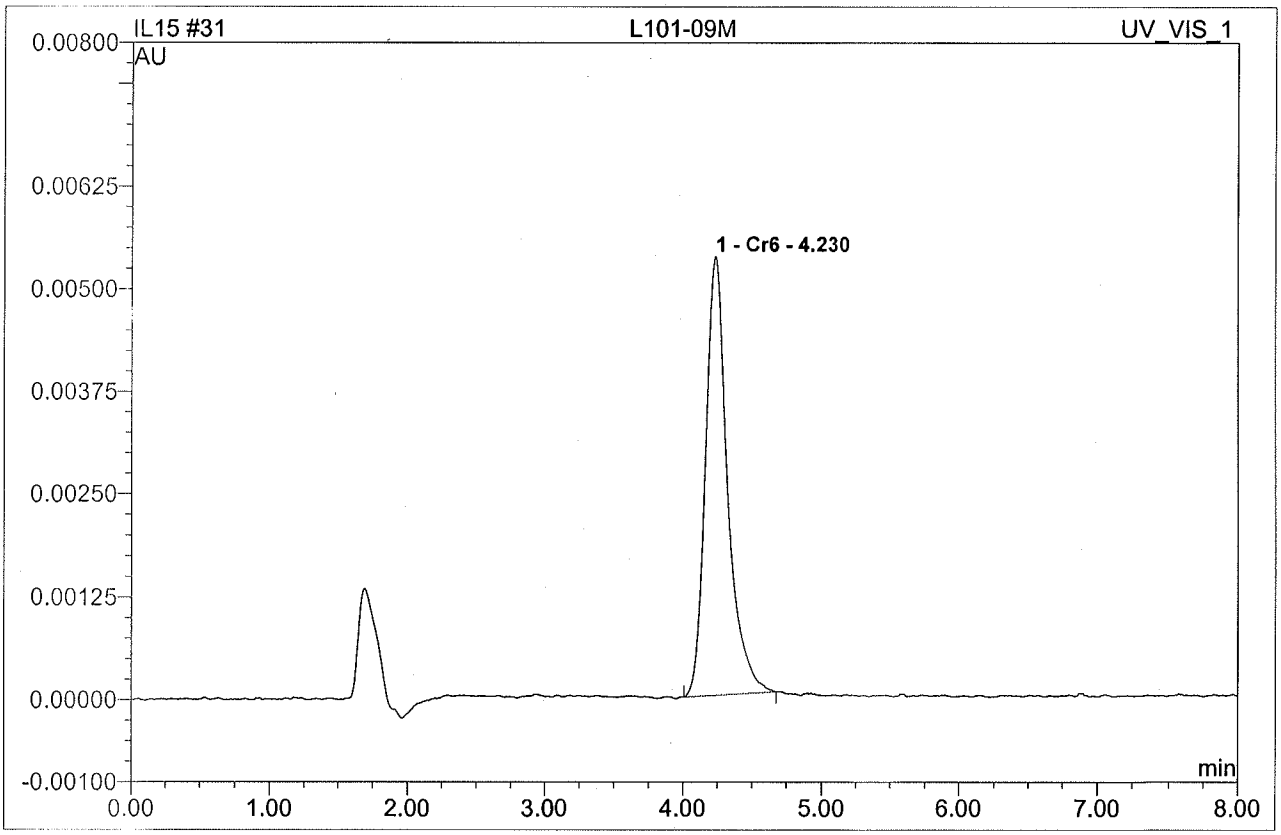
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-08S** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 17:00** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.31 | Cr6 | 0.0007220 | 0.0001018 | 100.00 | 0.994 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 0.994 | |

# IL15 031 L101-09M

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-09M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 17:21** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

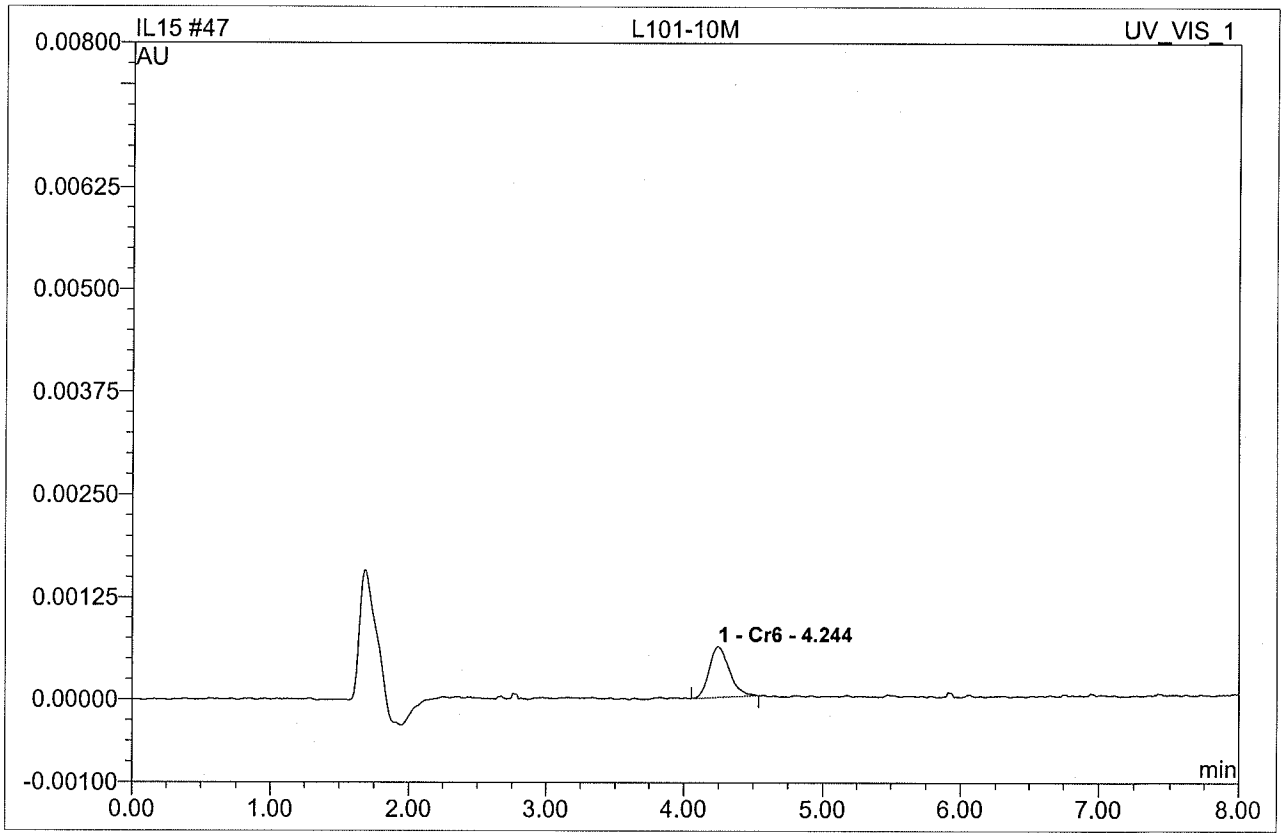



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.23 | Cr6 | 0.0053390 | 0.0009981 | 100.00 | 9.482 | BMB |
| Total: | | | 0.005 | 0.001 | 100.00 | 9.482 | |

# IL15 047 L101-10M

1mLto5mL

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-10M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 20:07** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

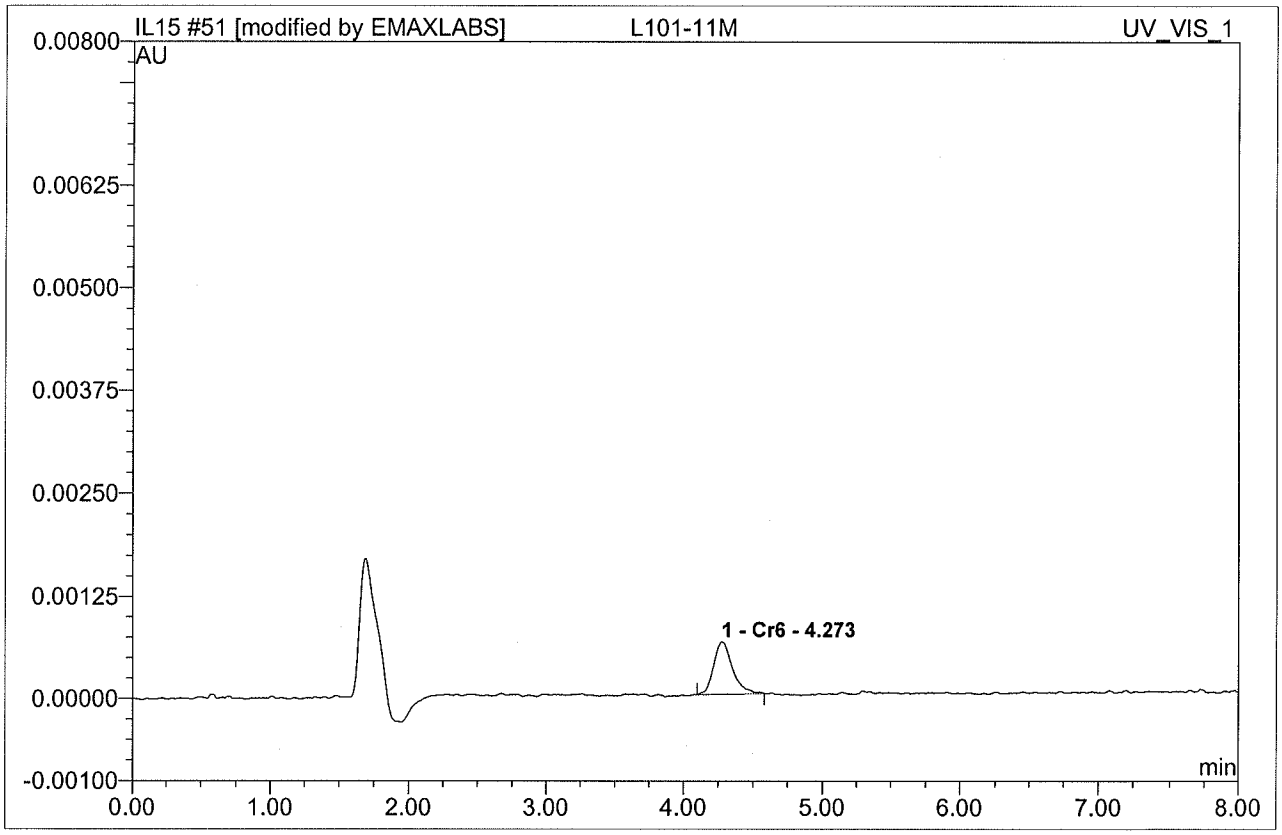



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.24 | Cr6 | 0.0006190 | 0.0001045 | 100.00 | 5.095 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 5.095 | |

# IL15 051 L101-11M

1mLto5mL

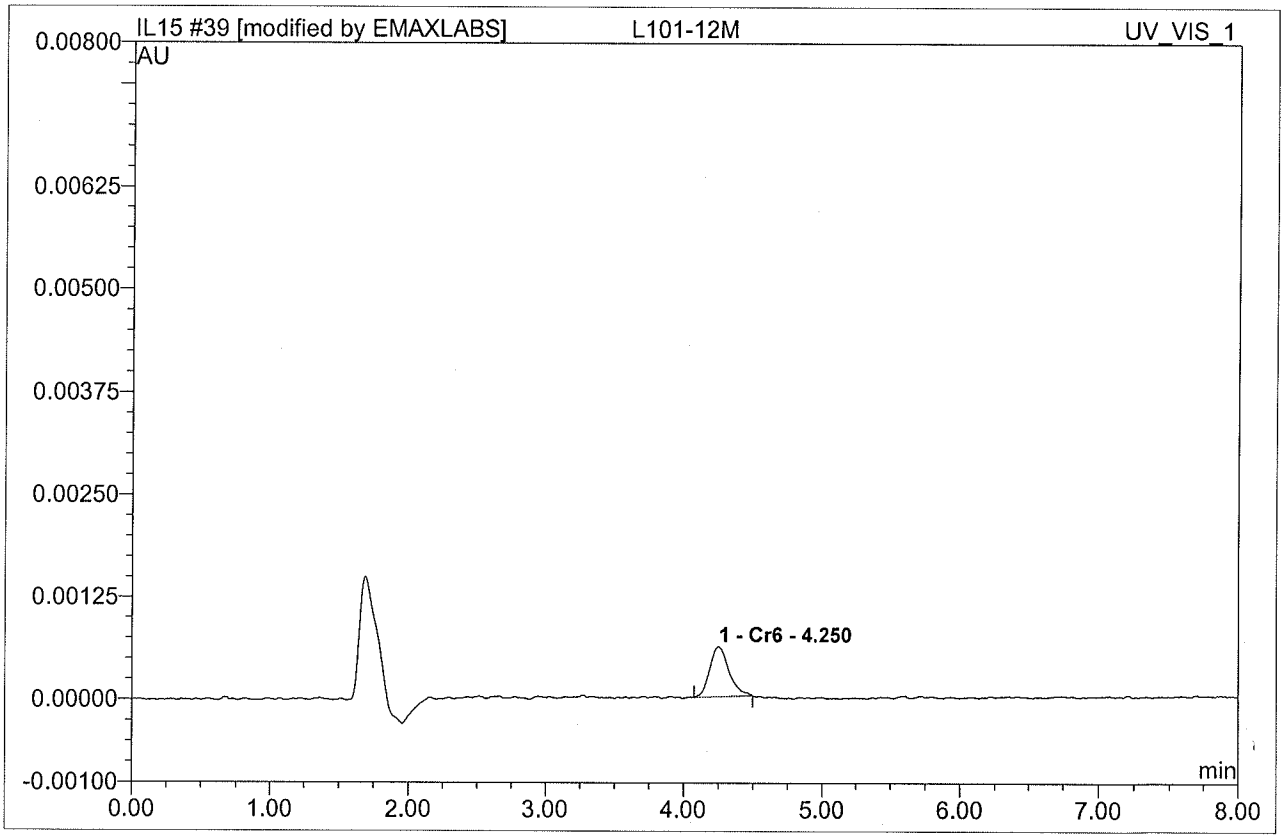
| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-11M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 20:49** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.27 | Cr6 | 0.0006400 | 0.0001009 | 100.00 | 4.924 | BMB* |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 4.924 | |

# IL15 039 L101-12M

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-12M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 18:44** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |

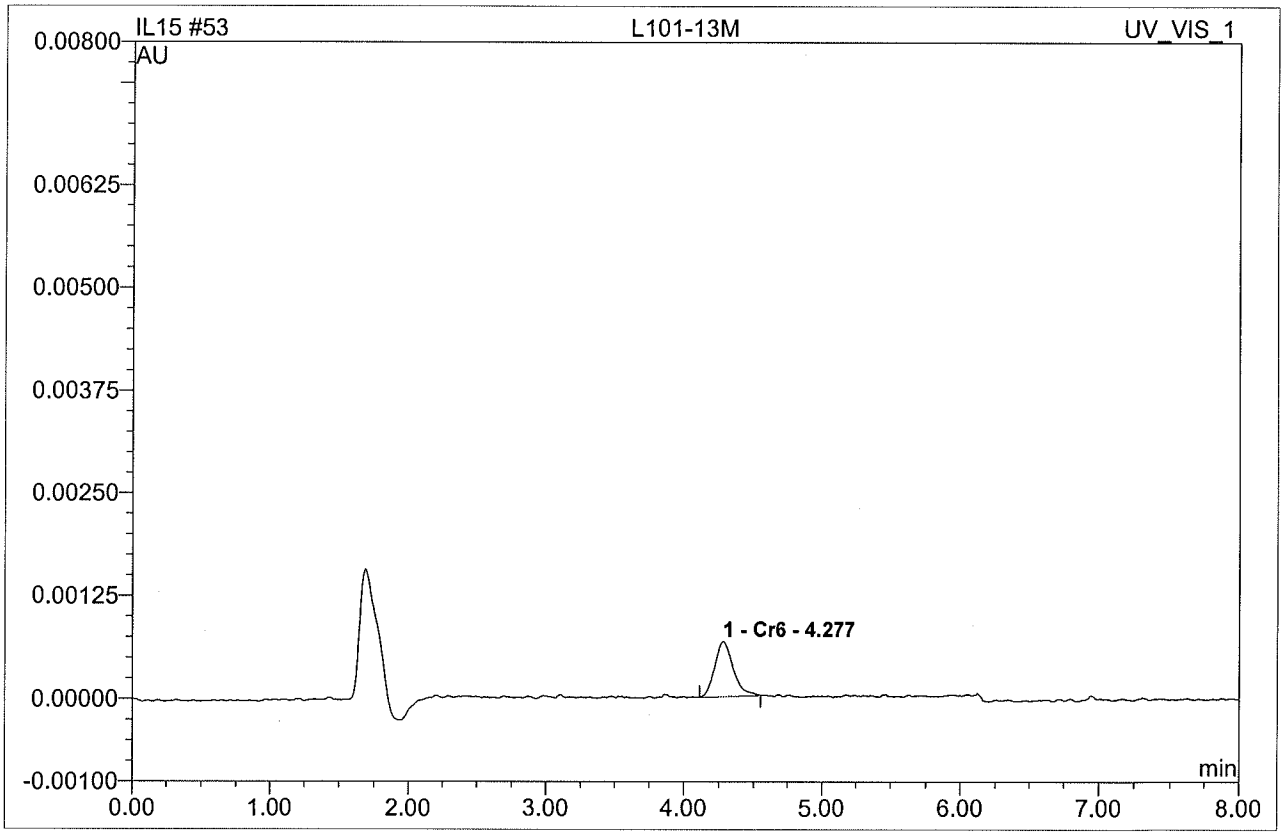



| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.25 | Cr6 | 0.0006090 | 0.0000983 | 100.00 | 0.960 | BMB* |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 0.960 | |

# IL15 053 L101-13M

1mLto5mL

| | | | |
|---|---|---|---|
| *Sample Name:* | **L101-13M** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **5** |
| *Recording Time:* | **12/15/2020 21:10** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.28 | Cr6 | 0.0006670 | 0.0001031 | 100.00 | 5.027 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 5.027 | |

# INITIAL CALIBRATION

IC RESULT FORM CalVersion : CR6.L15/IL15(2020)

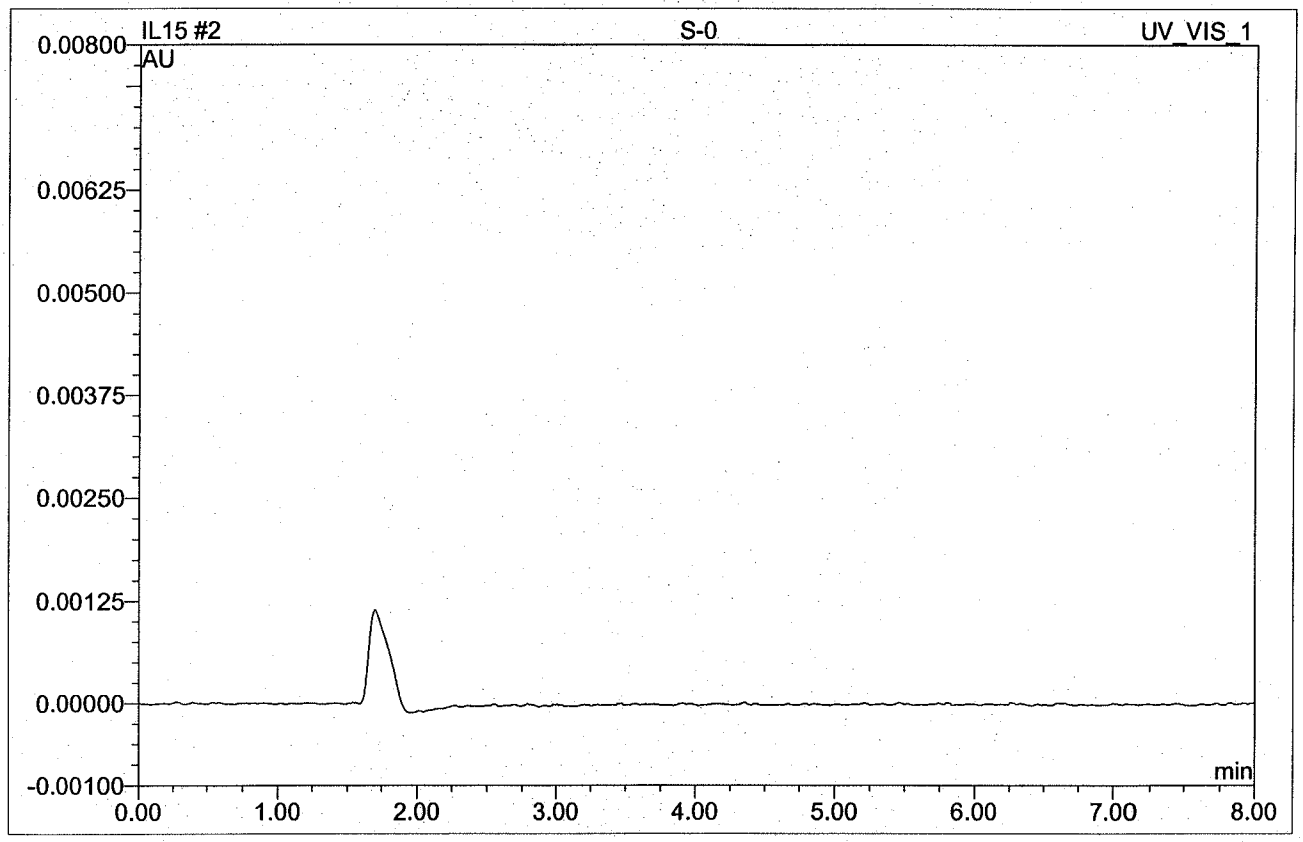
| LFID | LSID | SelCmp | Cr6 | DateTime | DF |
|---|---|---|---|---|---|
| IL15001 | IB | C | ND | 12/15/2012:02 | 1 |
| IL15002 | S-0 | C | ND | 12/15/2012:12 | 1 |
| IL15003 | S-1 | C | 0.212 | 12/15/2012:23 | 1 |
| IL15004 | S-2 | C | 0.491 | 12/15/2012:33 | 1 |
| IL15005 | S-3 | C | 0.971 | 12/15/2012:44 | 1 |
| IL15006 | S-4 | C | 2.009 | 12/15/2012:54 | 1 |
| IL15007 | S-5 | C | 5.015 | 12/15/2013:04 | 1 |
| IL15008 | S-6 | C | 7.417 | 12/15/2013:15 | 1 |
| IL15009 | S-7 | C | 10.056 | 12/15/2013:25 | 1 |
| IL15010 | ICV | C | 101% | 12/15/2013:39 | 1 |
| IL15011 | ICB | C | ND | 12/15/2013:49 | 1 |
| IL15012 | LOW CCV | C | 0.188 | 12/15/2013:59 | 1 |

METHOD: IC59L15
SOLVENT: BUFFER (SP2-01-41-01)

12/16/20

# IL15 002 S-0

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-0** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 12:12** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



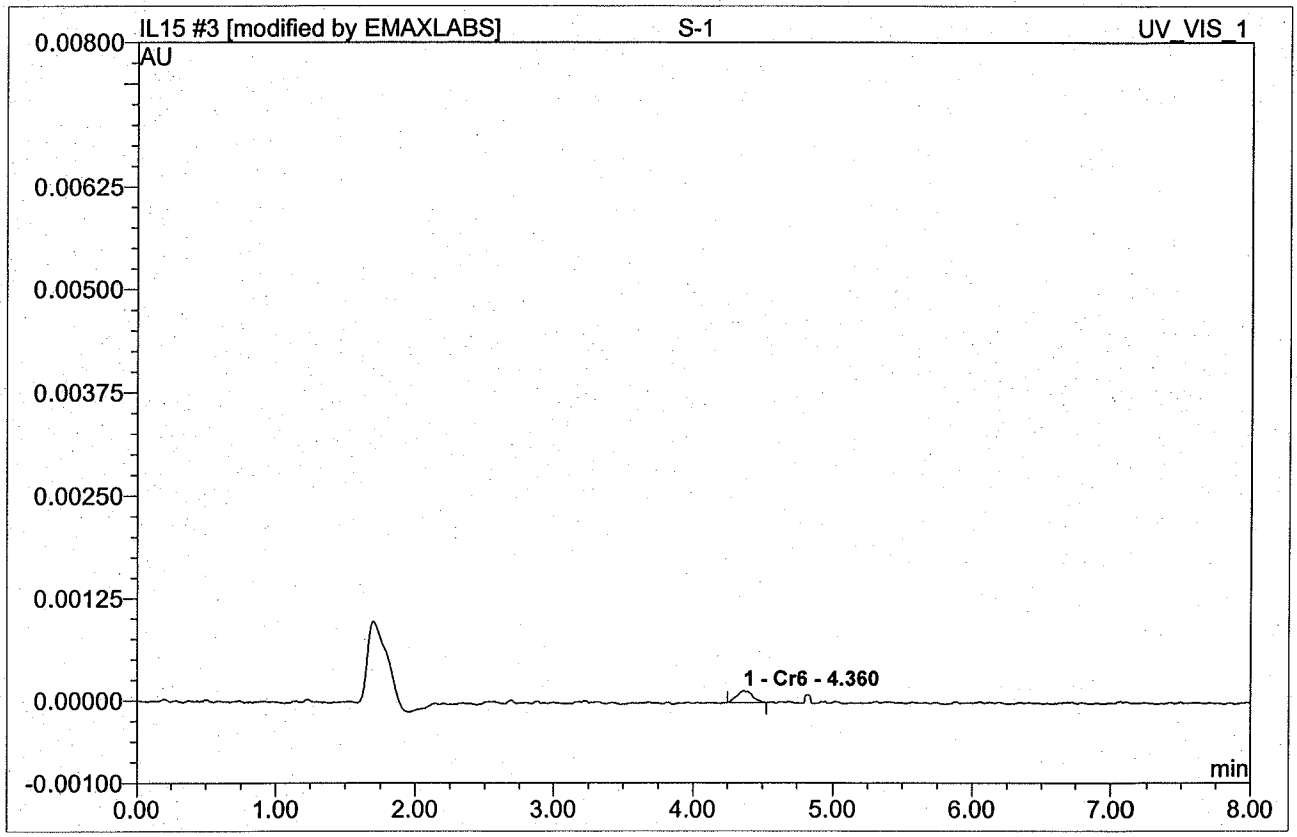

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

12/16/20

# IL15 003 S-1

0.2 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-1** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **standard** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 12:23** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



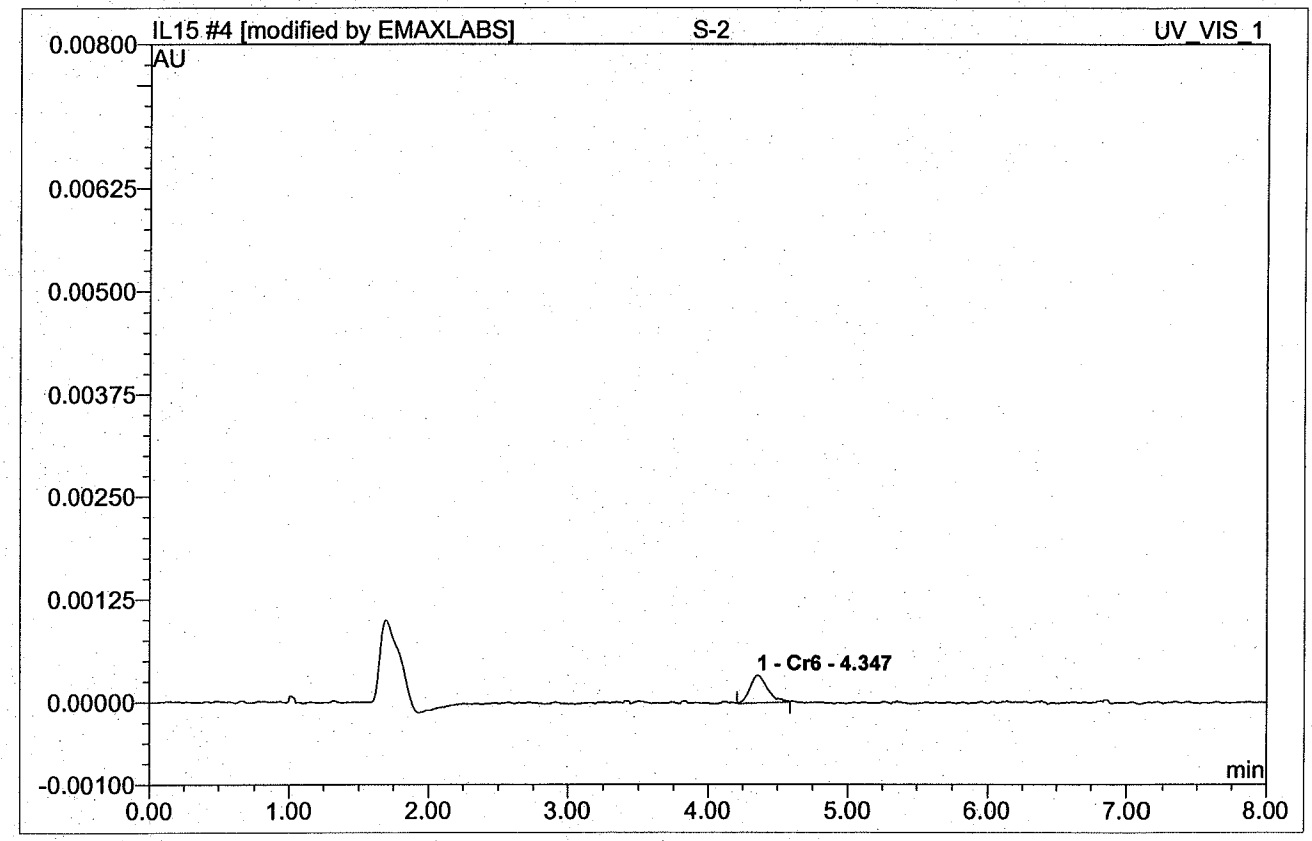

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.36 | Cr6 | 0.0001480 | 0.0000193 | 100.00 | 0.212 | BMB* |
| **Total:** | | | 0.000 | 0.000 | 100.00 | 0.212 | |

12/16/20

# IL15 004 S-2

0.5 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-2** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **standard** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 12:33** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



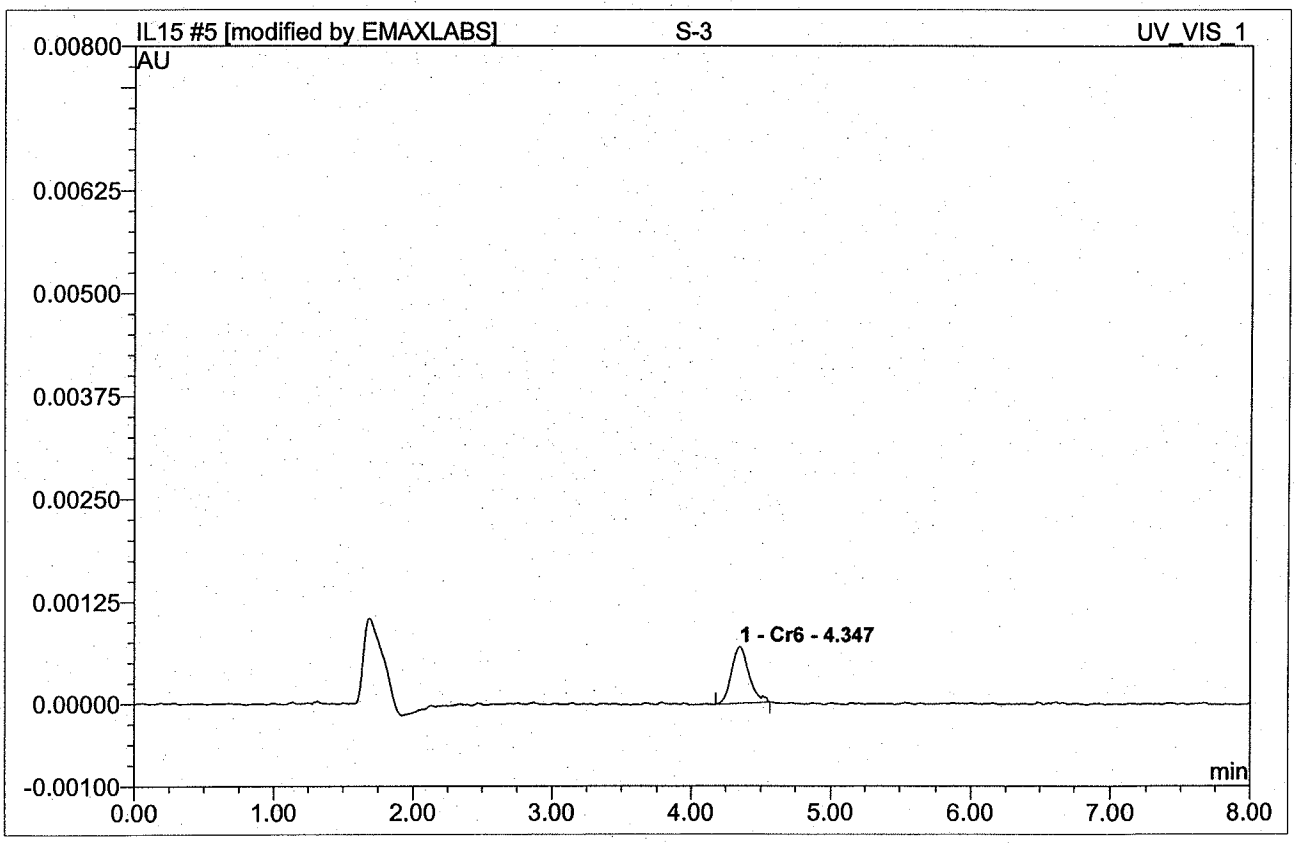

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.35 | Cr6 | 0.0003330 | 0.0000488 | 100.00 | 0.491 | BMB* |
| **Total:** | | | 0.000 | 0.000 | 100.00 | 0.491 | |

12/16/20

# IL15 005 S-3

1.0 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-3** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **standard** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 12:44** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



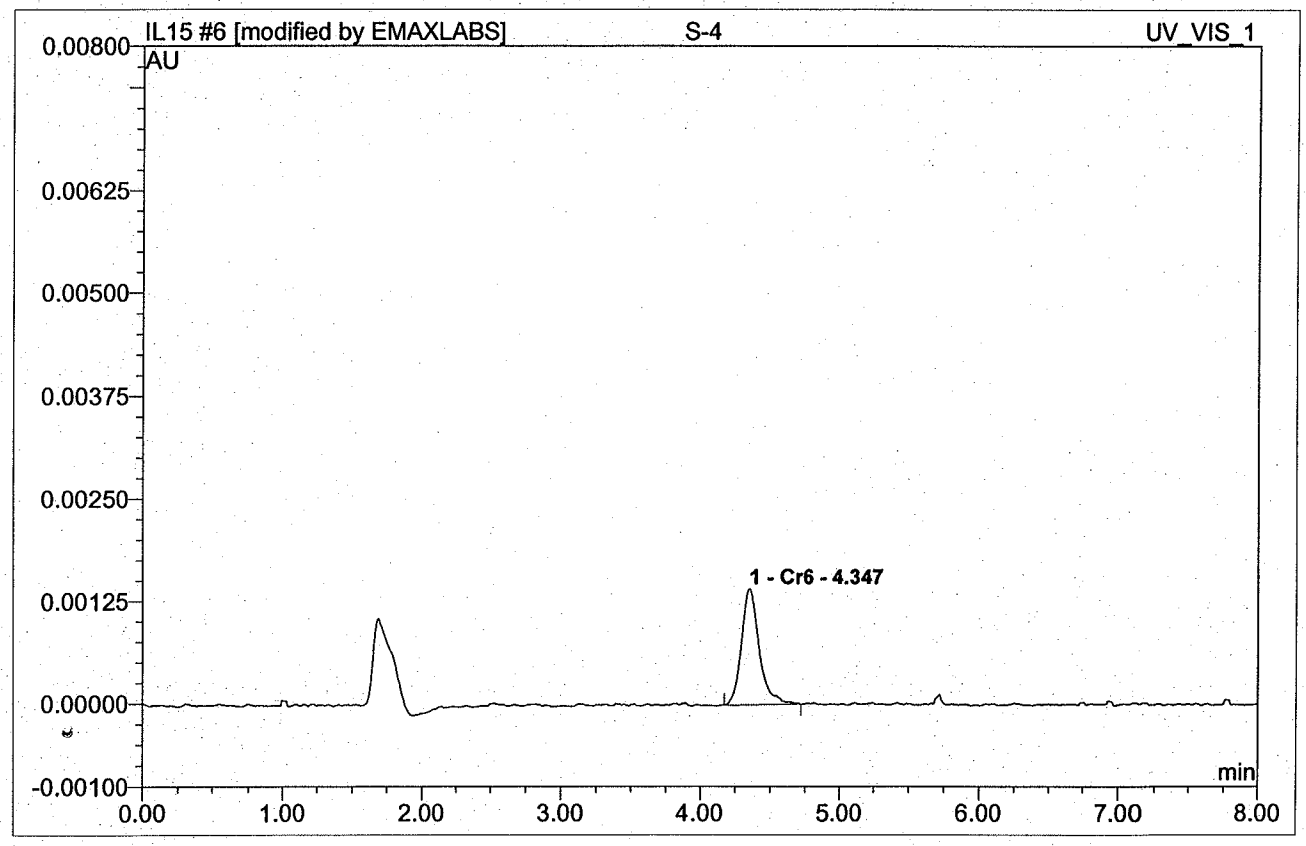

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.35 | Cr6 | 0.0006920 | 0.0000995 | 100.00 | 0.971 ✓ | BMB* |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 0.971 | |

12/16/20

# IL15 006 S-4

2.0 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-4** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **standard** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 12:54** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



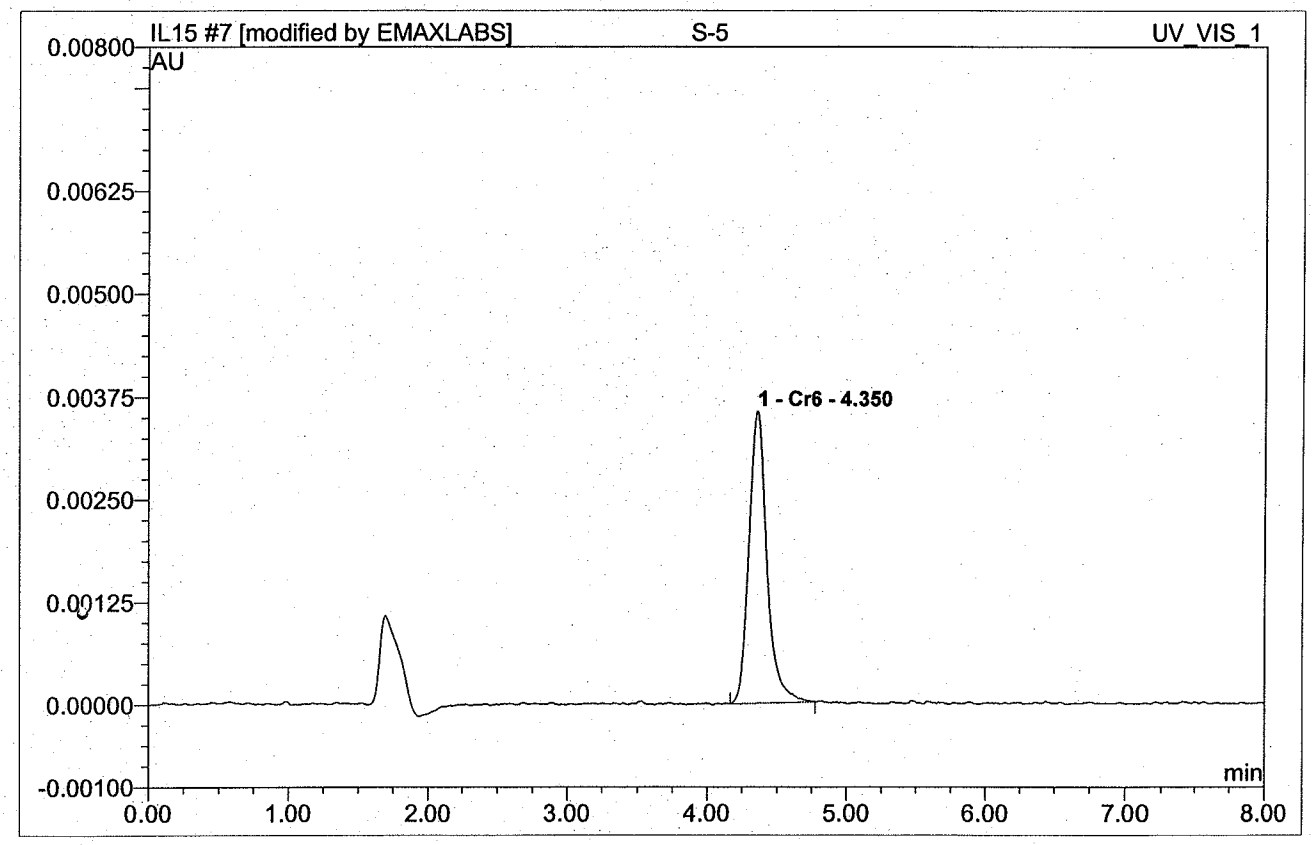

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.35 | Cr6 | 0.0014150 | 0.0002091 | 100.00 | 2.009 | BMB* |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 2.009 | |

12/16/20

# IL15 007 S-5

5.0 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-5** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **standard** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 13:04** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



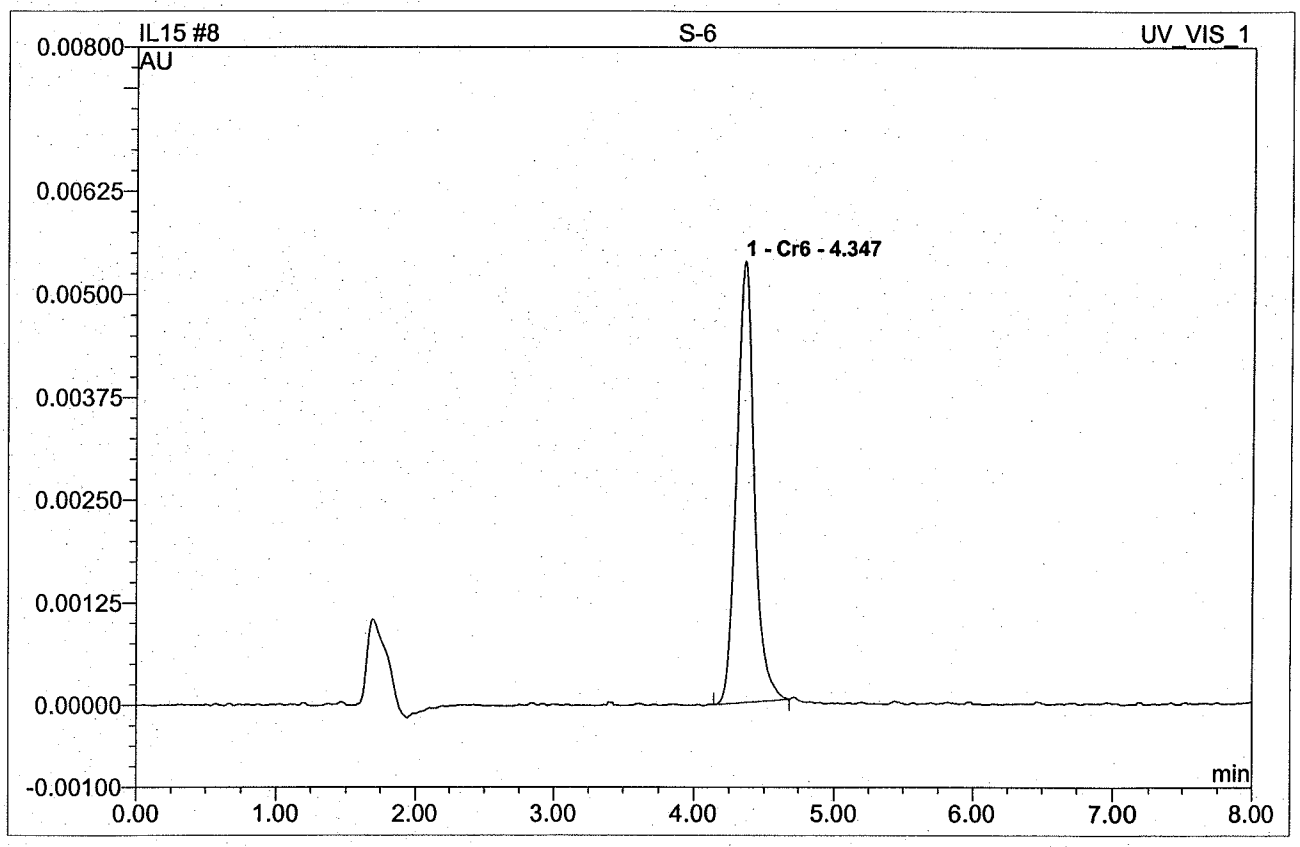

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.35 | Cr6 | 0.0035600 | 0.0005264 | 100.00 | 5.015 | BMB* |
| **Total:** | | | 0.004 | 0.001 | 100.00 | 5.015 | |

12/16/20

# IL15 008 S-6

7.5 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-6** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **standard** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 13:15** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



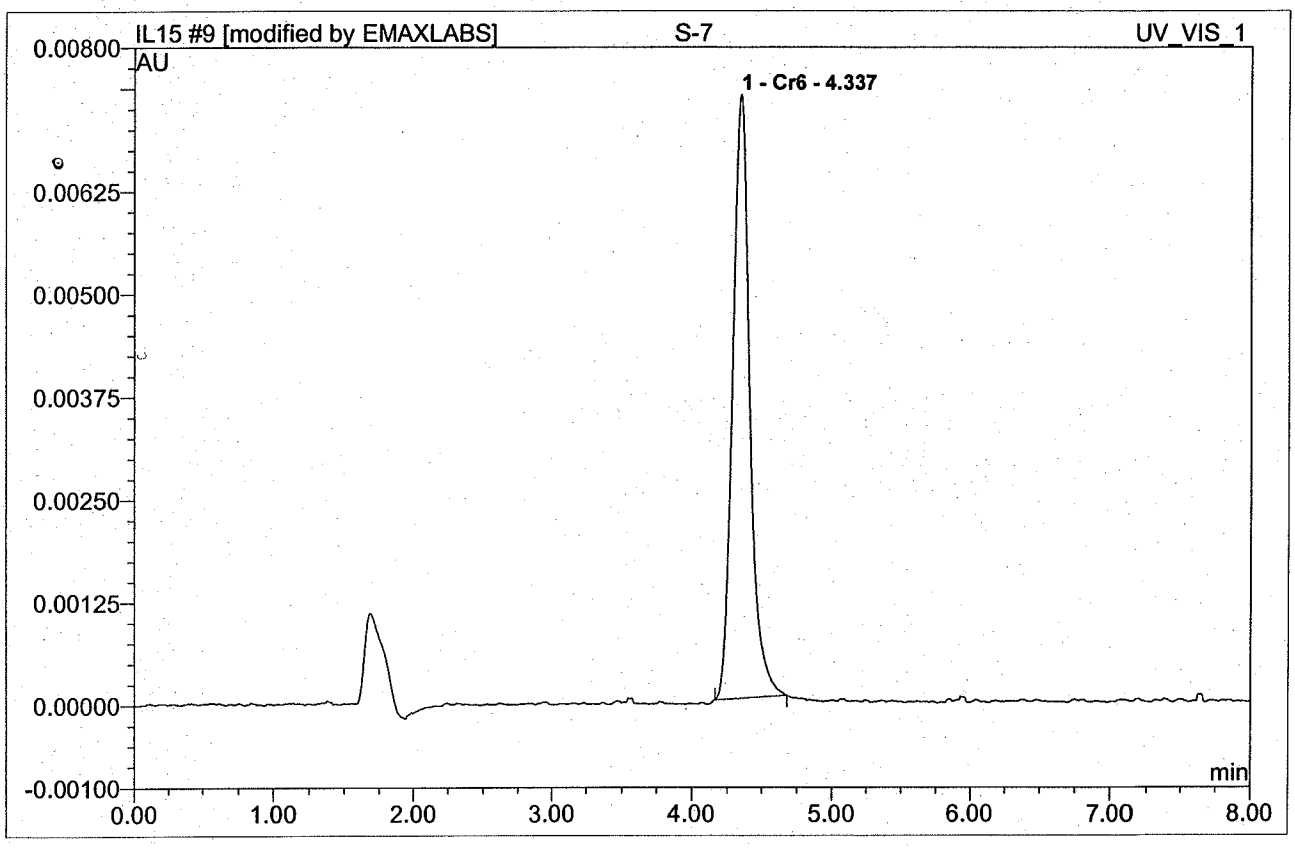

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.35 | Cr6 | 0.0053740 | 0.0007800 | 100.00 | 7.417 | BMB |
| **Total:** | | | 0.005 | 0.001 | 100.00 | 7.417 | |

12/16/20

# IL15 009 S-7

10 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-7** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **standard** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 13:25** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.34 | Cr6 | 0.0073420 | 0.0010588 | 100.00 | 10.056 | BMB* |
| **Total:** | | | 0.007 | 0.001 | 100.00 | 10.056 | |

12/16/20

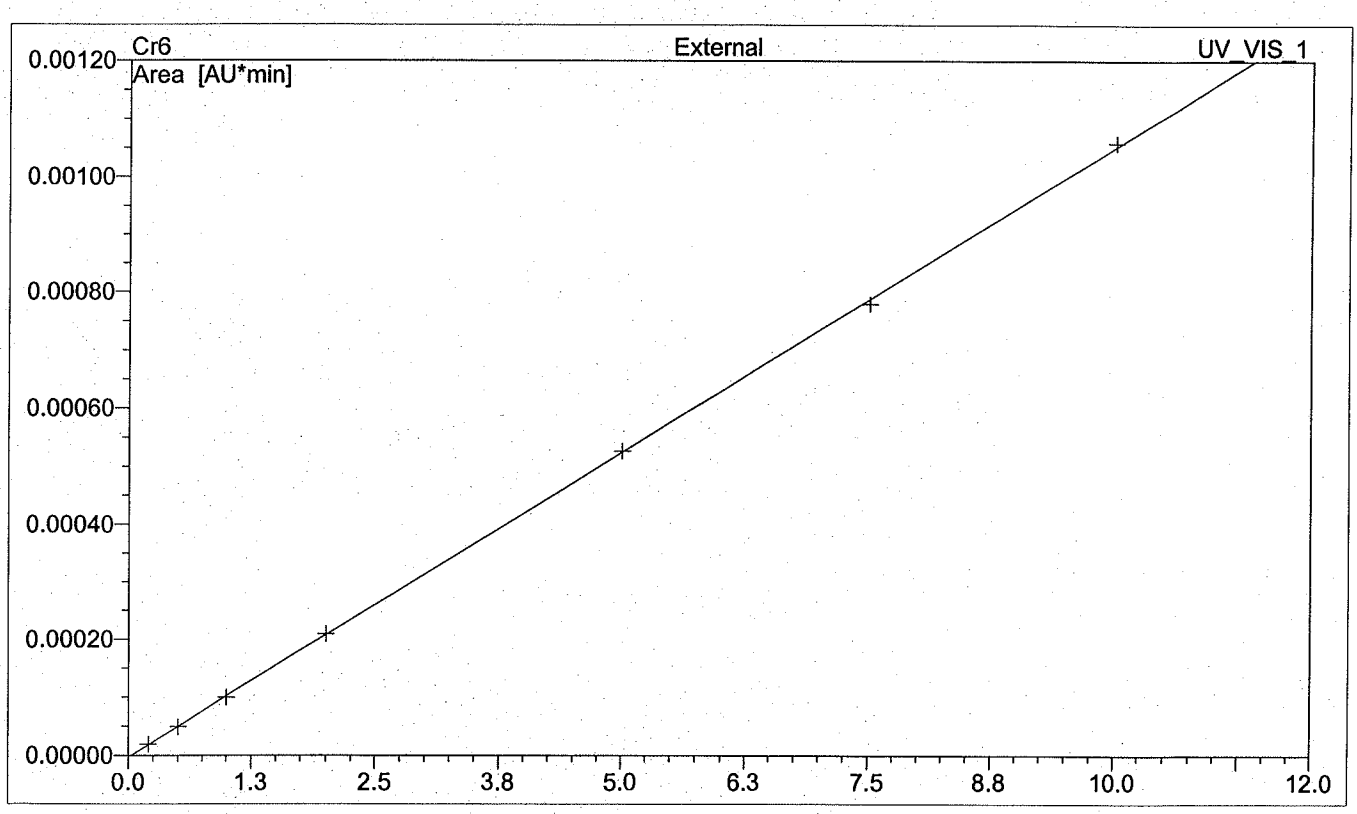
Chromeleon (c) Dionex 1996-2001
Version 6.70 SP2a Build 1871

Report/Integration

## 9 S-7

**10 PPB**

| | | | |
|---|---|---|---|
| *Sample Name:* | **S-7** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **standard** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1.0000** |
| *Recording Time:* | **12/15/2020 13:25** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Cal.Type | Points | R-Square | Offset | Slope | Curve |
|---|---|---|---|---|---|---|---|---|
| 1 | 4.34 | Cr6 | 0LOff | 7 | 0.9999 | -0.0000031 | 0.0001056 | 0.0000 |
| **Average:** | | | | | 0.9999 | 0.0000 | 0.0001 | 0.0000 |

12/16/20

# SECOND SOURCE VERIFICATION

IC RESULT FORM CalVersion : CR6.L15/IL15(2020)

| LFID | LSID | SelCmp | Cr6 | DateTime | DF |
|---|---|---|---|---|---|
| IL15001 | IB | C | ND | 12/15/2012:02 | 1 |
| IL15002 | S-0 | C | ND | 12/15/2012:12 | 1 |
| IL15003 | S-1 | C | 0.212 | 12/15/2012:23 | 1 |
| IL15004 | S-2 | C | 0.491 | 12/15/2012:33 | 1 |
| IL15005 | S-3 | C | 0.971 | 12/15/2012:44 | 1 |
| IL15006 | S-4 | C | 2.009 | 12/15/2012:54 | 1 |
| IL15007 | S-5 | C | 5.015 | 12/15/2013:04 | 1 |
| IL15008 | S-6 | C | 7.417 | 12/15/2013:15 | 1 |
| IL15009 | S-7 | C | 10.056 | 12/15/2013:25 | 1 |
| IL15010 | ICV | C | 101% | 12/15/2013:39 | 1 |
| IL15011 | ICB | C | ND | 12/15/2013:49 | 1 |
| IL15012 | LOW CCV | C | 0.188 | 12/15/2013:59 | 1 |

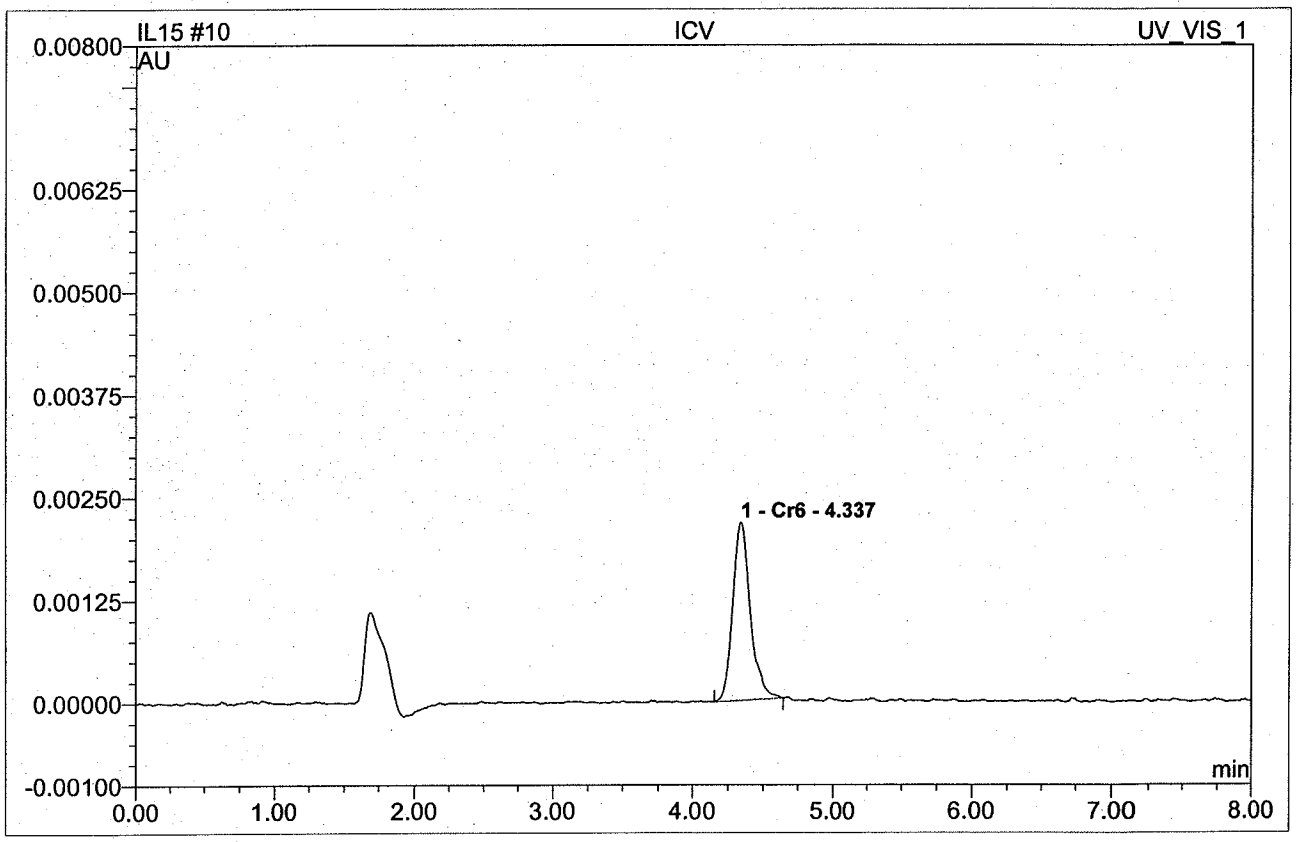
METHOD: IC59L15
SOLVENT: BUFFER (SP2-01-41-01)

12/16/20

# IL15 010 ICV

3.0 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **ICV** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 13:39** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



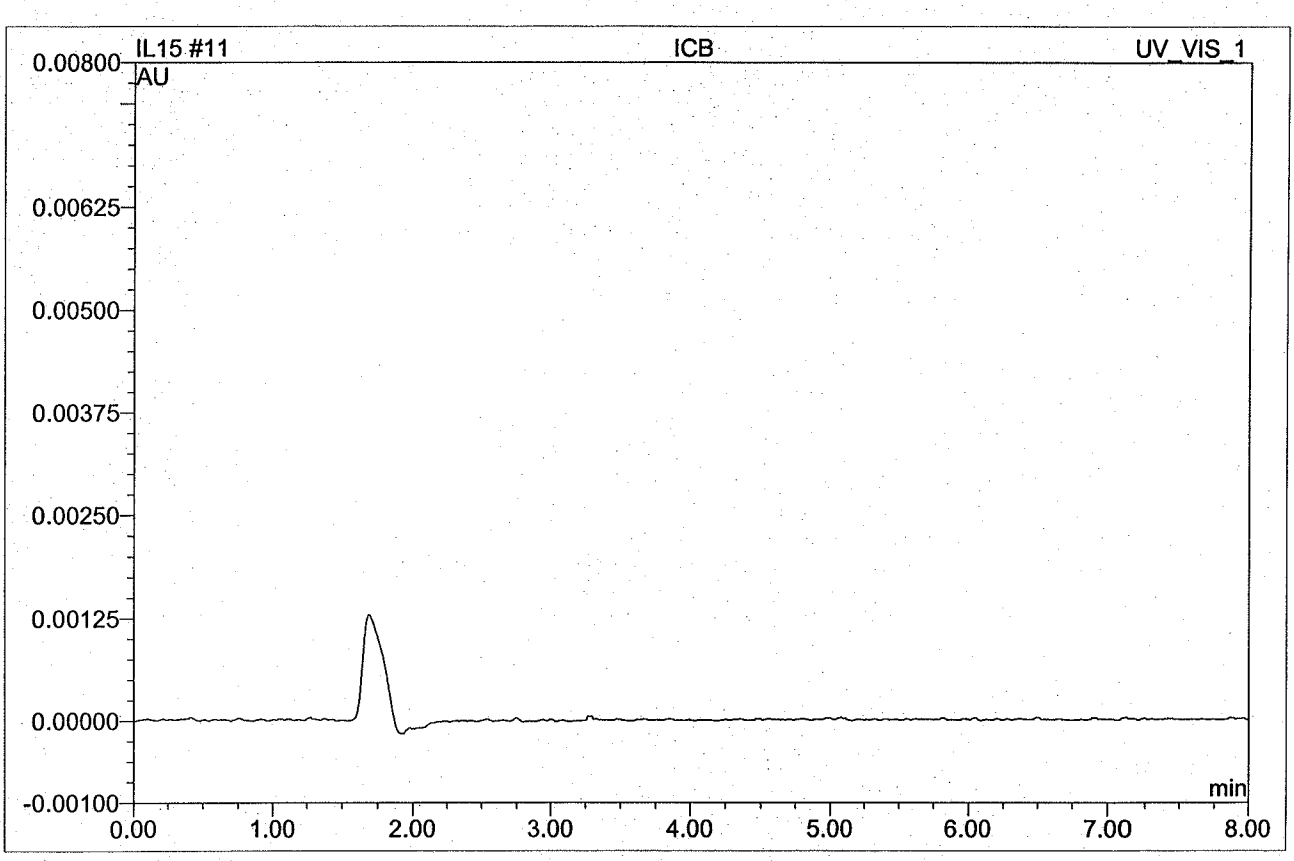

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.34 | Cr6 | 0.0021670 | 0.0003160 | 100.00 | 3.022 | BMB |
| **Total:** | | | 0.002 | 0.000 | 100.00 | 3.022 | |

conc. = Area - offset / slope

12/16/20

# IL15 011 ICB

| | | | |
|---|---|---|---|
| *Sample Name:* | **ICB** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 13:49** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |



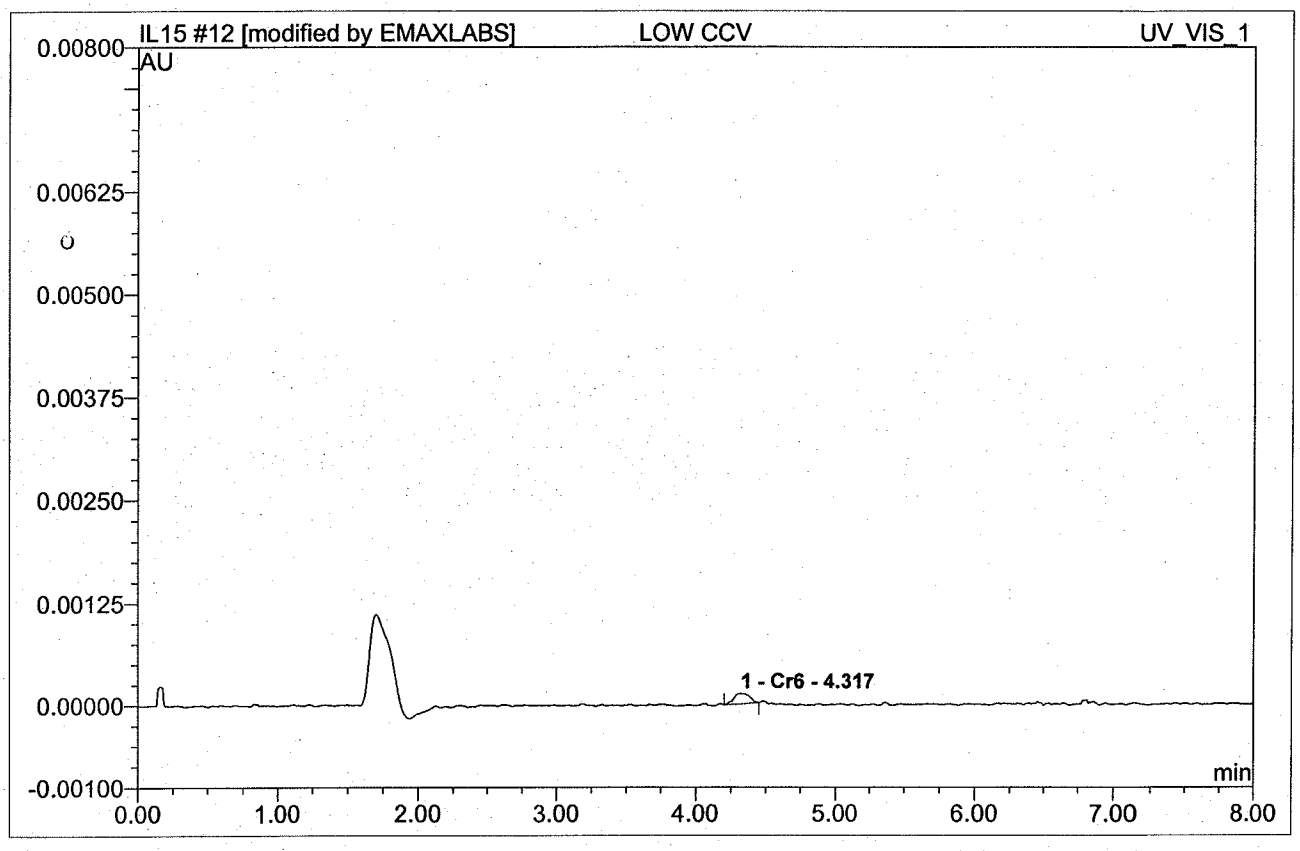

| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

12/16/20

# IL15 012 LOW CCV

0.2 PPB

| | | | |
|---|---|---|---|
| *Sample Name:* | **LOW CCV** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 13:59** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.32 | Cr6 | 0.0001290 | 0.0000168 | 100.00 | 0.188 ✓ | BMB* |
| **Total:** | | | 0.000 | 0.000 | 100.00 | 0.188 | |

12/16/20

# DAILY CALIBRATIONS

Continuing Calibration Summary Form

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG : 20L101
Method : E218.6
QuantMethod : IC59L15
InstrumentID: 59
Parameter : HEXAVALENT CHROMIUM

| LFID | LSID | DF | Expected | Result | Unit | %Rec | AnalysisDateTime |
|---|---|---|---|---|---|---|---|
| IL15013 | CCV1 | 1 | 2 | 2.033 | ug/L | 102 | 12/15/2014:14 |
| IL15025 | CCV3 | 1 | 2 | 2.013 | ug/L | 101 | 12/15/2016:18 |
| IL15036 | CCV5 | 1 | 2 | 2.002 | ug/L | 100 | 12/15/2018:13 |
| IL15048 | CCV7 | 1 | 2 | 2.002 | ug/L | 100 | 12/15/2020:18 |
| IL15060 | CCV9 | 1 | 2 | 1.973 | ug/L | 99 | 12/15/2022:23 |
| IL15066 | CCV11 | 1 | 2 | 1.967 | ug/L | 98 | 12/15/2023:25 |

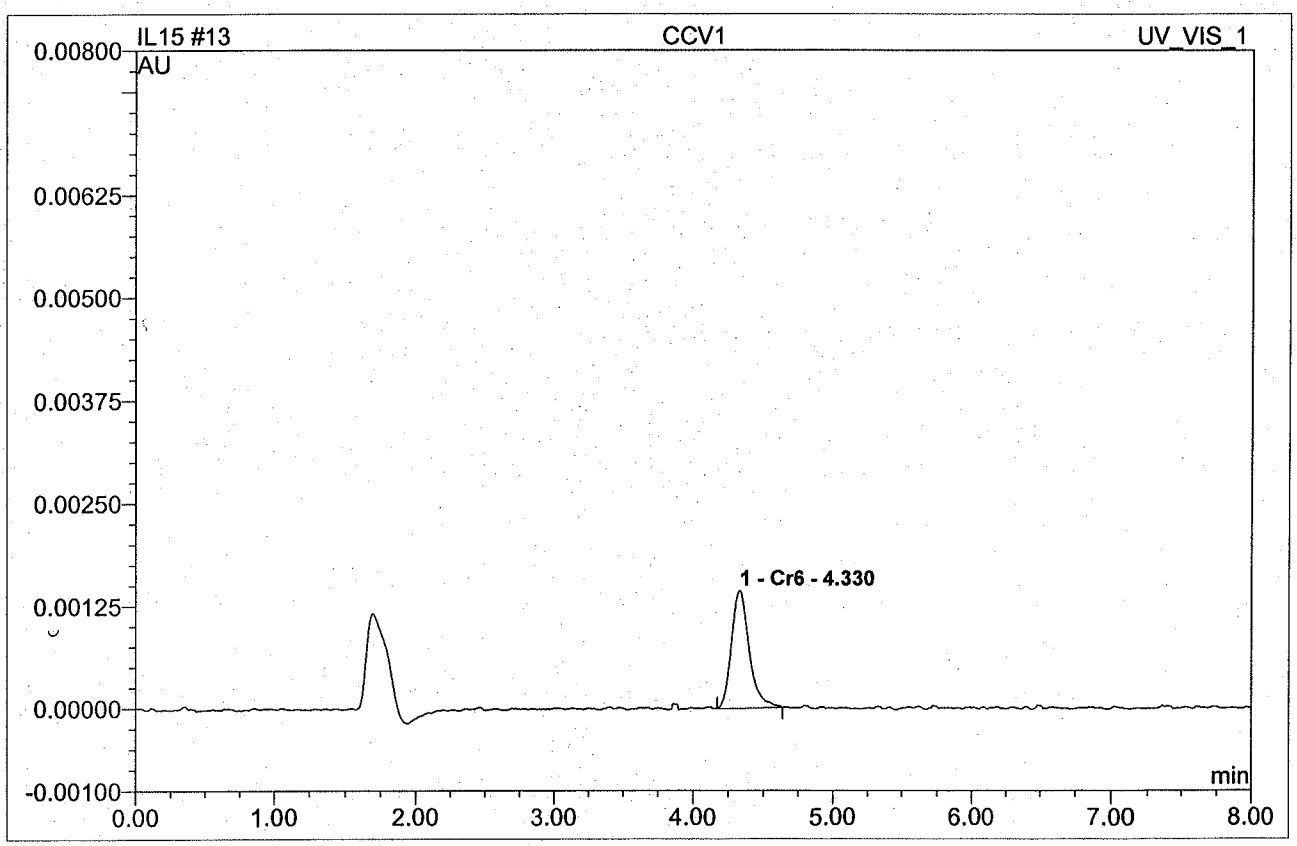
CCV Acceptance Criteria: 95-105%

IC RESULT FORM CalVersion : CR6.L15/IL15(2020)

| LFID | LSID | SelCmp | Cr6 | DateTime | DF |
|---|---|---|---|---|---|
| IL15001 | IB | C | ND | 12/15/2012:02 | 1 |
| IL15002 | S-0 | C | ND | 12/15/2012:12 | 1 |
| IL15003 | S-1 | C | 0.212 | 12/15/2012:23 | 1 |
| IL15004 | S-2 | C | 0.491 | 12/15/2012:33 | 1 |
| IL15005 | S-3 | C | 0.971 | 12/15/2012:44 | 1 |
| IL15006 | S-4 | C | 2.009 | 12/15/2012:54 | 1 |
| IL15007 | S-5 | C | 5.015 | 12/15/2013:04 | 1 |
| IL15008 | S-6 | C | 7.417 | 12/15/2013:15 | 1 |
| IL15009 | S-7 | C | 10.056 | 12/15/2013:25 | 1 |
| IL15010 | ICV | C | 101% | 12/15/2013:39 | 1 |
| IL15011 | ICB | C | ND | 12/15/2013:49 | 1 |
| IL15012 | LOW CCV | C | 0.188 | 12/15/2013:59 | 1 |
| IL15013 | CCV1 | C | 102% | 12/15/2014:14 | 1 |
| IL15014 | CCB1 | C | ND | 12/15/2014:24 | 1 |
| IL15015 | HCL005WB | C | ND | 12/15/2014:34 | 1 |
| IL15016 | HCL005WL | C | 2.025 | 12/15/2014:45 | 1 |
| IL15017 | HCL005WC | C | 2.024 | 12/15/2014:55 | 1 |
| IL15018 | L101-02 | C | ND | 12/15/2015:06 | 1 |
| IL15019 | L101-02M | C | 0.952 | 12/15/2015:16 | 1 |
| IL15020 | L101-02S | C | 0.946 | 12/15/2015:26 | 1 |
| IL15021 | L101-04 | C | ND | 12/15/2015:37 | 1 |
| IL15022 | L101-04M | C | 0.851 | 12/15/2015:47 | 1 |
| IL15023 | L101-06 | C | ND | 12/15/2015:58 | 1 |
| IL15024 | L101-06M | C | ND | 12/15/2016:08 | 1 |
| IL15025 | CCV3 | C | 101% | 12/15/2016:18 | 1 |
| IL15026 | CCB3 | C | ND | 12/15/2016:29 | 1 |
| IL15027 | L101-08 | C | ND | 12/15/2016:39 | 1 |
| IL15028 | L101-08M | C | 0.997 | 12/15/2016:50 | 1 |
| IL15029 | L101-08S | C | 0.994 | 12/15/2017:00 | 1 |
| IL15030 | L101-09 | C | 7.515 | 12/15/2017:11 | 1 |
| IL15031 | L101-09M | C | 9.482 | 12/15/2017:21 | 1 |
| IL15032 | L101-10 | C | ND | 12/15/2017:31 | 1 |
| IL15033 | L101-10M | C | ND | 12/15/2017:42 | 1 |
| IL15034 | L101-11 | C | ND | 12/15/2017:52 | 1 |
| IL15035 | L101-11M | C | ND | 12/15/2018:03 | 1 |
| IL15036 | CCV5 | C | 100% | 12/15/2018:13 | 1 |
| IL15037 | CCB5 | C | ND | 12/15/2018:23 | 1 |
| IL15038 | L101-12 | C | ND | 12/15/2018:34 | 1 |
| IL15039 | L101-12M | C | 0.960 | 12/15/2018:44 | 1 |
| IL15040 | L101-13 | C | ND | 12/15/2018:55 | 1 |
| IL15041 | L101-13M | C | ND | 12/15/2019:05 | 1 |
| IL15042 | L101-04I | C | ND | 12/15/2019:15 | 5 |
| IL15043 | L101-04M | C | 5.034 | 12/15/2019:26 | 5 |
| IL15044 | L101-06I | C | ND | 12/15/2019:36 | 5 |
| IL15045 | L101-06M | C | 5.134 | 12/15/2019:47 | 5 |
| IL15046 | L101-10I | C | ND | 12/15/2019:57 | 5 |
| IL15047 | L101-10M | C | 5.095 | 12/15/2020:07 | 5 |
| IL15048 | CCV7 | C | 100% | 12/15/2020:18 | 1 |
| IL15049 | CCB7 | C | ND | 12/15/2020:28 | 1 |
| IL15050 | L101-11I | C | ND | 12/15/2020:39 | 5 |
| IL15051 | L101-11M | C | 4.924 | 12/15/2020:49 | 5 |
| IL15052 | L101-13I | C | ND | 12/15/2020:59 | 5 |
| IL15053 | L101-13M | C | 5.027 | 12/15/2021:10 | 5 |
| IL15054 | L101-01 | C | ND | 12/15/2021:20 | 1 |
| IL15055 | L101-01M | C | 1.039 | 12/15/2021:31 | 1 |
| IL15056 | L101-03 | C | ND | 12/15/2021:41 | 1 |
| IL15057 | L101-03M | C | 0.969 | 12/15/2021:51 | 1 |
| IL15058 | L101-05 | C | ND | 12/15/2022:02 | 1 |
| IL15059 | L101-05M | C | 1.002 | 12/15/2022:12 | 1 |
| IL15060 | CCV9 | C | 99% | 12/15/2022:23 | 1 |
| IL15061 | CCB9 | C | ND | 12/15/2022:33 | 1 |
| IL15062 | L101-07 | C | ND | 12/15/2022:43 | 1 |
| IL15063 | L101-07M | C | 0.992 | 12/15/2022:54 | 1 |
| IL15064 | QC FILTER | C | ND | 12/15/2023:04 | 1 |
| IL15065 | QC BUFFER | C | ND | 12/15/2023:15 | 1 |
| IL15066 | CCV11 | C | 98% | 12/15/2023:25 | 1 |
| IL15067 | CCB11 | C | ND | 12/15/2023:35 | 1 |
| IL15068 | L443-01 | C | ND | 12/15/2023:46 | 1 |
| IL15069 | L443-01I | C | ND | 12/15/2023:56 | 5 |
| IL15070 | CCV13 | C | 99% | 12/16/2000:07 | 1 |
| IL15071 | CCB13 | C | ND | 12/16/2000:17 | 1 |

# IL15 013 CCV1

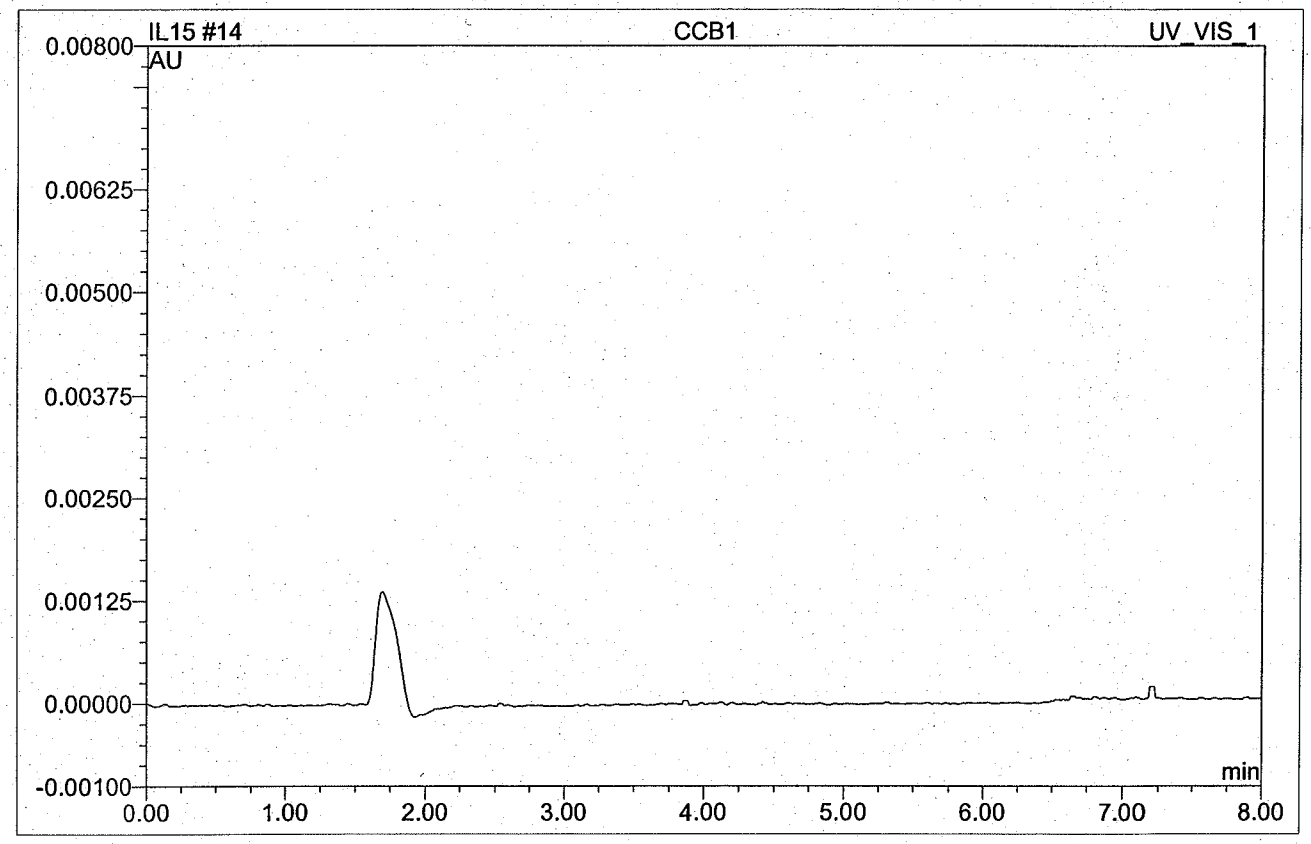
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV1** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 14:14** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.33 | Cr6 | 0.0014390 | 0.0002116 | 100.00 | 2.033 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 2.033 | |

# IL15 014 CCB1

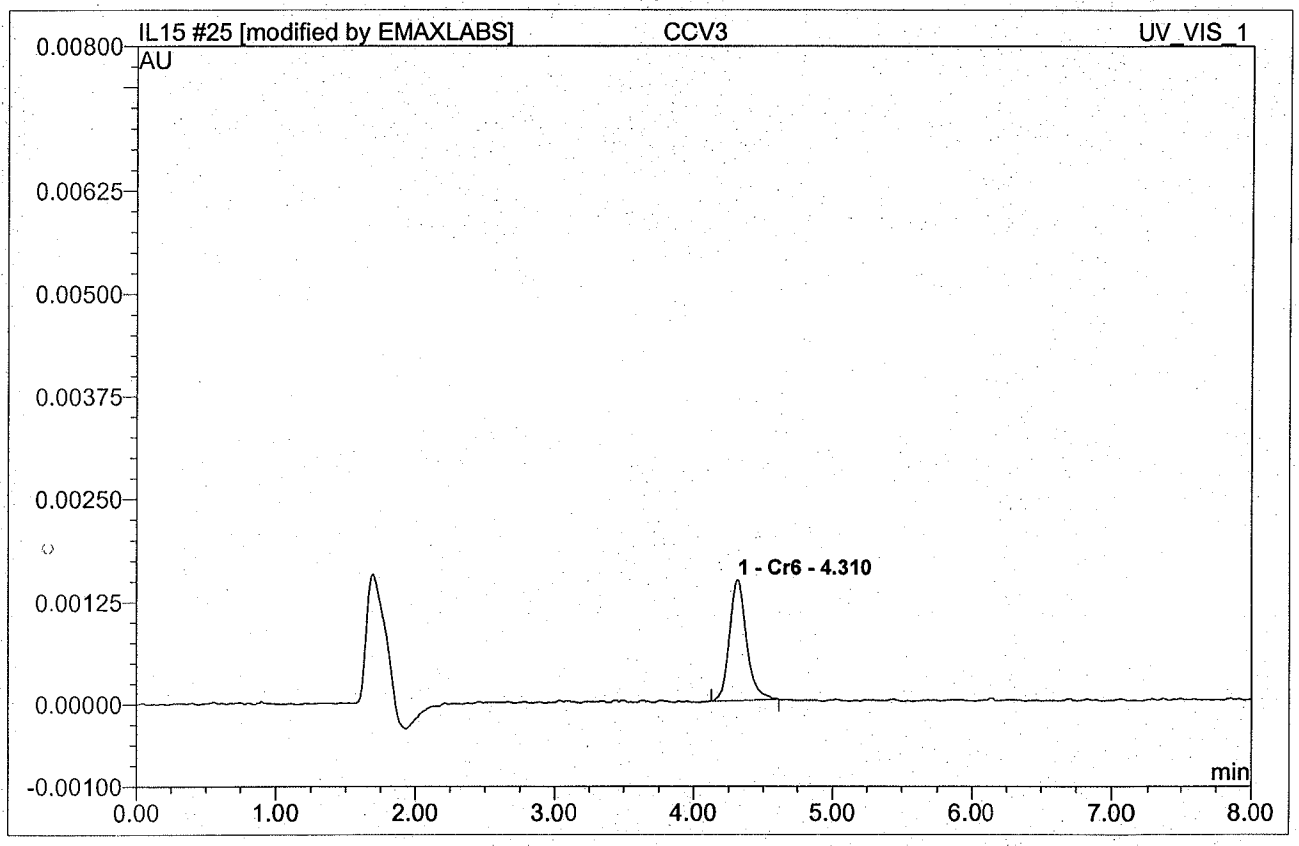
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB1** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 14:24** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 025 CCV3

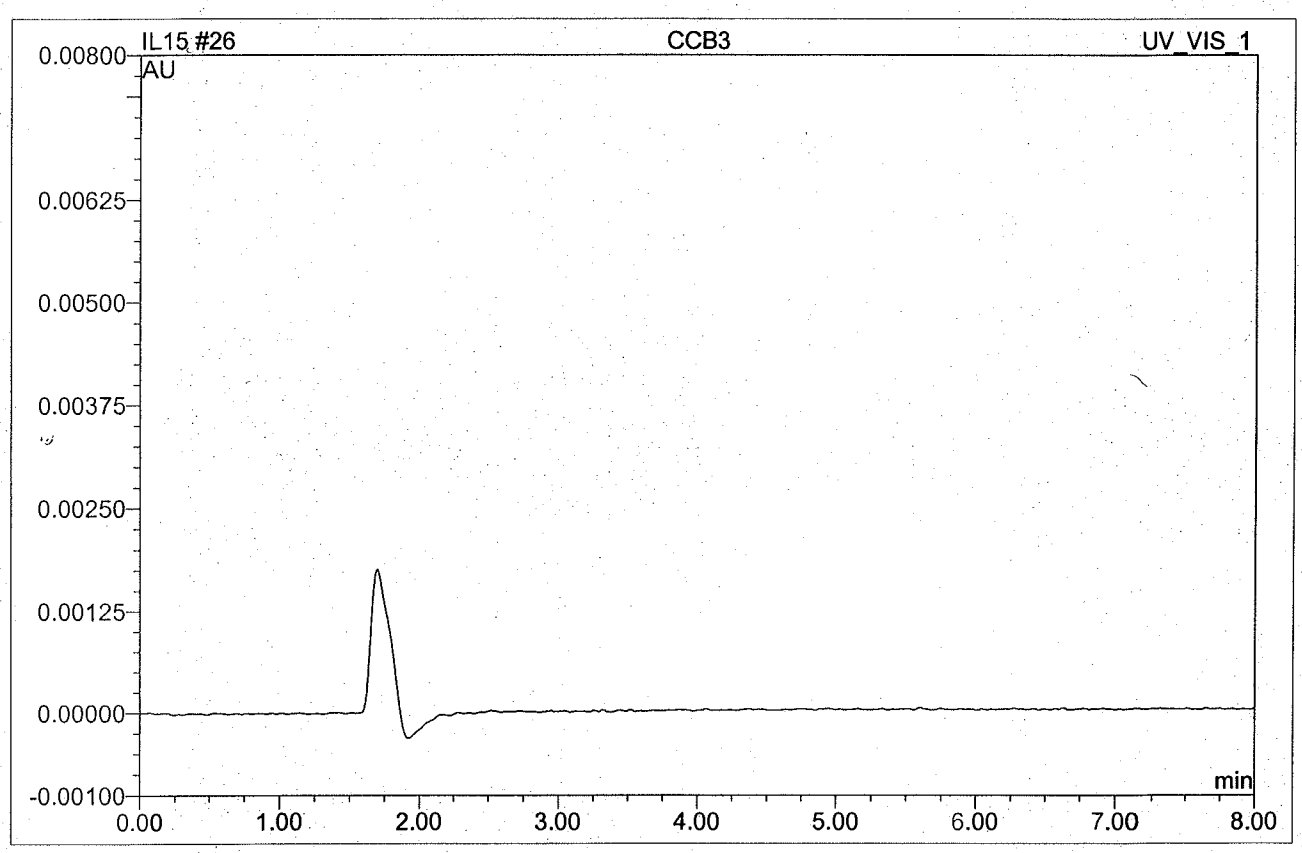
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV3** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 16:18** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.31 | Cr6 | 0.0014750 | 0.0002094 | 100.00 | 2.013 | BMB* |
| Total: | | | 0.001 | 0.000 | 100.00 | 2.013 | |

# IL15 026 CCB3

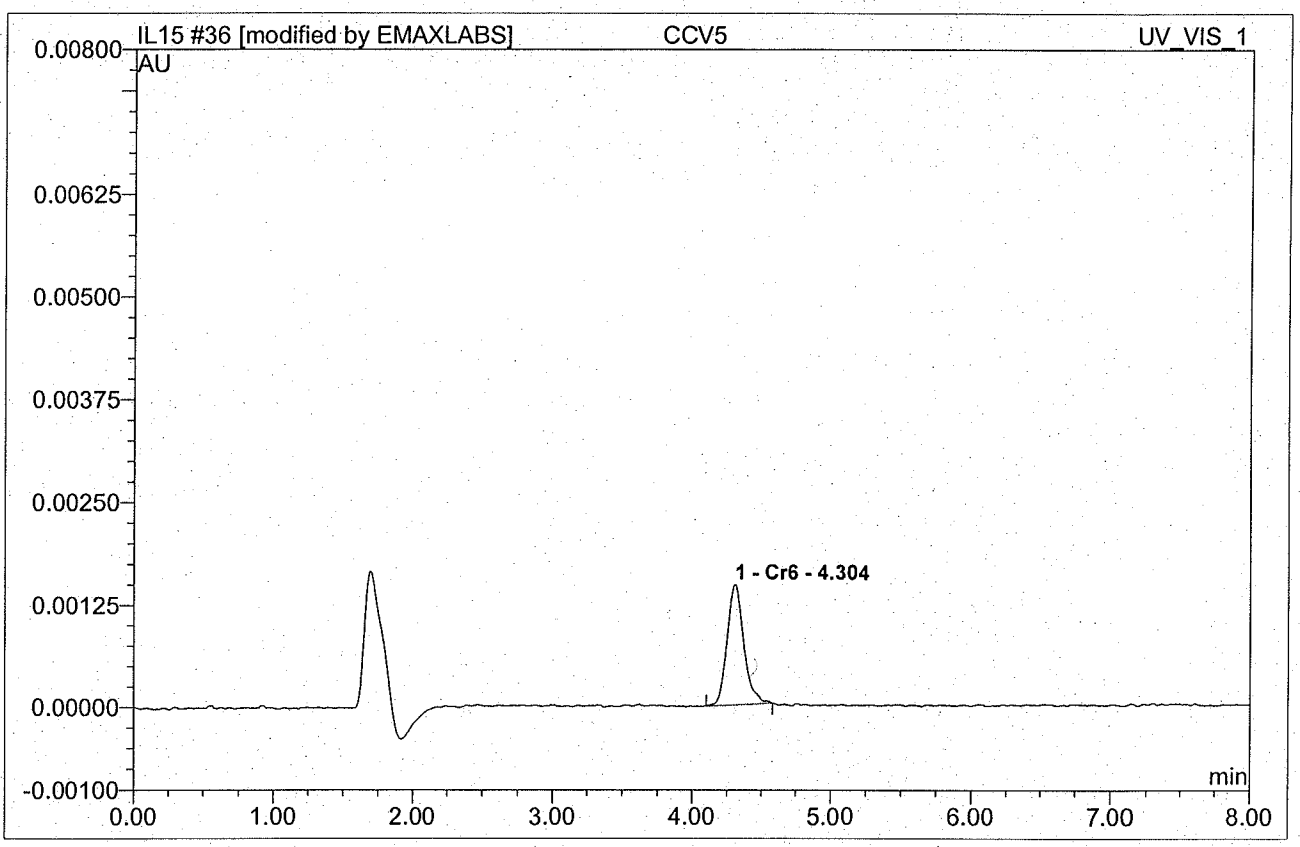
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB3** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 16:29** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 036 CCV5

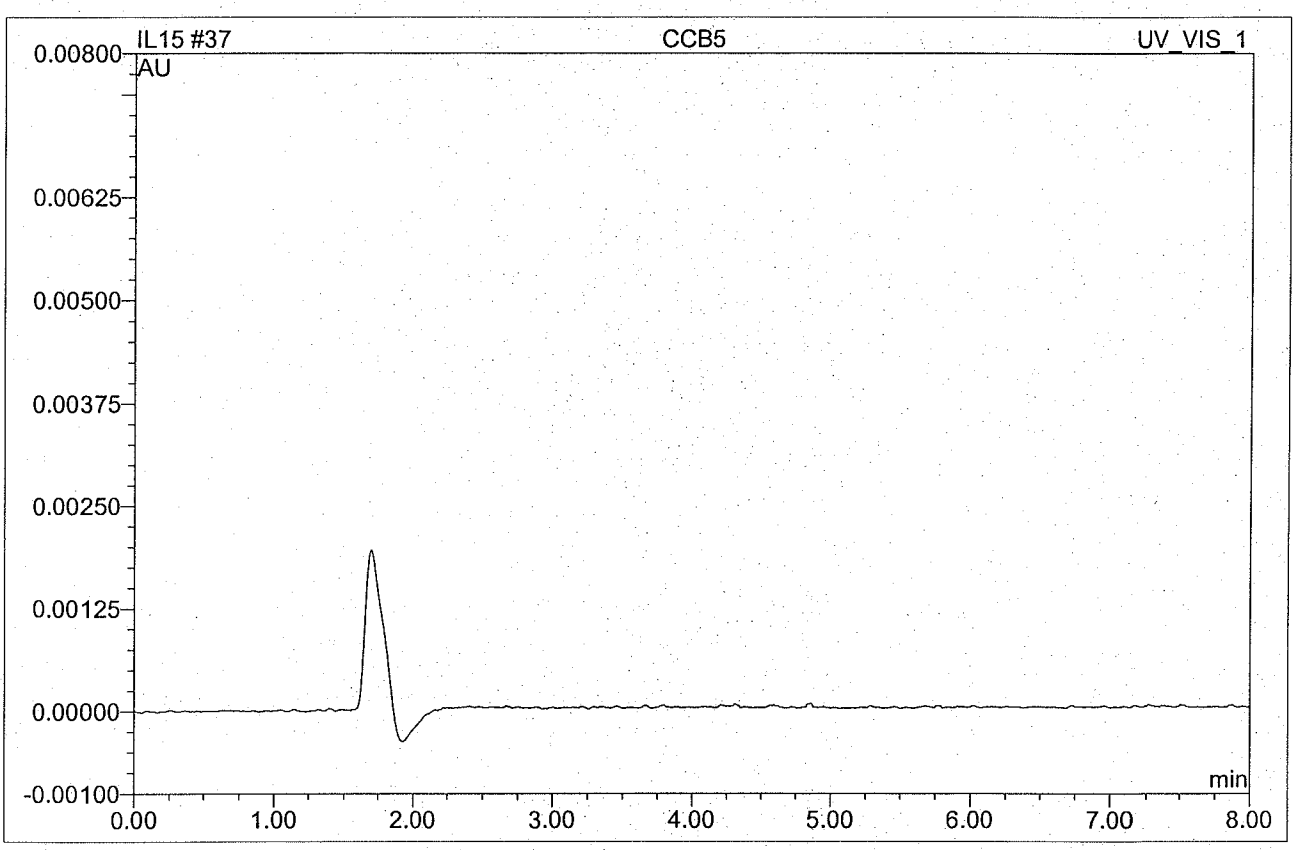
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV5** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 18:13** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.30 | Cr6 | 0.0014710 | 0.0002084 | 100.00 | 2.002 | BMB* |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 2.002 | |

# IL15 037 CCB5

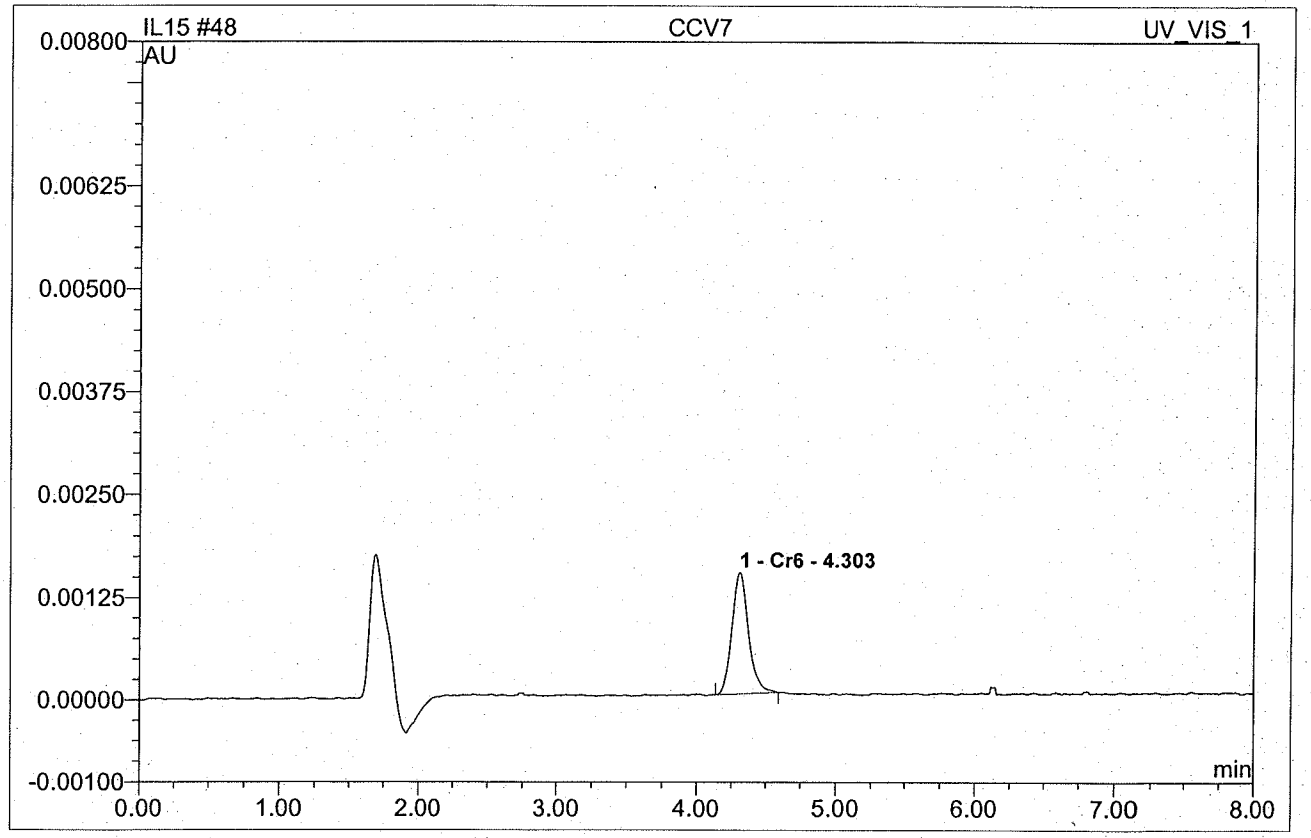
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB5** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 18:23** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 048 CCV7

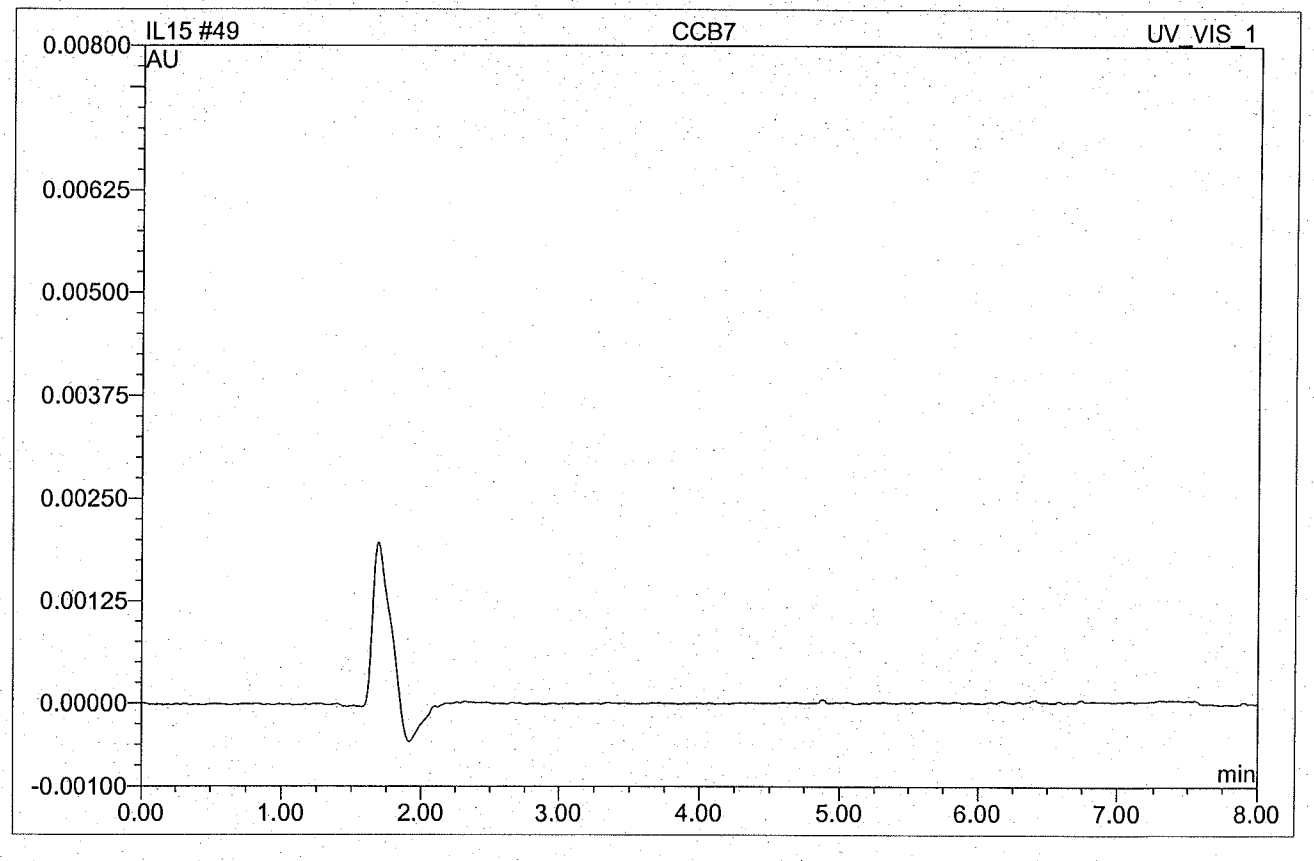
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV7** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 20:18** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.30 | Cr6 | 0.0014810 | 0.0002083 | 100.00 | 2.002 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 2.002 | |

# IL15 049 CCB7

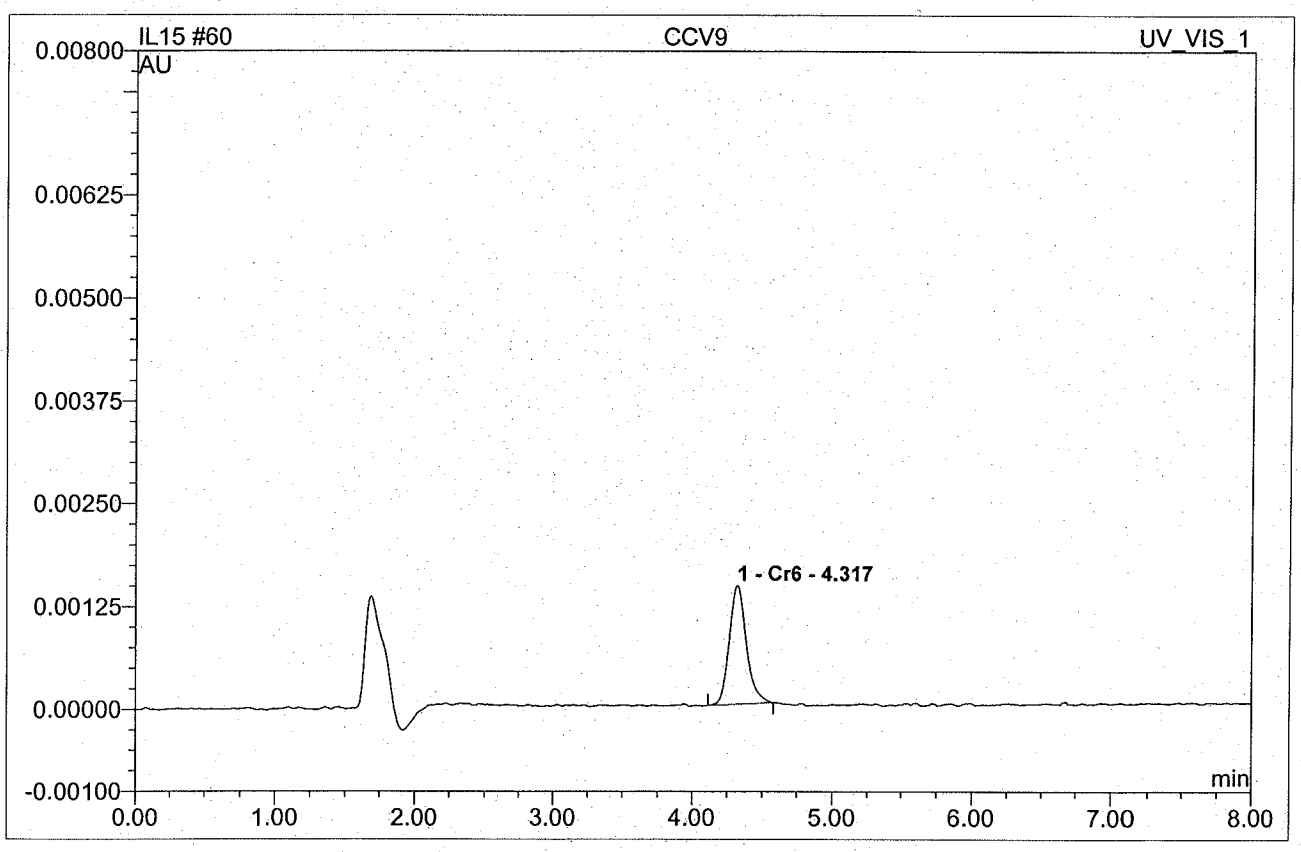
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB7** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 20:28** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 060 CCV9

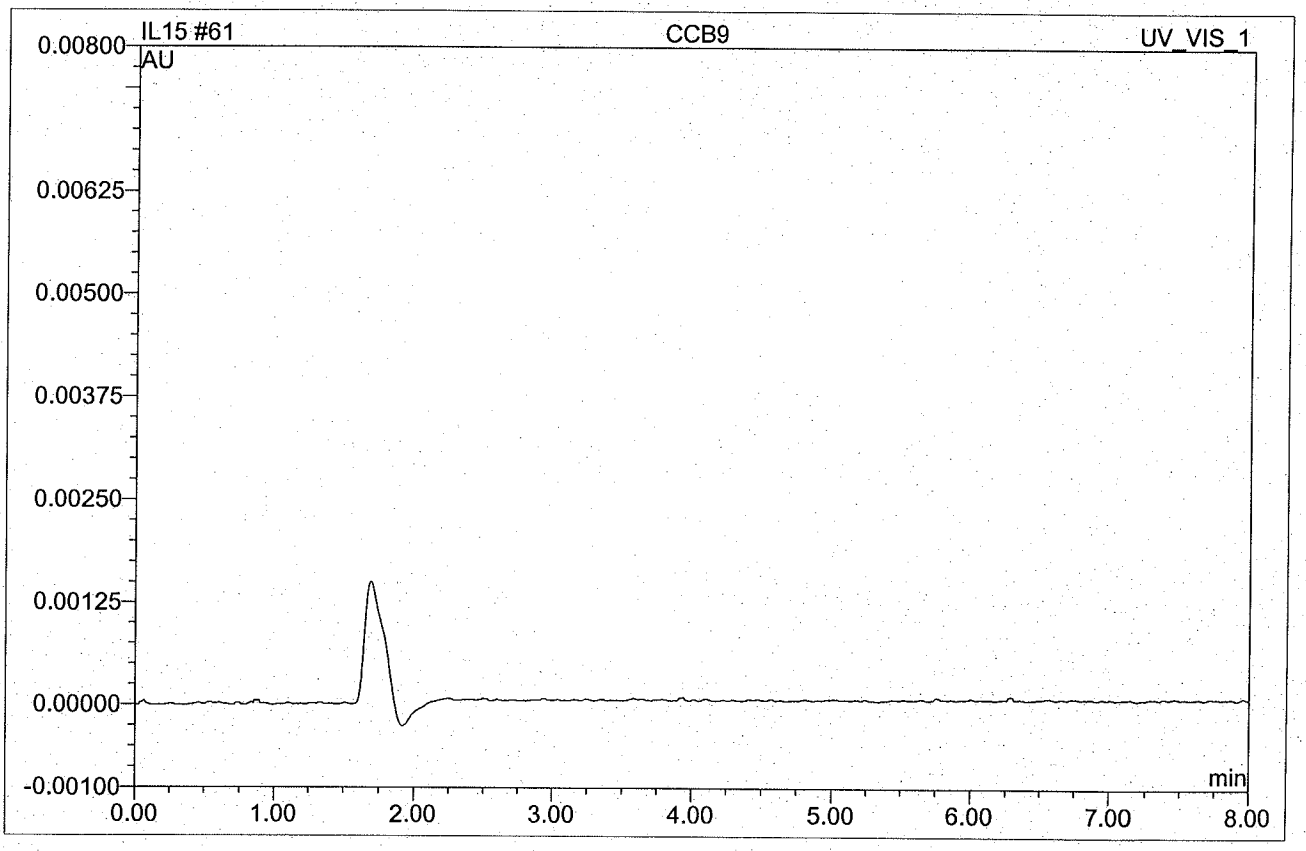
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV9** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 22:23** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.32 | Cr6 | 0.0014440 | 0.0002052 | 100.00 | 1.973 | BMB |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 1.973 | |

# IL15 061 CCB9

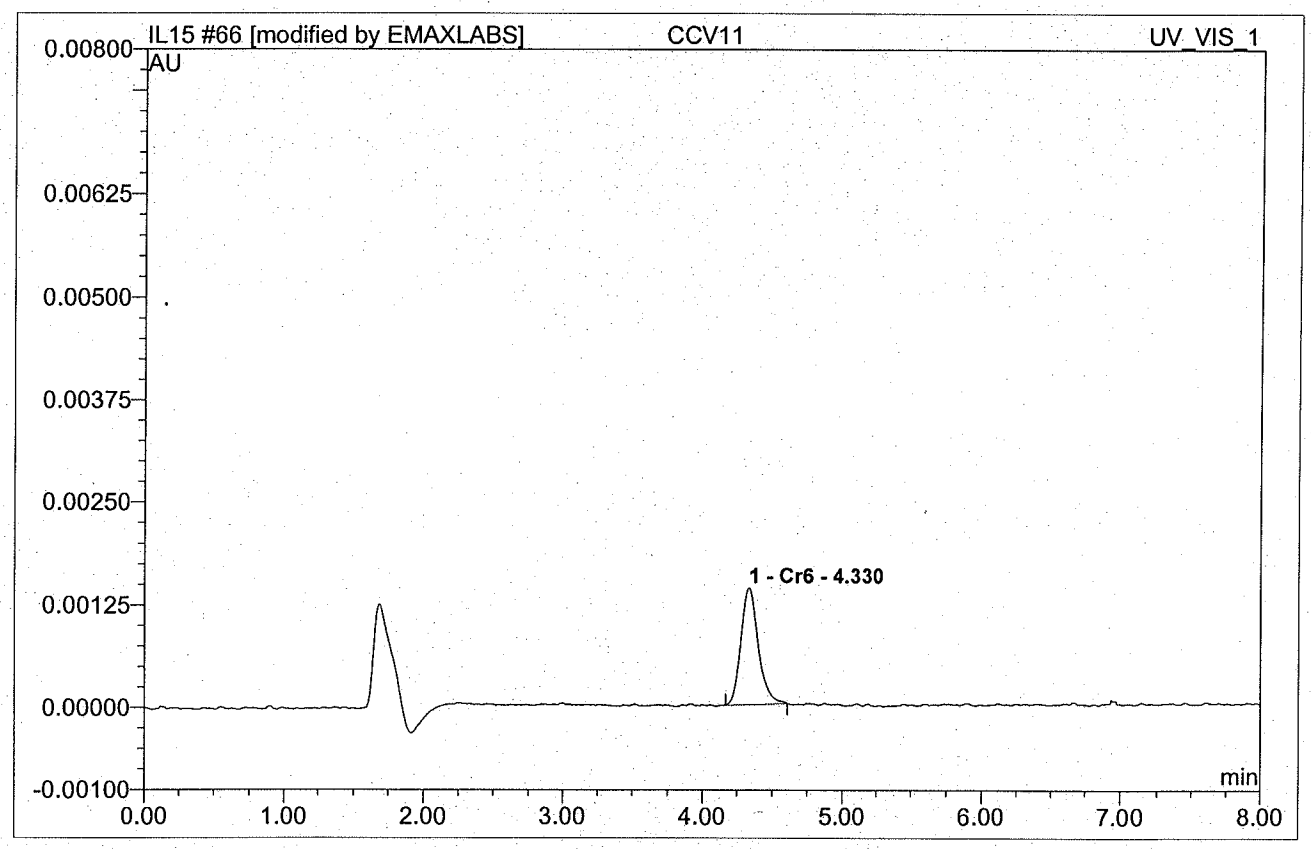
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB9** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 22:33** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| **Total:** | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# IL15 066 CCV11

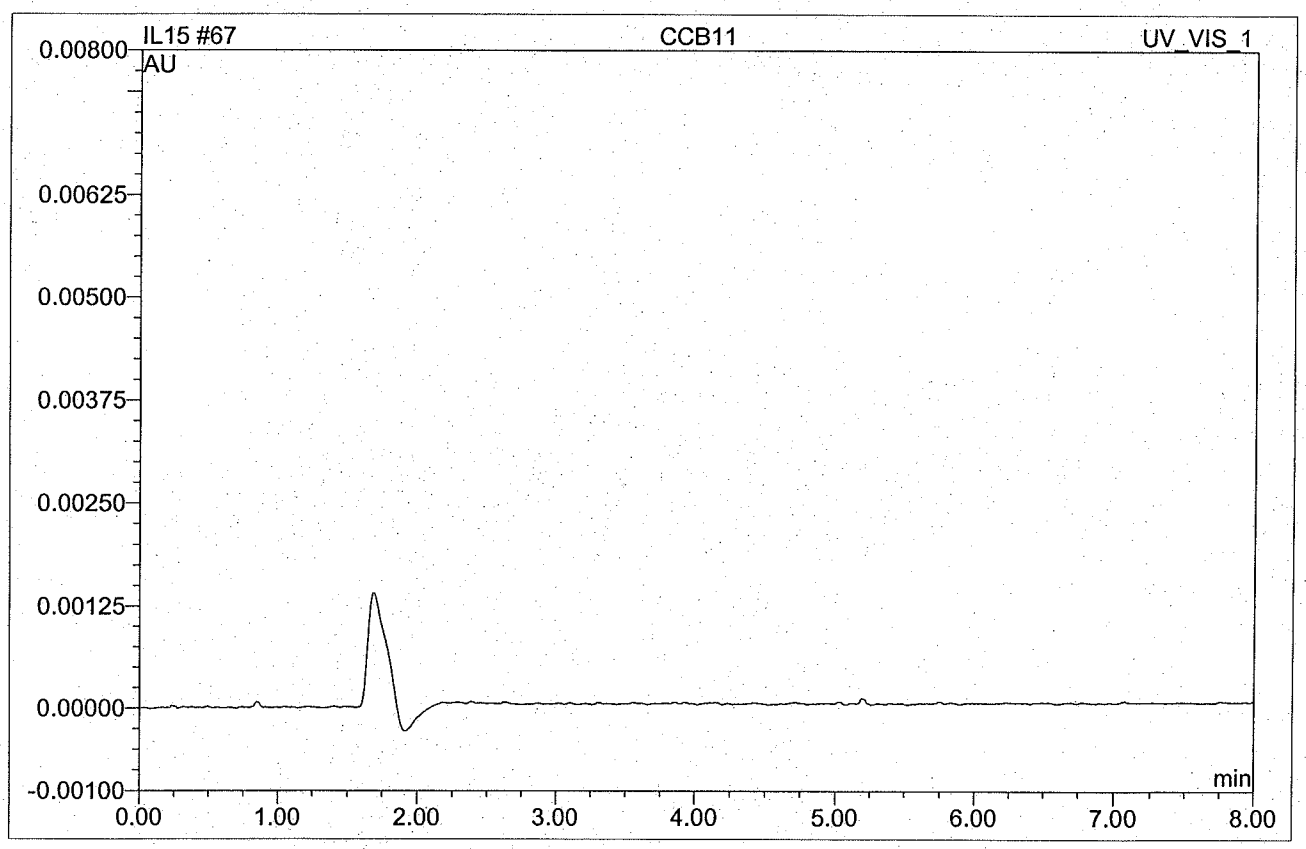
| | | | |
|---|---|---|---|
| *Sample Name:* | **CCV11** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 23:25** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| 1 | 4.33 | Cr6 | 0.0014190 | 0.0002046 | 100.00 | 1.967 | BMB* |
| **Total:** | | | 0.001 | 0.000 | 100.00 | 1.967 | |

# IL15 067 CCB11

| | | | |
|---|---|---|---|
| *Sample Name:* | **CCB11** | *Injection Volume:* | **250.0** |
| *Vial Number:* | **0** | *Channel:* | **UV_VIS_1** |
| *Sample Type:* | **unknown** | *Wavelength:* | **n.a.** |
| *Control Program:* | **Cr6 Program** | *Bandwidth:* | **n.a.** |
| *Quantif. Method:* | **IC59L15** | *Dilution Factor:* | **1** |
| *Recording Time:* | **12/15/2020 23:35** | *Sample Weight:* | **1.0000** |
| *Run Time (min):* | **8.00** | *Sample Amount:* | **1.0000** |




| No. | Ret.Time min | Peak Name | Height AU | Area AU*min | Rel.Area % | Amount | Type |
|---|---|---|---|---|---|---|---|
| Total: | | | 0.000 | 0.000 | 0.00 | 0.000 | |

# ANALYTICAL LOG(S)

# ANALYSIS RUN LOG
*for*
# HEXAVALENT CHROMIUM IC

**Note:** For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence.

**Comments:**

**Post Column Solution:** **Final Volume:** 1,000 mL

1,5 Diphenylcarbohydrazide : 0.5 g SW9A-04-064

MeOH : 100 mL SW1A-009-01-03

$H_2SO_4$ : 28 mL ↓ -08-24-05

**Eluent:** **Final Volume:** 2,000 mL

$(NH_4)_2SO_4$ : 66 g SW6A-01-01-03

$NH_4OH$ : 13 mL SW9A-04-066

☐ **pH Adjusted Water ID #:**
(range 9.3-9.5)

☑ **Buffer** (10 mL → 100 mL) SP2-01-41-01

**Reagent Water ID #:** RW1-20-002

ICAL Linear Range (ppb): $S_0$ - 0.00
$S_1$ - 0.20
$S_2$ - 0.50
$S_3$ - 1.00
$S_4$ - 2.00
$S_5$ - 5.00
$S_6$ - 7.50
$S_7$ - 10.00
ICV - 3.00

Low CCV: SW6B-003-02-19

HCL005W: L101, L443

QC Filter: Lot # 91369103

QC Buffer: SP2-01-42-01 (1mL→10 mL)

Column: Dionex IonPac AS7 (4x250 mm) serial: 19010324B

Guard Column: Dionex IonPac NG1 (4x35 mm) serial: 19061121B

Wavelength: 530 nm

Flow Rate: 1.00 mL/min

Injection: 0.250 mL

**Book #:** A59-051

**Instrument No.:** 59

**Pipette ID:** SW9A-04-017
SW9A-04-025
SW9A-04-052

**Balance ID:** 10601202

**Analytical Sequence:** IL15

**Method File:** IC59L5

**Analytical Batch:** HCL005W

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-218.6 | 7 |
| ☑ EMAX-7199 | 7 |
| ☐ EMAX- | |

| STANDARDS ID | |
|---|---|
| ICAL | SW6B-003-02-17 |
| ICV | SW6B-003-02-18 |
| CCV | SW6B-003-03-01 |

| LCS/MS STANDARDS | | | | |
|---|---|---|---|---|
| | Standard ID | Conc | Spike Amt | Final Vol |
| LCS | SW6B-003-02-14 | 100 ppb | 0.100 mL | 5 mL |
| MS | ↓ | ↓ | 0.050 mL | ↓ |

| ELECTRONIC DATA ARCHIVAL | |
|---|---|
| Location | Date |
| ☐ CHROMELEON | |
| ☐ | |

5 mL vial kit Lot #: 038008 Snap-Seal Container

0.45 µm filter lot #: 91758103 4 oz: 28619010

0.2 µm filter lot #: 1.5 oz: 21520008

Analyzed By: AS

Date: 12/15/20

Title: Temporary sequence for manual data acquisition
Datasource: DG7B3Q91_local
Location: DX600\2020
Timebase: DX600
#Samples: 71

FINAL

Created: 12/15/2020 12:00:41 PM by EMAXLABS
Last Update: 12/16/2020 4:12:02 PM by EMAXLABS

| No. | Sequence | Sample ID | Name | Type | Inj. Vol. | Program | Method | Status | Inj. Date/Time | Dil. Factor | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | IL15 | 001 | IB | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 12:02:24 PM | 1.0000 | BUFFER |
| 2 | IL15 | 002 | S-0 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 12:12:48 PM | 1.0000 | |
| 3 | IL15 | 003 | S-1 | Standard | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 12:23:13 PM | 1.0000 | 0.2 PPB |
| 4 | IL15 | 004 | S-2 | Standard | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 12:33:36 PM | 1.0000 | 0.5 PPB |
| 5 | IL15 | 005 | S-3 | Standard | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 12:44:01 PM | 1.0000 | 1.0 PPB |
| 6 | IL15 | 006 | S-4 | Standard | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 12:54:24 PM | 1.0000 | 2.0 PPB |
| 7 | IL15 | 007 | S-5 | Standard | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 1:04:49 PM | 1.0000 | 5.0 PPB |
| 8 | IL15 | 008 | S-6 | Standard | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 1:15:13 PM | 1.0000 | 7.5 PPB |
| 9 | IL15 | 009 | S-7 | Standard | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 1:25:37 PM | 1.0000 | 10 PPB |
| 10 | IL15 | 010 | ICV | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 1:39:05 PM | 1.0000 | 3.0 PPB |
| 11 | IL15 | 011 | ICB | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 1:49:29 PM | 1.0000 | |
| 12 | IL15 | 012 | LOW CCV | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 1:59:54 PM | 1.0000 | 0.2 PPB |
| 13 | IL15 | 013 | CCV1 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 2:14:08 PM | 1.0000 | |
| 14 | IL15 | 014 | CCB1 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 2:24:32 PM | 1.0000 | |
| 15 | IL15 | 015 | HCL005WB | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 2:34:56 PM | 1.0000 | |
| 16 | IL15 | 016 | HCL005WL | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 2:45:21 PM | 1.0000 | |
| 17 | IL15 | 017 | HCL005WC | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 2:55:45 PM | 1.0000 | |
| 18 | IL15 | 018 | L101-02 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 3:06:09 PM | 1.0000 | |
| 19 | IL15 | 019 | L101-02M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 3:16:34 PM | 1.0000 | |
| 20 | IL15 | 020 | L101-02S | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 3:26:58 PM | 1.0000 | |
| 21 | IL15 | 021 | L101-04 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 3:37:22 PM | 1.0000 | |
| 22 | IL15 | 022 | L101-04M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 3:47:46 PM | 1.0000 | |
| 23 | IL15 | 023 | L101-06 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 3:58:10 PM | 1.0000 | |
| 24 | IL15 | 024 | L101-06M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 4:08:34 PM | 1.0000 | |
| 25 | IL15 | 025 | CCV3 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 4:18:58 PM | 1.0000 | |
| 26 | IL15 | 026 | CCB3 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 4:29:22 PM | 1.0000 | |
| 27 | IL15 | 027 | L101-08 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 4:39:47 PM | 1.0000 | |

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Title: Temporary sequence for manual data acquisition
Datasource: DG7B3Q91_local
Location: DX600\2020
Timebase: DX600
#Samples: 71

FINAL

Created: 12/15/2020 12:00:41 PM by EMAXLABS
Last Update: 12/16/2020 4:12:02 PM by EMAXLABS

| No. | Sequence | Sample ID | Name | Type | Inj. Vol. | Program | Method | Status | Inj. Date/Time | Dil. Factor | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 | IL15 | 028 | L101-08M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 4:50:11 PM | 1.0000 | |
| 29 | IL15 | 029 | L101-08S | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 5:00:35 PM | 1.0000 | |
| 30 | IL15 | 030 | L101-09 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 5:11:00 PM | 1.0000 | |
| 31 | IL15 | 031 | L101-09M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 5:21:24 PM | 1.0000 | |
| 32 | IL15 | 032 | L101-10 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 5:31:48 PM | 1.0000 | |
| 33 | IL15 | 033 | L101-10M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 5:42:12 PM | 1.0000 | |
| 34 | IL15 | 034 | L101-11 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 5:52:36 PM | 1.0000 | |
| 35 | IL15 | 035 | L101-11M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 6:03:00 PM | 1.0000 | |
| 36 | IL15 | 036 | CCV5 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 6:13:24 PM | 1.0000 | |
| 37 | IL15 | 037 | CCB5 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 6:23:48 PM | 1.0000 | |
| 38 | IL15 | 038 | L101-12 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 6:34:12 PM | 1.0000 | |
| 39 | IL15 | 039 | L101-12M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 6:44:37 PM | 1.0000 | |
| 40 | IL15 | 040 | L101-13 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 6:55:01 PM | 1.0000 | |
| 41 | IL15 | 041 | L101-13M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 7:05:25 PM | 1.0000 | |
| 42 | IL15 | 042 | L101-04I | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 7:15:49 PM | 5.0000 | 1mLto5mL |
| 43 | IL15 | 043 | L101-04M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 7:26:13 PM | 5.0000 | 1mLto5mL |
| 44 | IL15 | 044 | L101-06I | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 7:36:37 PM | 5.0000 | 1mLto5mL |
| 45 | IL15 | 045 | L101-06M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 7:47:02 PM | 5.0000 | 1mLto5mL |
| 46 | IL15 | 046 | L101-10I | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 7:57:26 PM | 5.0000 | 1mLto5mL |
| 47 | IL15 | 047 | L101-10M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 8:07:50 PM | 5.0000 | 1mLto5mL |
| 48 | IL15 | 048 | CCV7 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 8:18:15 PM | 1.0000 | |
| 49 | IL15 | 049 | CCB7 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 8:28:39 PM | 1.0000 | |
| 50 | IL15 | 050 | L101-11I | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 8:39:03 PM | 5.0000 | 1mLto5mL |
| 51 | IL15 | 051 | L101-11M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 8:49:27 PM | 5.0000 | 1mLto5mL |
| 52 | IL15 | 052 | L101-13I | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 8:59:51 PM | 5.0000 | 1mLto5mL |
| 53 | IL15 | 053 | L101-13M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 9:10:15 PM | 5.0000 | 1mLto5mL |
| 54 | IL15 | 054 | L101-01 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 9:20:39 PM | 1.0000 | |

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Title: Temporary sequence for manual data acquisition
Datasource: DG7B3Q91_local©
Location: DX600\2020
Timebase: DX600
#Samples: 71

FINAL

Created: 12/15/2020 12:00:41 PM by EMAXLABS
Last Update: 12/16/2020 4:12:02 PM by EMAXLABS

| No. | Sequence | Sample ID | Name | Type | Inj. Vol. | Program | Method | Status | Inj. Date/Time | Dil. Factor | Comment |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 55 | IL15 | 055 | L101-01M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 9:31:04 PM | 1.0000 | |
| 56 | IL15 | 056 | L101-03 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 9:41:28 PM | 1.0000 | |
| 57 | IL15 | 057 | L101-03M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 9:51:52 PM | 1.0000 | |
| 58 | IL15 | 058 | L101-05 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 10:02:16 PM | 1.0000 | |
| 59 | IL15 | 059 | L101-05M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 10:12:40 PM | 1.0000 | |
| 60 | IL15 | 060 | CCV9 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 10:23:04 PM | 1.0000 | |
| 61 | IL15 | 061 | CCB9 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 10:33:28 PM | 1.0000 | |
| 62 | IL15 | 062 | L101-07 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 10:43:52 PM | 1.0000 | |
| 63 | IL15 | 063 | L101-07M | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 10:54:16 PM | 1.0000 | |
| 64 | IL15 | 064 | QC FILTER | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 11:04:41 PM | 1.0000 | 91369103 |
| 65 | IL15 | 065 | QC BUFFER | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 11:15:05 PM | 1.0000 | SP2-01-42-01 |
| 66 | IL15 | 066 | CCV11 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 11:25:29 PM | 1.0000 | |
| 67 | IL15 | 067 | CCB11 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 11:35:54 PM | 1.0000 | |
| 68 | IL15 | 068 | L443-01 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 11:46:18 PM | 1.0000 | |
| 69 | IL15 | 069 | L443-01I | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/15/2020 11:56:42 PM | 5.0000 | 1mLto5mL |
| 70 | IL15 | 070 | CCV13 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/16/2020 12:07:06 AM | 1.0000 | |
| 71 | IL15 | 071 | CCB13 | Unknown | 250.0 | Cr6 Program | IC59L15 | Finished | 12/16/2020 12:17:30 AM | 1.0000 | |

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# SAMPLE PRESERVATION LOG(S)

EMAX LABORATORIES, INC.

# pH ADJUSTMENT/SAMPLE PRESERVATION LOG FOR HEXAVALENT CHROMIUM

SOP ☑ EMAX-218.6 Rev. 7 ☐ EMAX-7199 Rev. 7

Book #: PHC-022

Matrix: W Start Date: 12/10/20 Time: 18:00 End Date: 12/10/20 Time: 19:05

| Sample Prep ID | Lab Sample ID (LSCID) | Initial pH | Final pH | Notes |
|---|---|---|---|---|
| 01 | L443-01 | 9.2 | 9.43 | no adjustment needed; Cr, light Yw |
| 02 | L101-01 | 9.50 | 9.50 | no adjustment needed; Cr |
| 03 | -02 (002) | 9.47 | 9.47 | |
| 04 | -02 (003) | 9.47 | 9.47 | |
| 05 | -03 | 9.50 | 9.50 | |
| 06 | -04 (007) | 9.48 | 9.48 | |
| 07 | -04 (008) | 9.49 | 9.49 | |
| 08 | -05 | 9.50 | 9.50 | |
| 09 | -06 (012) | 9.49 | 9.49 | |
| 10 | -06 (013) | 9.49 | 9.49 | |
| 11 | -07 | 9.50 | 9.50 | |
| 12 | -08 (017) | 9.50 | 9.50 | |
| 13 | -08 (018) | 9.50 | 9.50 | |
| 14 | -09 | 9.48 | 9.48 | |
| 15 | -10 | 9.46 | 9.46 | |
| 16 | -11 | 9.36 | 9.36 | |
| 17 | -12 | 9.41 | 9.41 | |
| 18 | -13 | 9.35 | 9.35 | |
| 19 | | | | |
| 20 | | | | |
| 21 | | | | |
| 22 | | | | |
| 23 | | | | |
| 24 | | | | |
| 25 | | | | |

AS 12/10/20

| Standards | ID | pH |
|---|---|---|
| Buffer 7 | SW1-02-05-22 | 7.00 |
| Buffer 10 | -23 | 10.01 |
| Check pH Buffer ~~(8)~~ 7.96 | AS 12/10/20 -19 | 7.92 |
| pH meter | F7 | |

| Reagent | Standard ID # |
|---|---|
| NaOH | |
| $(NH_4)_2SO_4/NH_4OH$ | |
| Reagent Water | |

Legend:

| Color | Texture | Clarity | Artifacts |
|---|---|---|---|
| Bu = Blue<br>Bl = Black | Cs = Coarse | Cr = Clear | Rk = Rocks |
| Bn = Brown<br>Gn = Green | Md = Medium | Cy = Cloudy | Sl = Shale |
| Og = Orange<br>Rd = Red | Fn = Fine | Td = Turbid | Vg = Vegetation |
| Yw = Yellow | | | |

☑ Samples were received with preservation

Comments:

Prepared By: AS

Standard Added By:

Checked By: AS

# RETENTION TIME WINDOW

**RETENTION TIME WINDOW**

**METHOD 218.6/7199**

| | | | |
|---|---|---|---|
| **Lab Name:** | EMAX | **METHOD:** | EMAX-218.6/7199 |
| **Instrument ID:** | DX500IC59 | **IC COLUMN:** | AS7/AG7 / AS7/NG1 |
| | | **COLUMN SIZE:** | 4x250mm |

| Compound | Ical Mean RT | from | to | Retention Time Window |
|---|---|---|---|---|
| **CHROMIUM VI** | **4.35** | 4.14 | 4.56 | **0.213** |

IC59L15

12/16

CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD E300.0
CHLORIDE

A total of nine(9) water samples were received on 12/10/20 to be analyzed for Chloride in accordance with Method E300.0 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Chloride was not detected in ICL010WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICL010WL/ICL010WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD E300.0
SULFATE

A total of nine(9) water samples were received on 12/10/20 to be analyzed for Sulfate in accordance with Method E300.0 and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Sulfate was not detected in ICL010WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ICL010WL/ICL010WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

# SAMPLE RESULTS

METHOD E300.0
CHLORIDE

Client : ARCADIS
Project : PG&E TOPOCK-GMP
Batch No. : 20L101

Matrix : WATER
InstrumentID : D7

| CLIENT SAMPLE ID | EMAX SAMPLE ID | RESULTS (mg/L) | DFxPREP FACTOR | MOIST (%) | RL (mg/L) | MDL (mg/L) | ANALYSIS DATETIME | PREPARATION DATETIME | DATA FILE ID | CAL REF | PREP BATCH | COLLECTION DATETIME | RECEIVED DATETIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MBLK1W | ICL010WB | ND | 1 | NA | 0.2 | 0.1 | 12/16/2016:50 | NA | AL10-03 | AL10-01 | ICL010W | NA | NA |
| LCS1W | ICL010WL | 1.88 | 1 | NA | 0.2 | 0.1 | 12/16/2017:11 | NA | AL10-04 | AL10-01 | ICL010W | NA | NA |
| LCD1W | ICL010WC | 1.87 | 1 | NA | 0.2 | 0.1 | 12/16/2017:32 | NA | AL10-05 | AL10-01 | ICL010W | NA | NA |
| MW-54-085-Q420 | L101-02K | 2910 | 800 | NA | 160 | 80 | 12/17/2002:11 | NA | AL10-29 | AL10-25 | ICL010W | 12/09/2009:06 | 12/10/20 |
| MW-55-045-Q420 | L101-08J | 258 | 100 | NA | 20 | 10 | 12/17/2003:55 | NA | AL10-34 | AL10-25 | ICL010W | 12/09/2009:23 | 12/10/20 |
| MW-55-120-Q420 | L101-09K | 2190 | 800 | NA | 160 | 80 | 12/17/2006:00 | NA | AL10-39 | AL10-36 | ICL010W | 12/09/2008:42 | 12/10/20 |
| MW-56M-Q420 | L101-11J | 4860 | 1000 | NA | 200 | 100 | 12/17/2007:23 | NA | AL10-43 | AL10-36 | ICL010W | 12/09/2010:29 | 12/10/20 |
| MW-56S-Q420 | L101-12J | 1300 | 800 | NA | 160 | 80 | 12/17/2008:04 | NA | AL10-45 | AL10-36 | ICL010W | 12/09/2011:41 | 12/10/20 |
| MW-54-140-Q420 | L101-04K | 4010 | 1000 | NA | 200 | 100 | 12/17/2010:33 | NA | AL10-52 | AL10-47 | ICL010W | 12/09/2008:22 | 12/10/20 |
| MW-54-195-Q420 | L101-06K | 6090 | 2000 | NA | 400 | 200 | 12/17/2010:53 | NA | AL10-53 | AL10-47 | ICL010W | 12/09/2007:36 | 12/10/20 |
| MW-56D-Q420 | L101-10T | 7370 | 2000 | NA | 400 | 200 | 12/17/2011:14 | NA | AL10-54 | AL10-47 | ICL010W | 12/09/2011:11 | 12/10/20 |
| MW-924-Q420 | L101-13T | 4820 | 2000 | NA | 400 | 200 | 12/17/2011:56 | NA | AL10-56 | AL10-47 | ICL010W | 12/09/2010:39 | 12/10/20 |

METHOD E300.0
SULFATE

Client : ARCADIS
Project : PG&E TOPOCK-GMP
Batch No. : 20L101

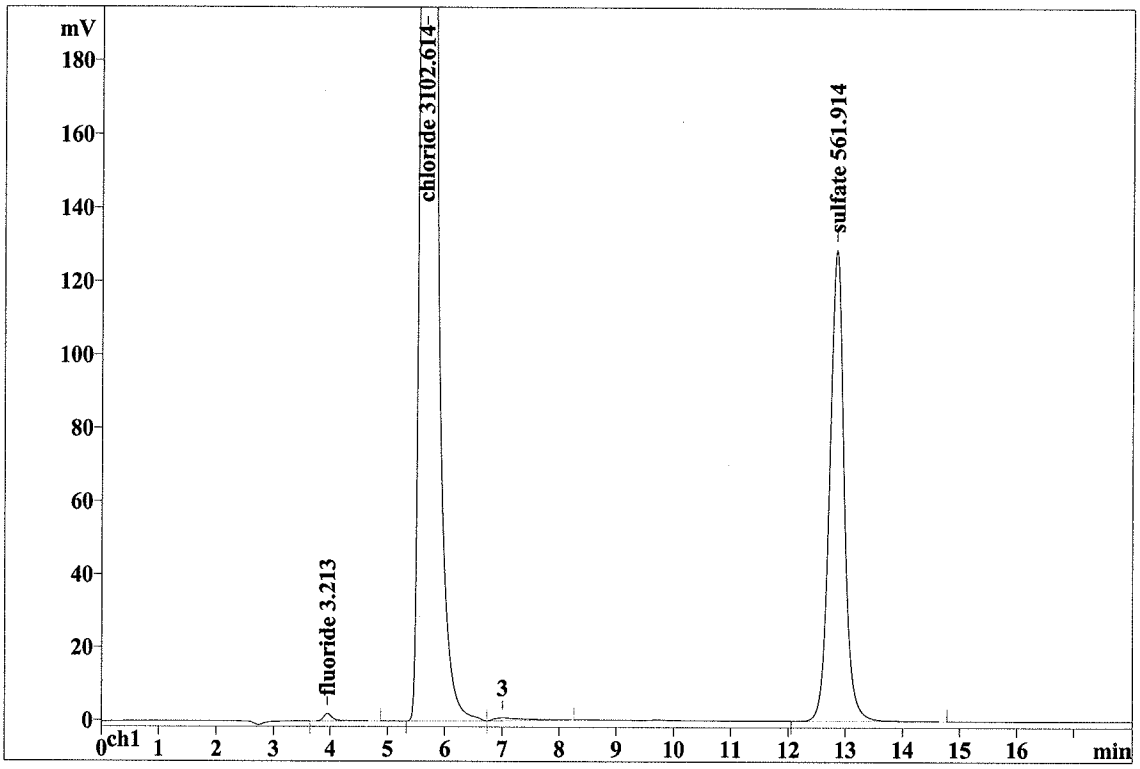
Matrix : WATER
InstrumentID : D7

| CLIENT SAMPLE ID | EMAX SAMPLE ID | RESULTS (mg/L) | DFxPREP FACTOR | MOIST (%) | RL (mg/L) | MDL (mg/L) | ANALYSIS DATETIME | PREPARATION DATETIME | DATA FILE ID | CAL REF | PREP BATCH | COLLECTION DATETIME | RECEIVED DATETIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MBLK1W | ICL010WB | ND | 1 | NA | 0.5 | 0.25 | 12/16/2016:50 | NA | AL10-03 | AL10-01 | ICL010W | NA | NA |
| LCS1W | ICL010WL | 4.71 | 1 | NA | 0.5 | 0.25 | 12/16/2017:11 | NA | AL10-04 | AL10-01 | ICL010W | NA | NA |
| LCD1W | ICL010WC | 4.71 | 1 | NA | 0.5 | 0.25 | 12/16/2017:32 | NA | AL10-05 | AL10-01 | ICL010W | NA | NA |
| MW-55-045-Q420 | L101-08I | 76.4 | 10 | NA | 5 | 2.5 | 12/16/2018:55 | NA | AL10-09 | AL10-01 | ICL010W | 12/09/2009:23 | 12/10/20 |
| MW-54-085-Q420 | L101-02J | 562 | 40 | NA | 20 | 10 | 12/17/2001:51 | NA | AL10-28 | AL10-25 | ICL010W | 12/09/2009:06 | 12/10/20 |
| MW-54-140-Q420 | L101-04I | 565 | 40 | NA | 20 | 10 | 12/17/2002:32 | NA | AL10-30 | AL10-25 | ICL010W | 12/09/2008:22 | 12/10/20 |
| MW-54-195-Q420 | L101-06I | 869 | 100 | NA | 50 | 25 | 12/17/2003:14 | NA | AL10-32 | AL10-25 | ICL010W | 12/09/2007:36 | 12/10/20 |
| MW-55-120-Q420 | L101-09I | 239 | 40 | NA | 20 | 10 | 12/17/2005:39 | NA | AL10-38 | AL10-36 | ICL010W | 12/09/2008:42 | 12/10/20 |
| MW-56D-Q420 | L101-10J | 1270 | 100 | NA | 50 | 25 | 12/17/2006:20 | NA | AL10-40 | AL10-36 | ICL010W | 12/09/2011:11 | 12/10/20 |
| MW-56M-Q420 | L101-11I | 835 | 100 | NA | 50 | 25 | 12/17/2007:02 | NA | AL10-42 | AL10-36 | ICL010W | 12/09/2010:29 | 12/10/20 |
| MW-56S-Q420 | L101-12I | 585 | 40 | NA | 20 | 10 | 12/17/2007:43 | NA | AL10-44 | AL10-36 | ICL010W | 12/09/2011:41 | 12/10/20 |
| MW-924-Q420 | L101-13K | 854 | 100 | NA | 50 | 25 | 12/17/2011:35 | NA | AL10-55 | AL10-47 | ICL010W | 12/09/2010:39 | 12/10/20 |

Report date: 12/17/2020 1:05:37 PM
Printed by: TWangc

Ident: AL10-28 L101-02J DF=40
Analysis from: 12/17/2020 1:51:05 AM
File: _2020-12-17_01-51.chw Last save: 12/17/2020 2:09:06 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97298

SAMPLE: METHOD 300/9056/4110B
: 1ml/40ml
Vial number: 28
Volume: 1.0 µL
Dilution: 40.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.95 | 2.04 | 23.317 | 3.213 | fluoride |
| 2 | 5.66 | 1458.94 | 16817.692 | 3102.614 | chloride |
| 3 | 7.02 | 0.76 | 28.452 | 0.000 | |
| 4 | 12.83 | 128.85 | 2315.787 | 561.914 | sulfate |
| 4 | 18.00 | 1590.58 | 19185.249 | 3667.740 | |

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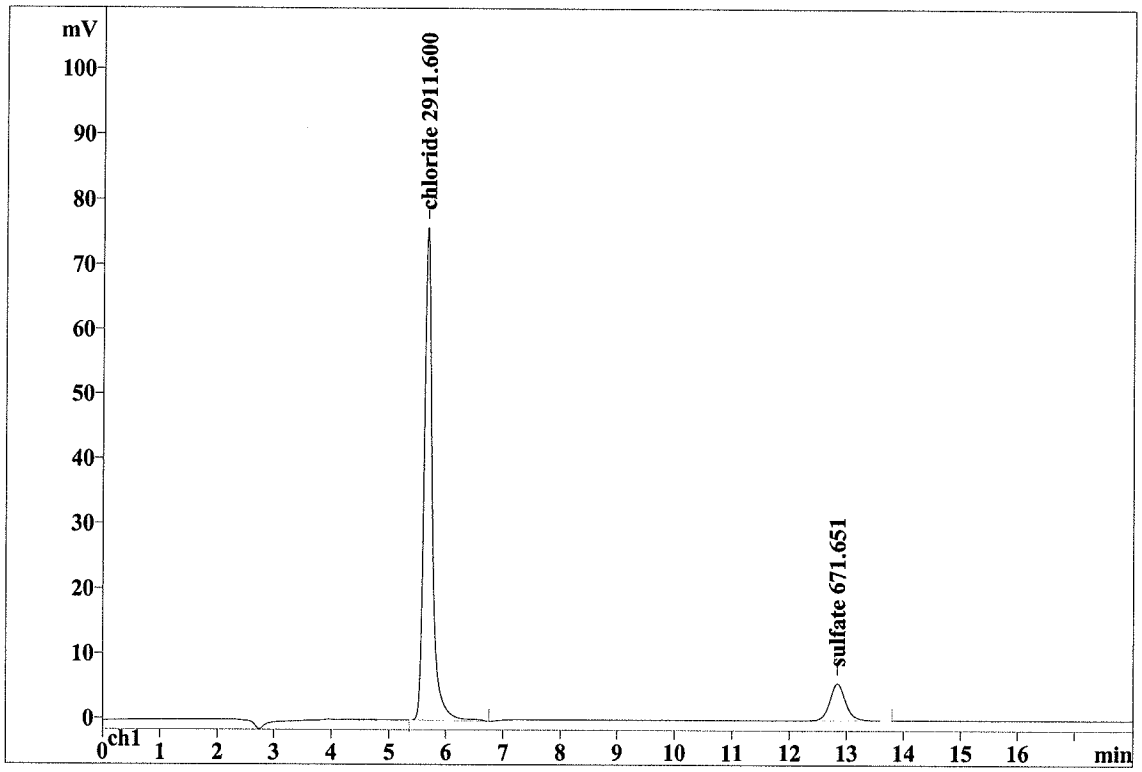
Report date: 12/17/2020 1:06:59 PM
Printed by: TWangc

Ident: AL10-29 L101-02K DF=800
Analysis from: 12/17/2020 2:11:51 AM
File: _2020-12-17_02-11.chw Last save: 12/17/2020 2:29:51 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97299

SAMPLE: METHOD 300/9056/4110B
: 1ml/40ml INTERMEDIATE, 1ml/20ml DF=800
Vial number: 29
Volume: 1.0 µL
Dilution: 800.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.67 | 76.03 | 774.484 | 2911.600 | chloride ✓ |
| 2 | 12.85 | 5.68 | 109.016 | 671.651 | sulfate |
| 2 | 18.00 | 81.71 | 883.500 | 3583.251 | |

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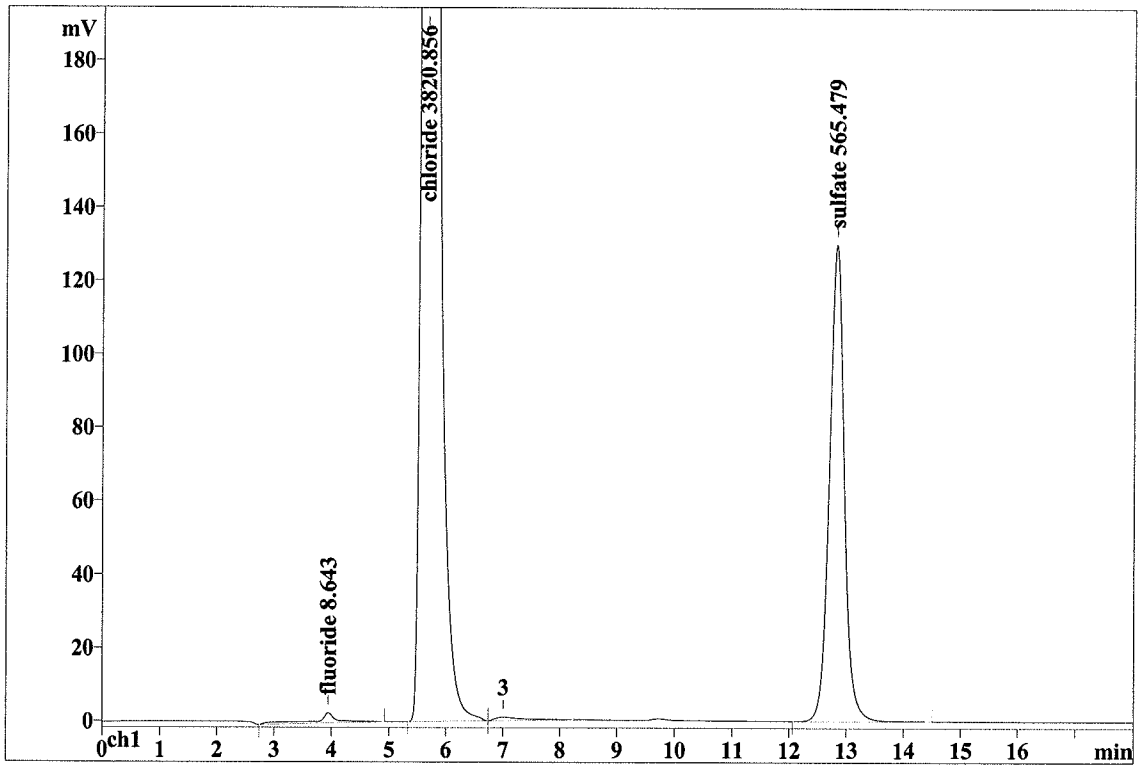
Report date: 12/17/2020 1:08:49 PM
Printed by: TWangc

Ident: AL10-30 L101-04I DF=40
Analysis from: 12/17/2020 2:32:36 AM
File: _2020-12-17_02-32.chw Last save: 12/17/2020 2:50:36 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97300

SAMPLE: METHOD 300/9056/4110B
: 1ml/40ml
Vial number: 30
Volume: 1.0 µL
Dilution: 40.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.95 | 2.80 | 73.439 | 8.643 | fluoride |
| 2 | 5.66 | 1590.92 | 20714.475 | 3820.856 | chloride |
| 3 | 7.01 | 0.95 | 33.954 | 0.000 | |
| 4 | 12.82 | 129.90 | 2330.676 | 565.479 | sulfate ✓ |
| 4 | 18.00 | 1724.56 | 23152.544 | 4394.978 | |

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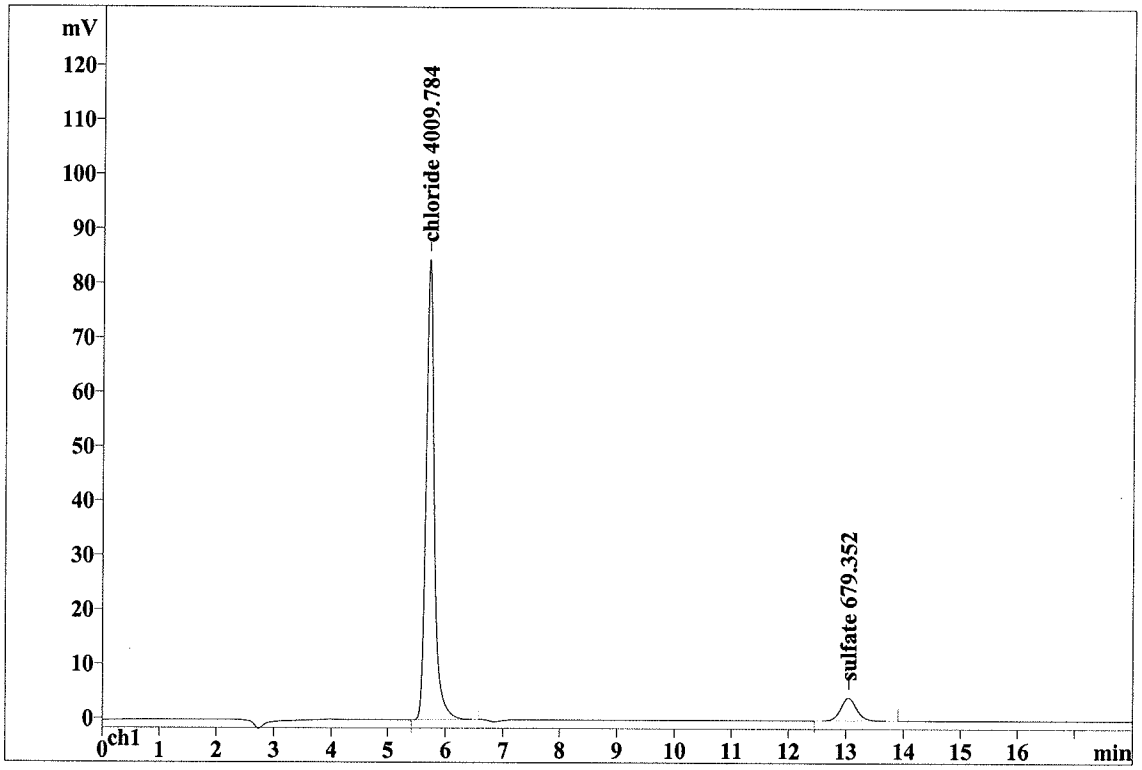
Report date: 12/17/2020 1:16:05 PM
Printed by: TWangc

Ident: AL10-52 L101-04K DF=1000
Analysis from: 12/17/2020 10:33:07 AM
File: _2020-12-17_10-33.chw Last save: 12/17/2020 10:51:07 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97323

SAMPLE: METHOD 300/9056/4110B
: 0.2ml/20ml INTERMEDIATE, 2ml/20ml DF=1000
Vial number: 52
Volume: 1.0 µL
Dilution: 1000.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.71 | 84.63 | 854.842 | 4009.784 | chloride ✓ |
| 2 | 13.05 | 4.23 | 82.248 | 679.352 | sulfate |
| 2 | 18.00 | 88.86 | 937.090 | 4689.136 | |

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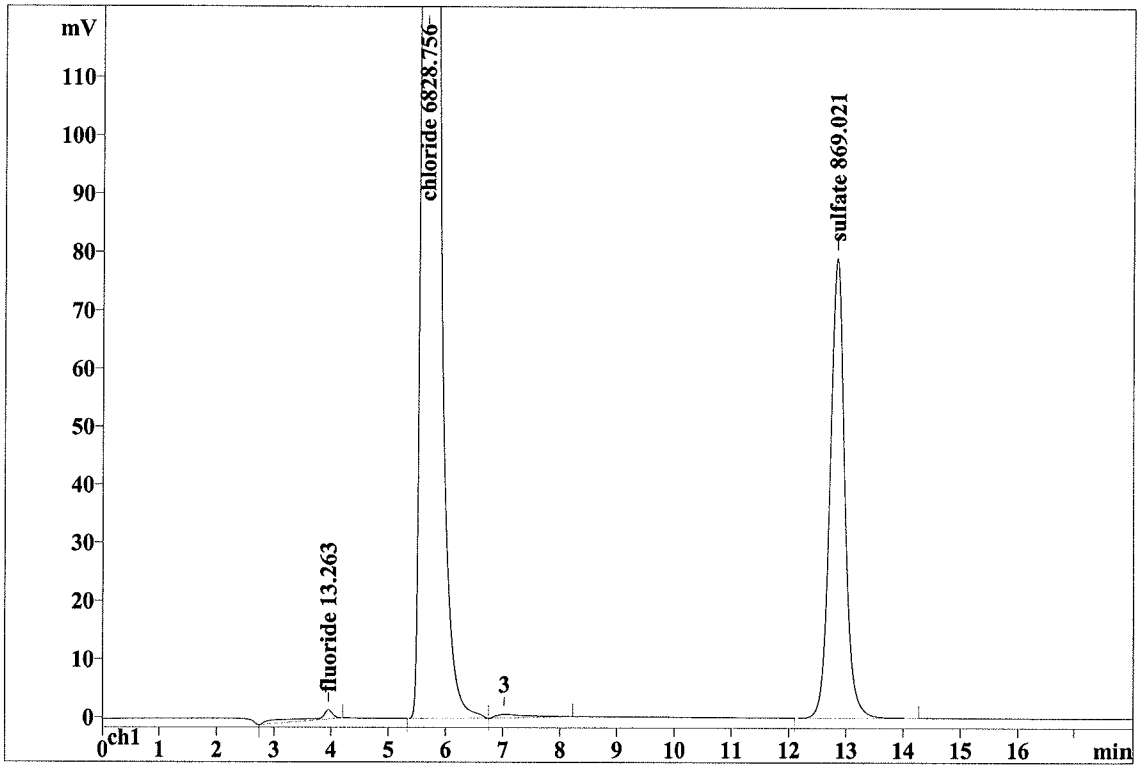
Report date: 12/17/2020 1:09:23 PM
Printed by: TWangc

Ident: AL10-32 L101-06I DF=100
Analysis from: 12/17/2020 3:14:05 AM
File: _2020-12-17_03-14.chw Last save: 12/17/2020 3:32:06 AM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97302

SAMPLE: METHOD 300/9056/4110B
: 0.2ml/20ml
Vial number: 32
Volume: 1.0 µL
Dilution: 100.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 1.57 | 42.627 | 13.263 | fluoride |
| 2 | 5.67 | 1364.98 | 14804.251 | 6828.756 | chloride |
| 3 | 7.03 | 0.62 | 24.158 | 0.000 | |
| 4 | 12.84 | 79.13 | 1420.661 | 869.021 | sulfate ✓ |
| 4 | 18.00 | 1446.30 | 16291.696 | 7711.039 | |

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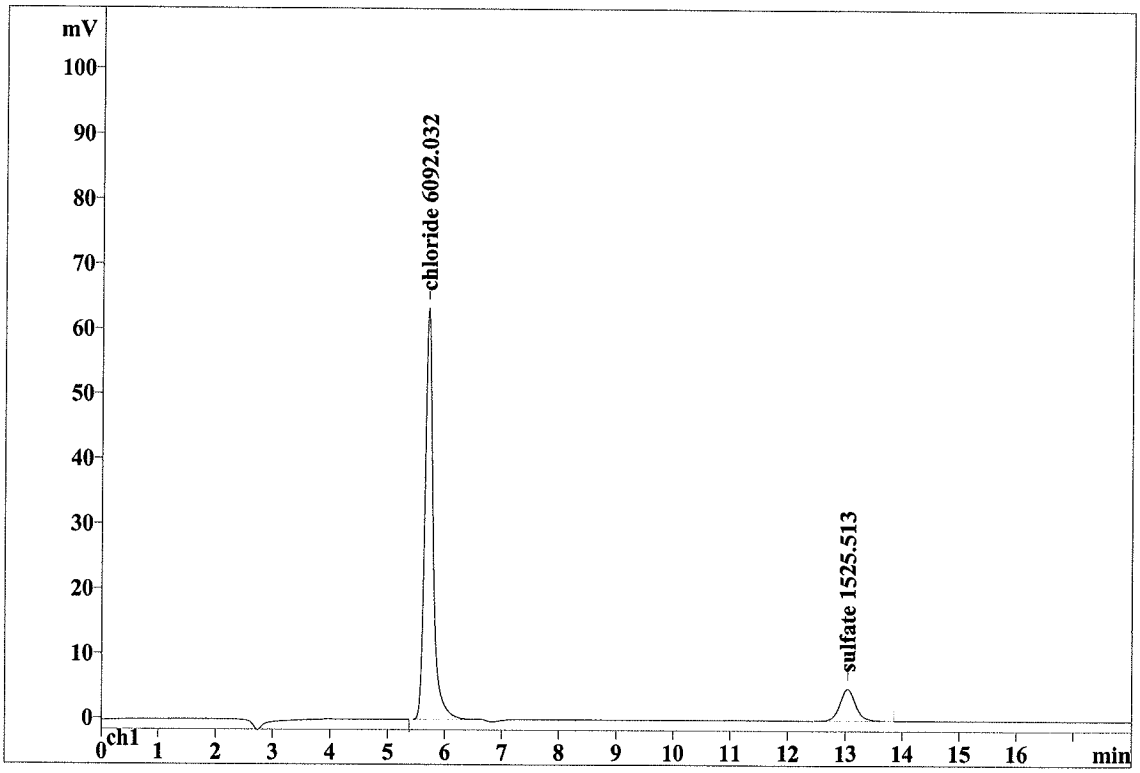
| | |
|---|---|
| Report date: | 12/17/2020 1:18:44 PM |
| Printed by: | TWangc |
| Ident: | AL10-53 L101-06K DF=2000 |
| Analysis from: | 12/17/2020 10:53:52 AM |
| File: | _2020-12-17_10-53.chw Last save: 12/17/2020 11:11:52 AM |
| Modified! | |
| Method: | ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM |
| Run operator: | TWangc |
| Analysis number: | 97324 |
| SAMPLE: | METHOD 300/9056/4110B |
| : | 0.2ml/20ml INTERMEDIATE, 1ml/20ml DF=2000 |
| Vial number: | 53 |
| Volume: | 1.0 µL |
| Dilution: | 2000.00 |
| Amount: | 1.0000 |




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.70 | 63.42 | 645.688 | 6092.032 | chloride ✓ |
| 2 | 13.04 | 4.93 | 96.183 | 1525.513 | sulfate |
| 2 | 18.00 | 68.35 | 741.871 | 7617.545 | |

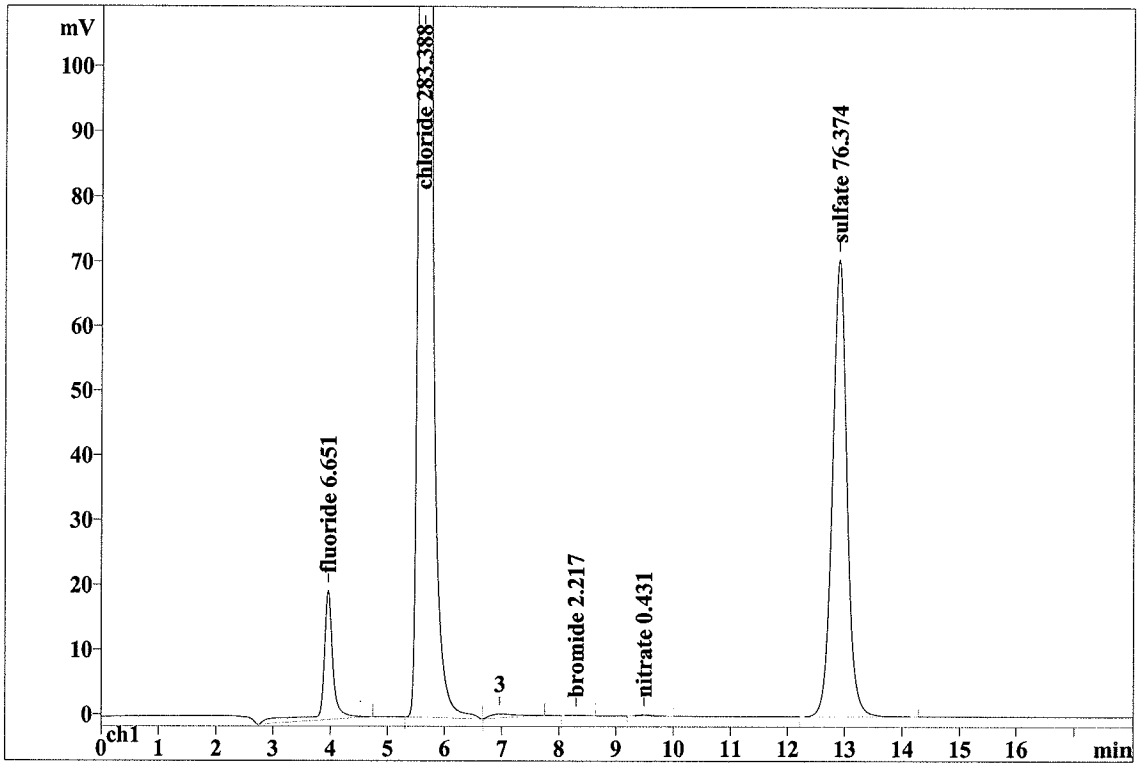
This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 1:03:53 PM
Printed by: TWangc

Ident: AL10-09 L101-08I DF=10
Analysis from: 12/16/2020 6:55:33 PM
File: _2020-12-16_18-55.chw Last save: 12/16/2020 7:13:34 PM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97278

SAMPLE: METHOD 300/9056/4110B
: 2ml/20ml
Vial number: 9
Volume: 1.0 µL
Dilution: 10.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 19.91 | 239.206 | 6.651 | fluoride |
| 2 | 5.62 | 612.05 | 6134.678 | 283.388 | chloride |
| 3 | 6.97 | 0.62 | 19.537 | 0.000 | |
| 4 | 8.29 | 0.11 | 1.602 | 2.217 | bromide |
| 5 | 9.50 | 0.20 | 3.178 | 0.431 | nitrate |
| 6 | 12.90 | 70.67 | 1244.766 | 76.374 | sulfate ✓ |
| 6 | 18.00 | 703.57 | 7642.967 | 369.061 | |

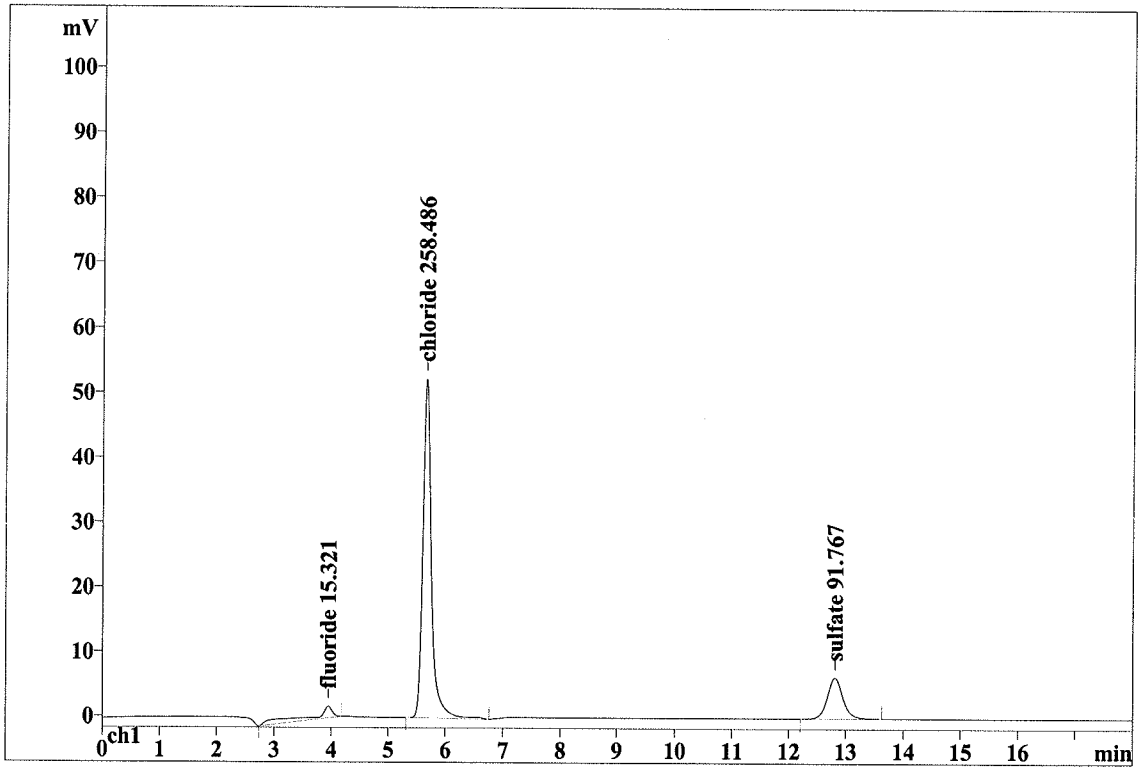
This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 1:09:40 PM
Printed by: TWangc

Ident: AL10-34 L101-08J DF=100
Analysis from: 12/17/2020 3:55:35 AM
File: _2020-12-17_03-55.chw Last save: 12/17/2020 4:13:35 AM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97304

SAMPLE: METHOD 300/9056/4110B
: 0.2ml/20ml
Vial number: 34
Volume: 1.0 µL
Dilution: 100.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.94 | 1.78 | 50.227 | 15.321 | fluoride |
| 2 | 5.66 | 52.37 | 545.609 | 258.486 | chloride ✓ |
| 3 | 12.81 | 6.35 | 122.065 | 91.767 | sulfate |
| 3 | 17.99 | 60.51 | 717.901 | 365.574 | |

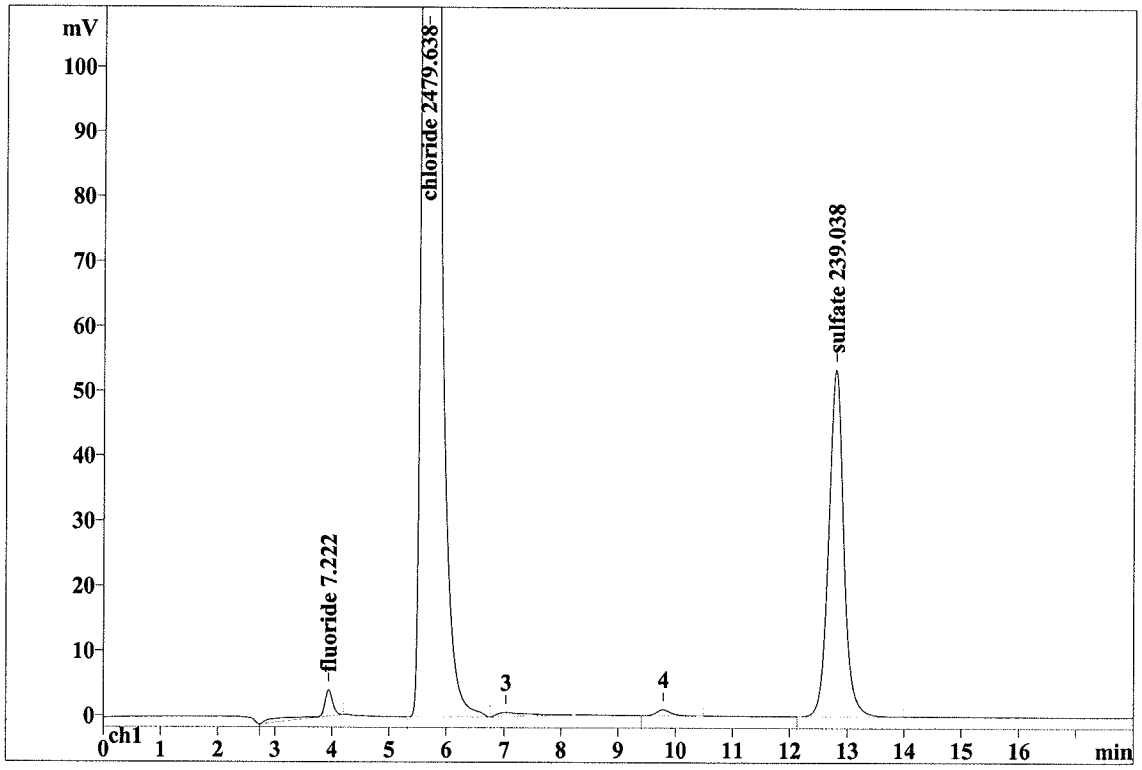
This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 1:10:04 PM
Printed by: TWangc

Ident: AL10-38 L101-09I DF=40
Analysis from: 12/17/2020 5:39:18 AM
File: _2020-12-17_05-39.chw Last save: 12/17/2020 5:57:18 AM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97309

SAMPLE: METHOD 300/9056/4110B
: 1ml/40ml
Vial number: 38
Volume: 1.0 µL
Dilution: 40.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.94 | 4.02 | 60.321 | 7.222 | fluoride |
| 2 | 5.66 | 1278.96 | 13437.774 | 2479.638 | chloride |
| 3 | 7.03 | 0.61 | 24.428 | 0.000 | |
| 4 | 9.79 | 0.92 | 15.809 | 0.000 | |
| 5 | 12.79 | 53.48 | 967.174 | 239.038 | sulfate ✓ |
| 5 | 18.00 | 1337.99 | 14505.505 | 2725.897 | |

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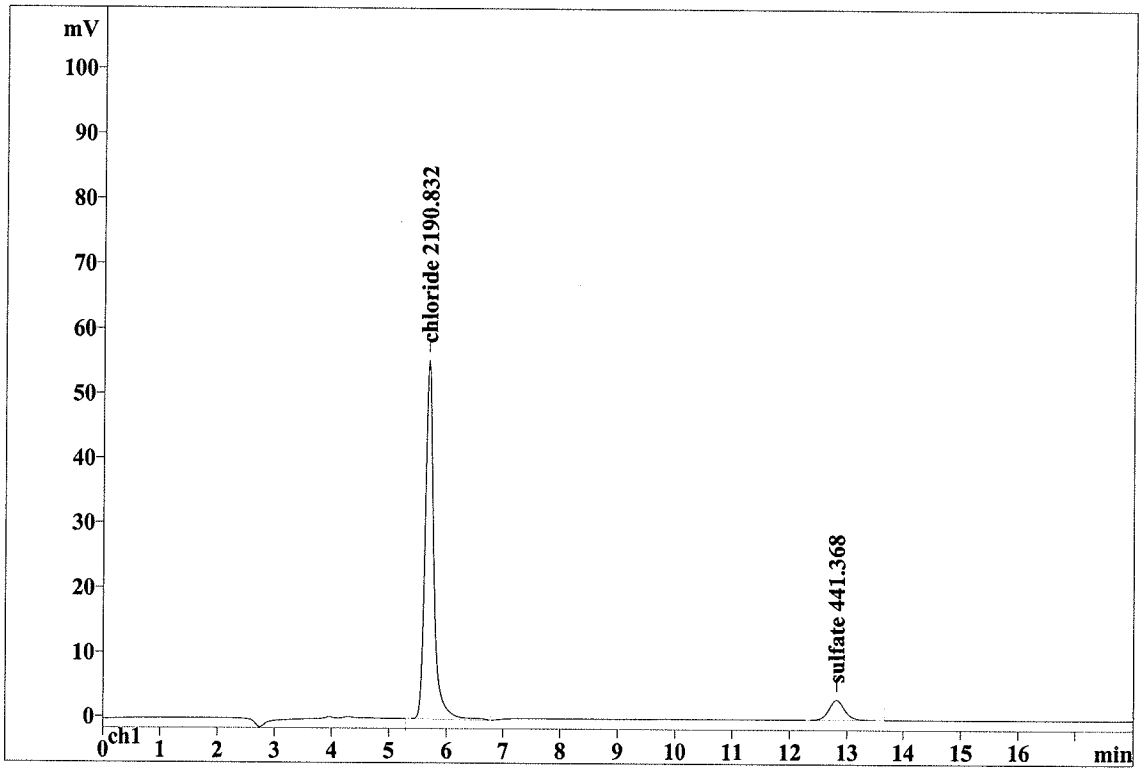
METROHM LTD

| | |
|---|---|
| Report date: | 12/17/2020 1:10:39 PM |
| Printed by: | TWangc |
| Ident: | AL10-39 L101-09K DF=800 |
| Analysis from: | 12/17/2020 6:00:03 AM |
| File: | _2020-12-17_06-00.chw Last save: 12/17/2020 6:18:03 AM |
| Modified! | |
| Method: | ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM |
| Run operator: | TWangc |
| Analysis number: | 97310 |
| SAMPLE: | METHOD 300/9056/4110B |
| : | 1ml/40ml INTERMEDIATE, 1ml/20ml DF=800 |
| Vial number: | 39 |
| Volume: | 1.0 µL |
| Dilution: | 800.00 |
| Amount: | 1.0000 |




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.68 | 55.46 | 578.960 | 2190.832 | chloride ✓ |
| 2 | 12.82 | 3.12 | 60.923 | 441.368 | sulfate |
| 2 | 18.00 | 58.58 | 639.882 | 2632.200 | |

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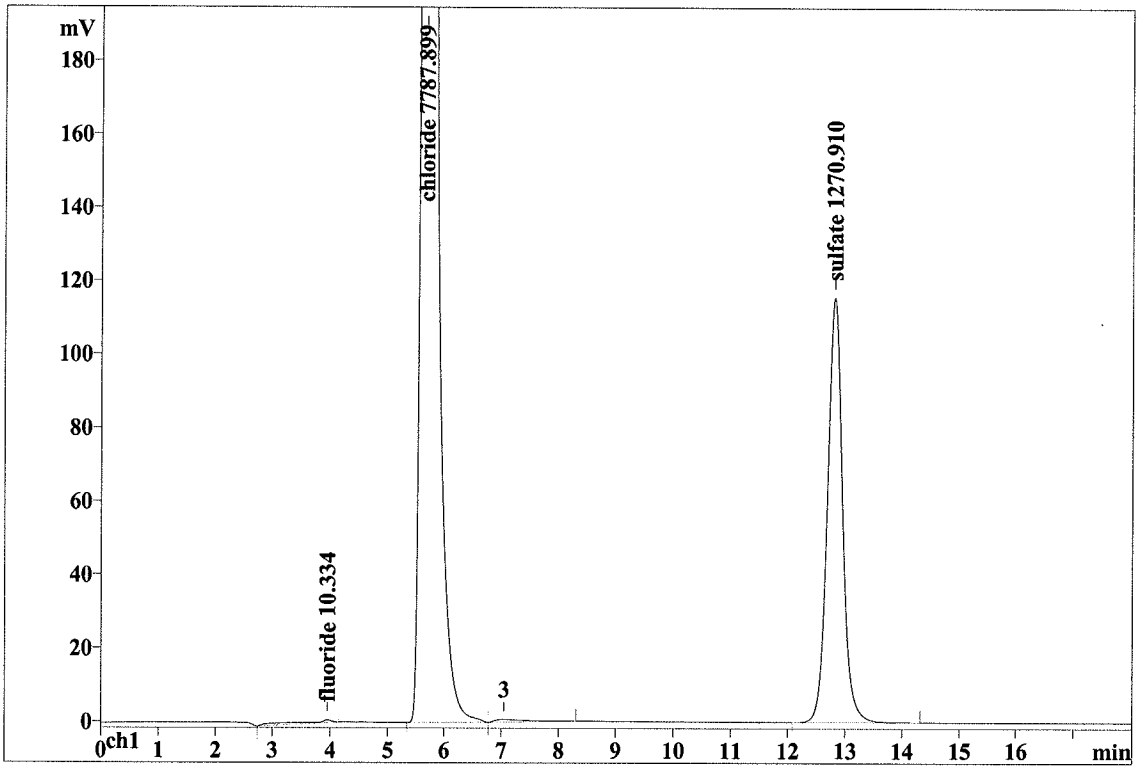
Report date: 12/17/2020 1:11:14 PM
Printed by: TWangc

Ident: AL10-40 L101-10J DF=100
Analysis from: 12/17/2020 6:20:47 AM
File: _2020-12-17_06-20.chw Last save: 12/17/2020 6:38:48 AM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97311

SAMPLE: METHOD 300/9056/4110B
: 0.2ml/20ml
Vial number: 40
Volume: 1.0 µL
Dilution: 100.00
Amount: 1.0000




Quantitation method: Custom

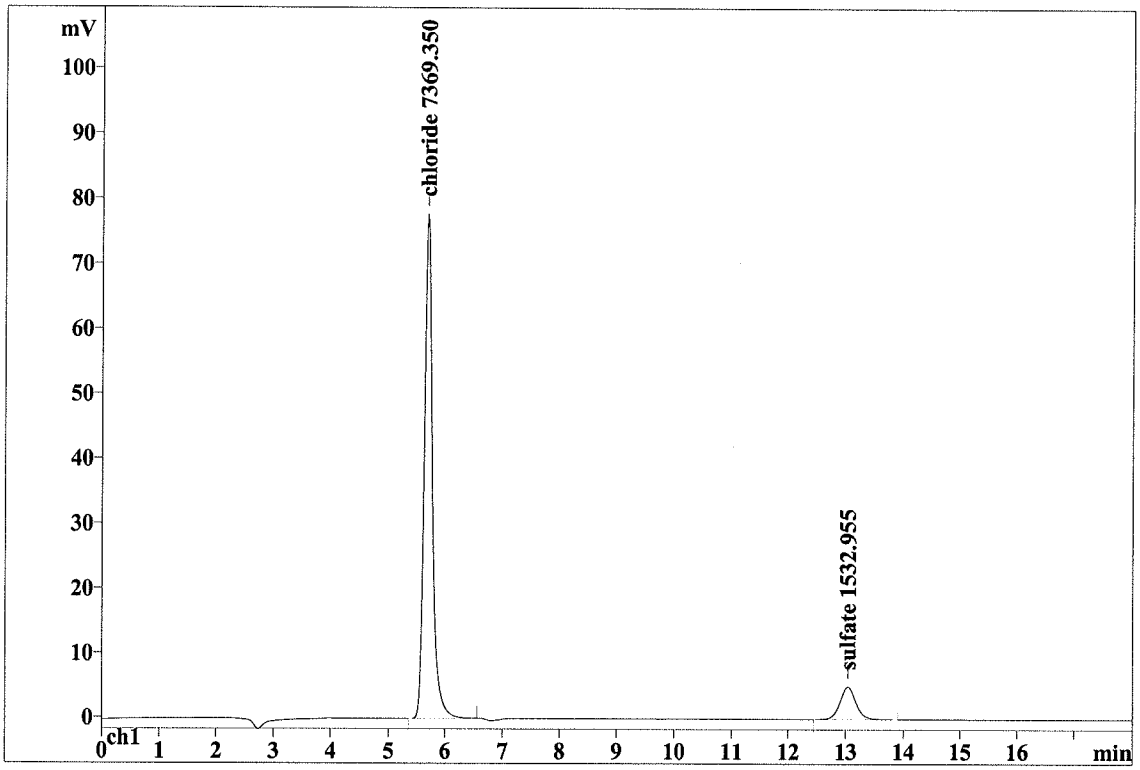
| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.95 | 0.73 | 31.814 | 10.334 | fluoride |
| 2 | 5.67 | 1453.36 | 16885.761 | 7787.899 | chloride |
| 3 | 7.04 | 0.72 | 27.742 | 0.000 | |
| 4 | 12.81 | 115.57 | 2092.115 | 1270.910 | sulfate ✓ |
| 4 | 18.00 | 1570.38 | 19037.432 | 9069.142 | |

This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 1:20:32 PM
Printed by: TWangc

Ident: AL10-54 L101-10T DF=2000
Analysis from: 12/17/2020 11:14:36 AM
File: _2020-12-17_11-14.chw Last save: 12/17/2020 12:48:29 PM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97325

SAMPLE: METHOD 300/9056/4110B
: 0.2ml/20ml INTERMEDIATE, 1ml/20ml DF=2000
Vial number: 54
Volume: 1.0 µL
Dilution: 2000.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.69 | 77.77 | 784.288 | 7369.350 | chloride ✓ |
| 2 | 13.04 | 5.03 | 96.805 | 1532.955 | sulfate |
| 2 | 18.00 | 82.80 | 881.093 | 8902.304 | |

This report has been created by IC Net
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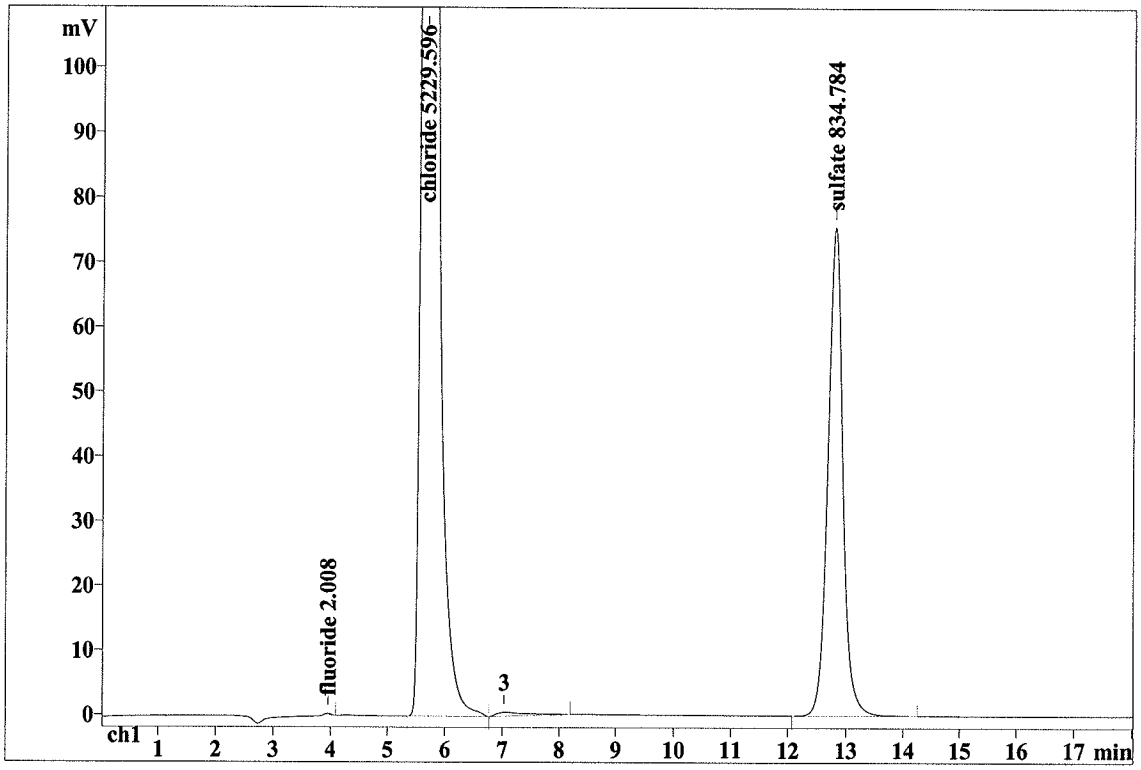
Report date: 12/17/2020 1:12:24 PM
Printed by: TWangc

Ident: AL10-42 L101-11I DF=100
Analysis from: 12/17/2020 7:02:18 AM
File: _2020-12-17_07-02.chw Last save: 12/17/2020 7:20:18 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97313

SAMPLE: METHOD 300/9056/4110B
: 0.2ml/20ml
Vial number: 42
Volume: 1.0 µL
Dilution: 100.00
Amount: 1.0000




Quantitation method: Custom

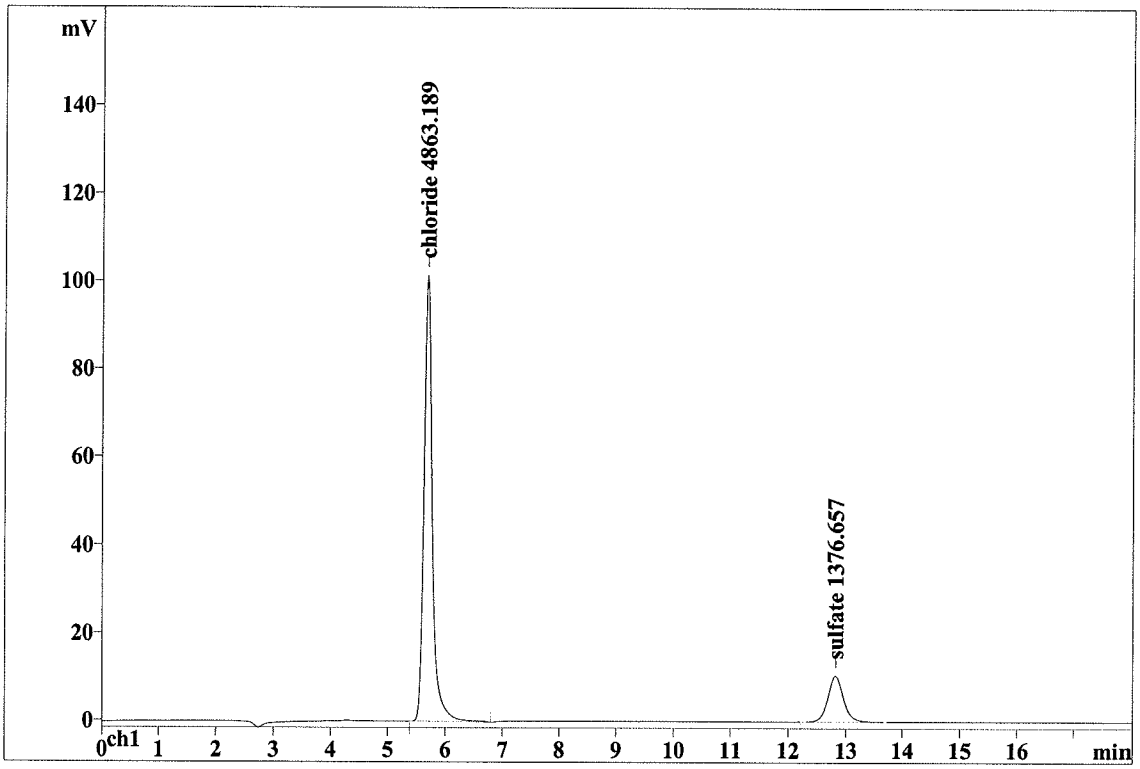
| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 0.18 | 1.073 | 2.008 | fluoride |
| 2 | 5.66 | 1084.27 | 11333.792 | 5229.596 | chloride |
| 3 | 7.04 | 0.60 | 23.226 | 0.000 | |
| 4 | 12.80 | 75.54 | 1363.460 | 834.784 | sulfate ✓ |
| 4 | 18.00 | 1160.59 | 12721.551 | 6066.388 | |

This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 1:13:17 PM
Printed by: TWangc

Ident: AL10-43 L101-11J DF=1000
Analysis from: 12/17/2020 7:23:02 AM
File: _2020-12-17_07-23.chw Last save: 12/17/2020 7:41:02 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97314

SAMPLE: METHOD 300/9056/4110B
: 0.2ml/20ml INTERMEDIATE, 2ml/20ml DF=1000
Vial number: 43
Volume: 1.0 µL
Dilution: 1000.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.68 | 101.56 | 1040.046 | 4863.189 | chloride ✓ |
| 2 | 12.82 | 10.46 | 198.750 | 1376.657 | sulfate |
| 2 | 18.00 | 112.03 | 1238.797 | 6239.846 | |

This report has been created by IC Net
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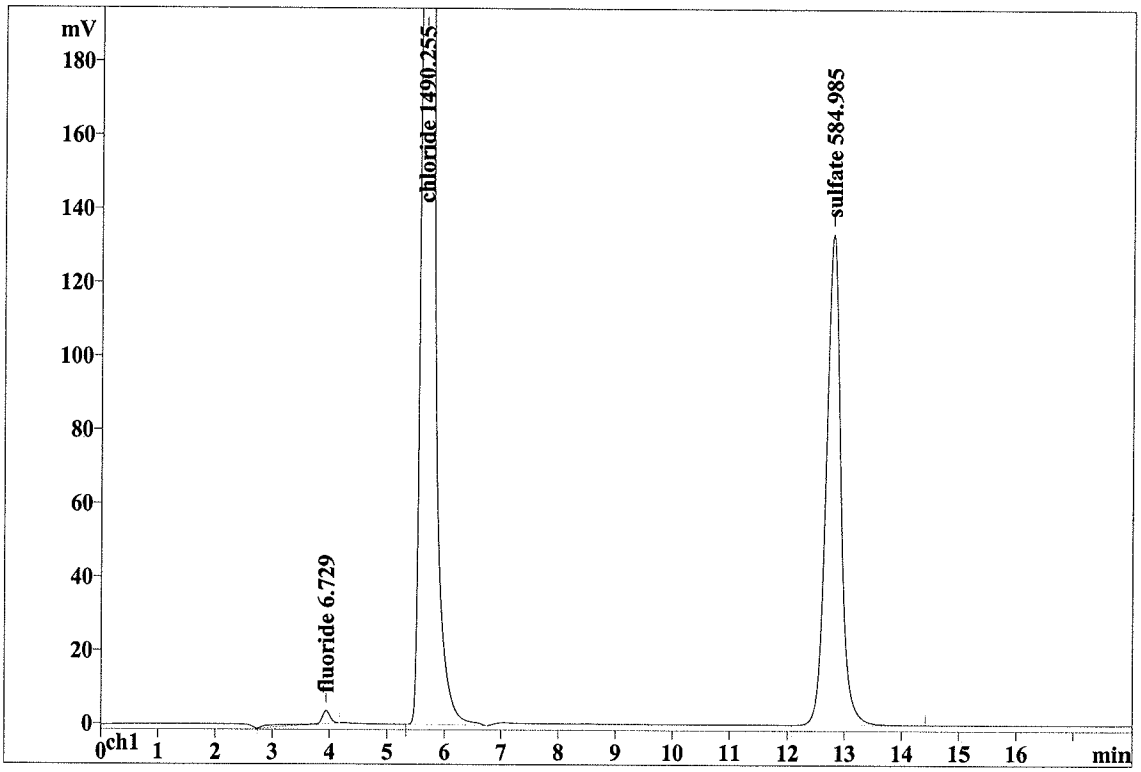
Report date: 12/17/2020 1:14:28 PM
Printed by: TWangc

Ident: AL10-44 L101-12I DF=40
Analysis from: 12/17/2020 7:43:47 AM
File: _2020-12-17_07-43.chw Last save: 12/17/2020 8:01:47 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97315

SAMPLE: METHOD 300/9056/4110B
: 1ml/40ml
Vial number: 44
Volume: 1.0 µL
Dilution: 40.00
Amount: 1.0000




Quantitation method: Custom

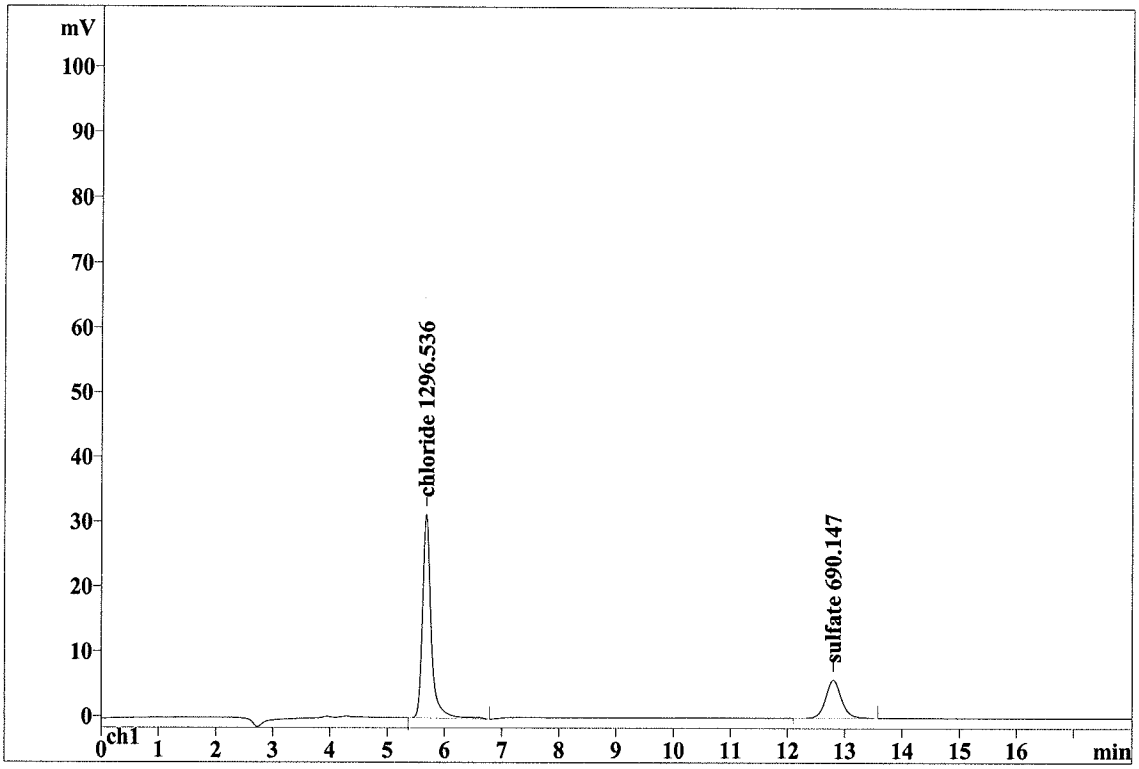
| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.94 | 3.57 | 55.766 | 6.729 | fluoride |
| 2 | 5.66 | 773.94 | 8069.939 | 1490.255 | chloride |
| 3 | 12.78 | 133.49 | 2412.151 | 584.985 | sulfate ✓ |
| 3 | 18.00 | 911.00 | 10537.856 | 2081.968 | |

This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 1:15:05 PM
Printed by: TWangc

Ident: AL10-45 L101-12J DF=800
Analysis from: 12/17/2020 8:04:32 AM
File: _2020-12-17_08-04.chw Last save: 12/17/2020 8:22:32 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97316

SAMPLE: METHOD 300/9056/4110B
: 1ml/40ml INTERMEDIATE, 1ml/20ml DF=800
Vial number: 45
Volume: 1.0 µL
Dilution: 800.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.68 | 31.40 | 336.362 | 1296.536 | chloride ✓ |
| 2 | 12.80 | 5.86 | 112.878 | 690.147 | sulfate |
| 2 | 18.00 | 37.26 | 449.241 | 1986.683 | |

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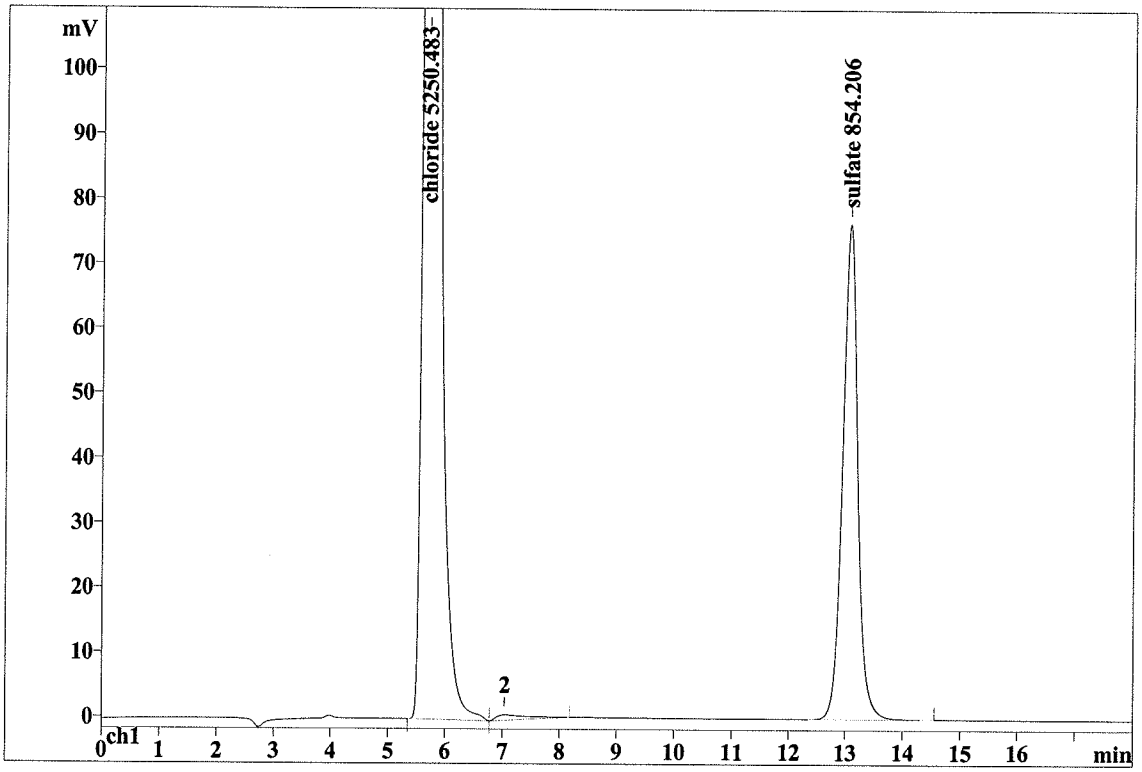
| | | | |
|---|---|---|---|
| Report date: | 12/17/2020 1:20:56 PM | | |
| Printed by: | TWangc | | |
| Ident: | AL10-55 L101-13K DF=100 | | |
| Analysis from: | 12/17/2020 11:35:21 AM | | |
| File: | _2020-12-17_11-35.chw | Last save: | 12/17/2020 11:53:21 AM |
| Modified! | | | |
| Method: | ICD7-L15.mtw | Last save: | 12/16/2020 3:43:03 PM |
| Run operator: | TWangc | | |
| Analysis number: | 97326 | | |
| SAMPLE: | METHOD 300/9056/4110B | | |
| : | 0.2ml/20ml | | |
| Vial number: | 55 | | |
| Volume: | 1.0 µL | | |
| Dilution: | 100.00 | | |
| Amount: | 1.0000 | | |




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.68 | 1082.51 | 11379.121 | 5250.483 | chloride |
| 2 | 7.03 | 0.85 | 32.259 | 0.000 | |
| 3 | 13.06 | 76.48 | 1395.909 | 854.206 | sulfate ✓ |
| 3 | 18.00 | 1159.84 | 12807.289 | 6104.689 | |

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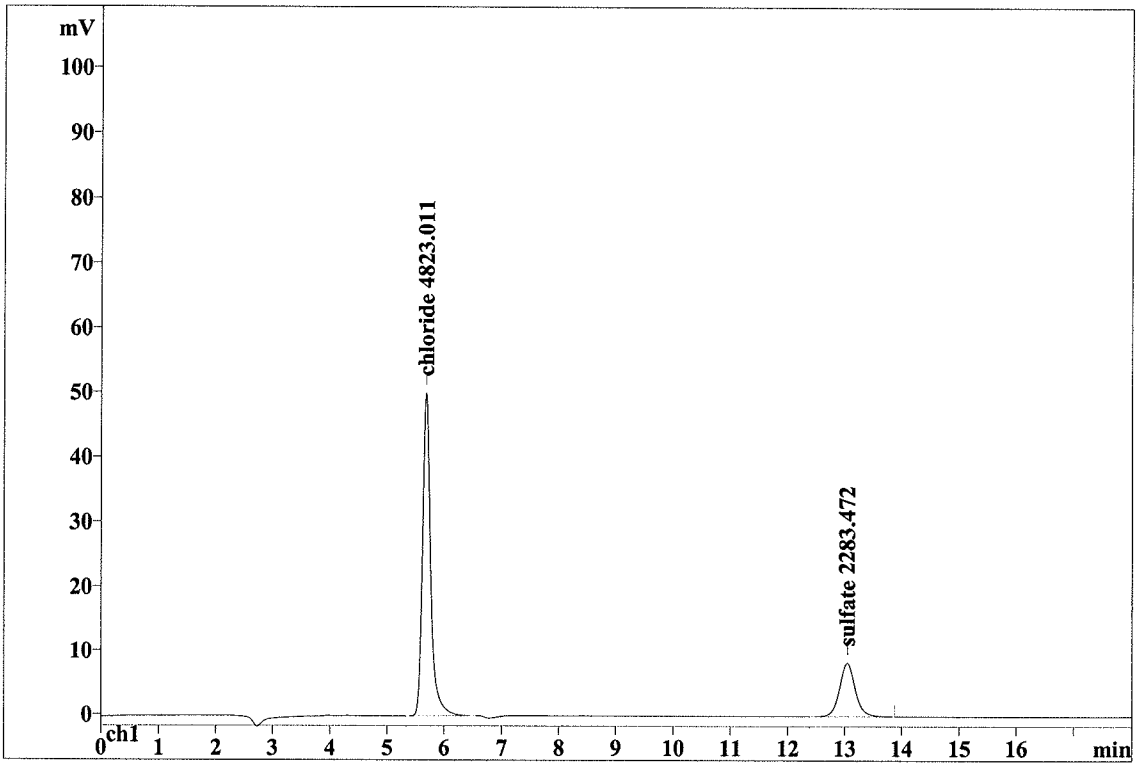
Report date: 12/17/2020 1:22:31 PM
Printed by: TWangc

Ident: AL10-56 L101-13T DF=2000
Analysis from: 12/17/2020 11:56:07 AM
File: _2020-12-17_11-56.chw Last save: 12/17/2020 12:14:07 PM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97327

SAMPLE: METHOD 300/9056/4110B
: 0.2ml/20ml INTERMEDIATE, 1ml/20ml DF=2000
Vial number: 56
Volume: 1.0 µL
Dilution: 2000.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 5.68 | 50.05 | 507.988 | 4823.011 | chloride ✓ |
| 2 | 13.04 | 8.32 | 159.501 | 2283.472 | sulfate |
| 2 | 18.00 | 58.37 | 667.489 | 7106.483 | |

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# QC SUMMARIES

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E300.0

MATRIX : WATER % MOISTURE: NA

| | | | |
|---|---|---|---|
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID : | MBLK1W | LCS1W | LCD1W |
| LAB SAMPLE ID : | ICL010WB | ICL010WL | ICL010WC |
| LAB FILE ID : | AL10-03 | AL10-04 | AL10-05 |
| DATE PREPARED : | NA | NA | NA |
| DATE ANALYZED : | 12/16/2016:50 | 12/16/2017:11 | 12/16/2017:32 |
| PREP BATCH : | ICL010W | ICL010W | ICL010W |
| CALIBRATION REF: | AL10-01 | AL10-01 | AL10-01 |

ACCESSION:

| PARAMETER | MB RESULT (mg/L) | SPIKE AMT (mg/L) | BS RESULT (mg/L) | BS REC (%) | SPIKE AMT (mg/L) | BSD RESULT (mg/L) | BSD REC (%) | RPD (%) | QC LIMIT (%) | MAX RPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 2 | 1.88 | 94 | 2 | 1.87 | 94 | 1 | 90-110 | 20 |

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : E300.0

MATRIX : WATER % MOISTURE: NA

| | | | |
|---|---|---|---|
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID : | MBLK1W | LCS1W | LCD1W |
| LAB SAMPLE ID : | ICL010WB | ICL010WL | ICL010WC |
| LAB FILE ID : | AL10-03 | AL10-04 | AL10-05 |
| DATE PREPARED : | NA | NA | NA |
| DATE ANALYZED : | 12/16/2016:50 | 12/16/2017:11 | 12/16/2017:32 |
| PREP BATCH : | ICL010W | ICL010W | ICL010W |
| CALIBRATION REF: | AL10-01 | AL10-01 | AL10-01 |

ACCESSION:

| PARAMETER | MB RESULT (mg/L) | SPIKE AMT (mg/L) | BS RESULT (mg/L) | BS REC (%) | SPIKE AMT (mg/L) | BSD RESULT (mg/L) | BSD REC (%) | RPD (%) | QC LIMIT (%) | MAX RPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 5 | 4.71 | 94 | 5 | 4.71 | 94 | 0 | 90-110 | 20 |

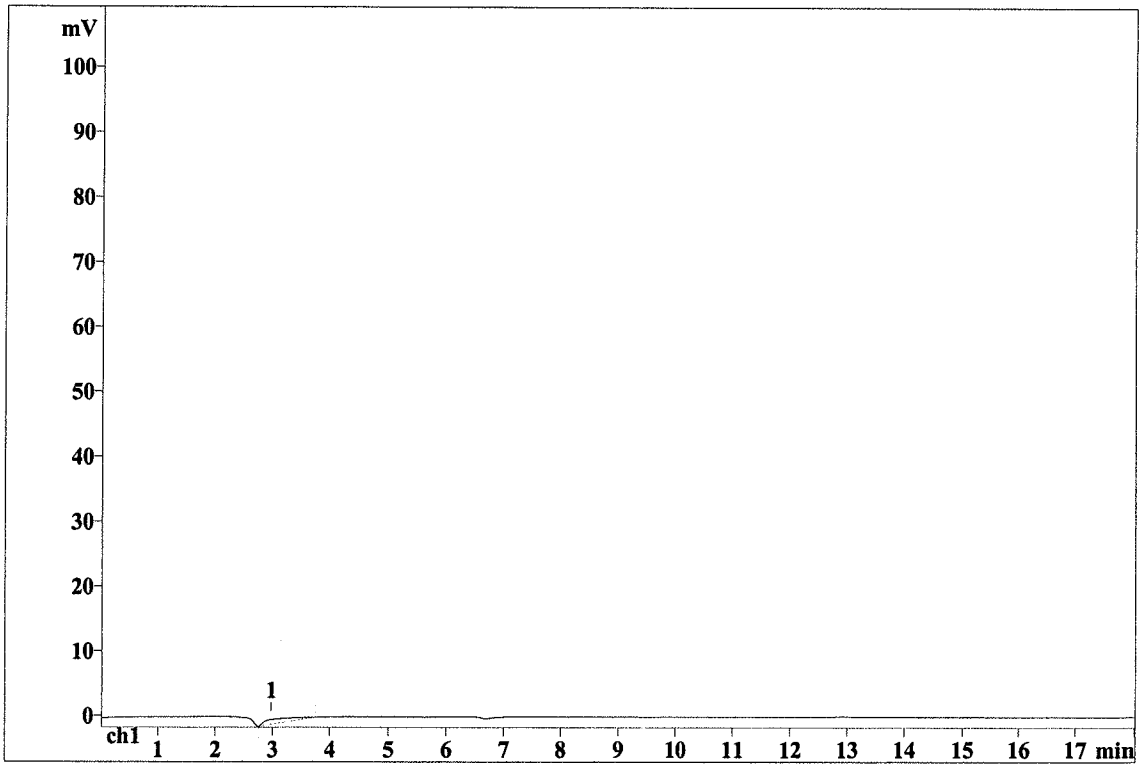
# QC DATA

Report date: 12/17/2020 11:49:13 AM
Printed by: TWangc

Ident: AL10-03 ICL010WB
Analysis from: 12/16/2020 4:50:31 PM
File: _2020-12-16_16-50.chw Last save: 12/17/2020 11:43:31 AM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97272

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 2.96 | 0.71 | 25.621 | 0.000 | |

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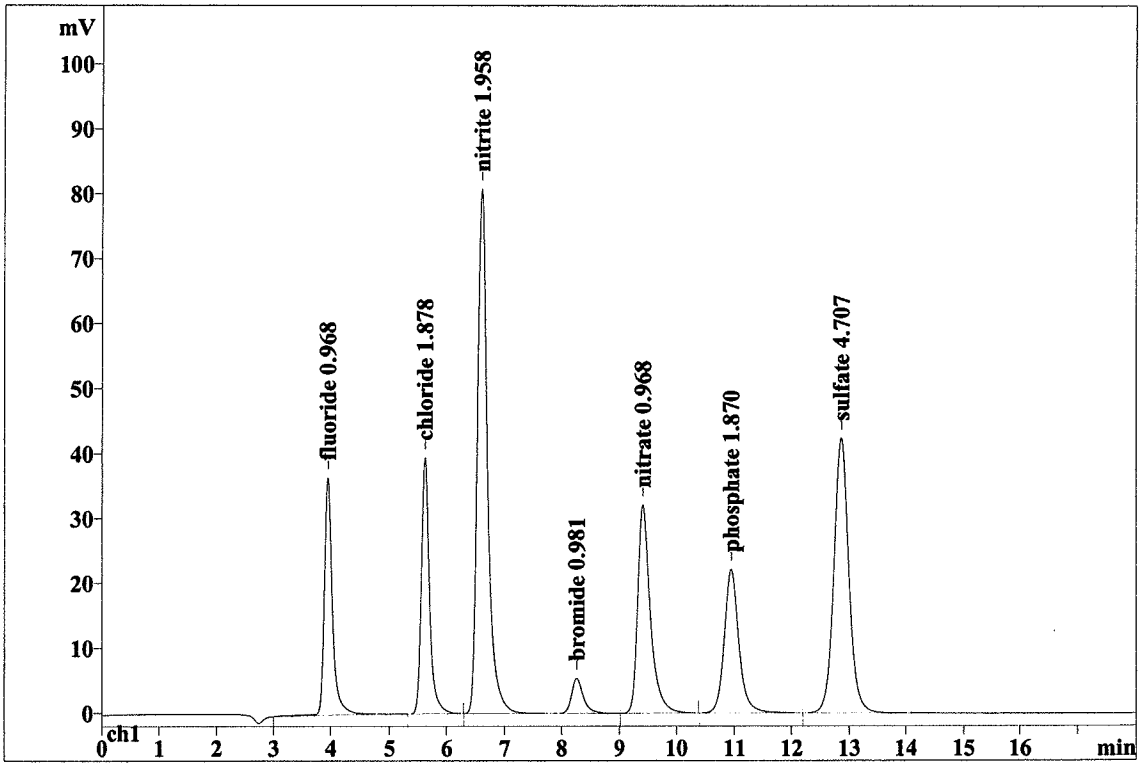
Report date: 12/17/2020 12:11:39 PM
Printed by: TWangc

Ident: AL10-04 ICL010WL
Analysis from: 12/16/2020 5:11:16 PM
File: _2020-12-16_17-11.chw Last save: 12/17/2020 11:49:56 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97273

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.95 | 36.61 | 351.093 | 0.968 | fluoride |
| 2 | 5.62 | 39.49 | 392.191 | 1.878 | chloride |
| 3 | 6.60 | 80.85 | 993.791 | 1.958 | nitrite |
| 4 | 8.26 | 5.41 | 76.213 | 0.981 | bromide |
| 5 | 9.42 | 32.13 | 487.961 | 0.968 | nitrate |
| 6 | 10.95 | 22.13 | 385.764 | 1.870 | phosphate |
| 7 | 12.86 | 42.41 | 755.089 | 4.707 | sulfate |
| 7 | 18.00 | 259.02 | 3442.102 | 13.331 | |

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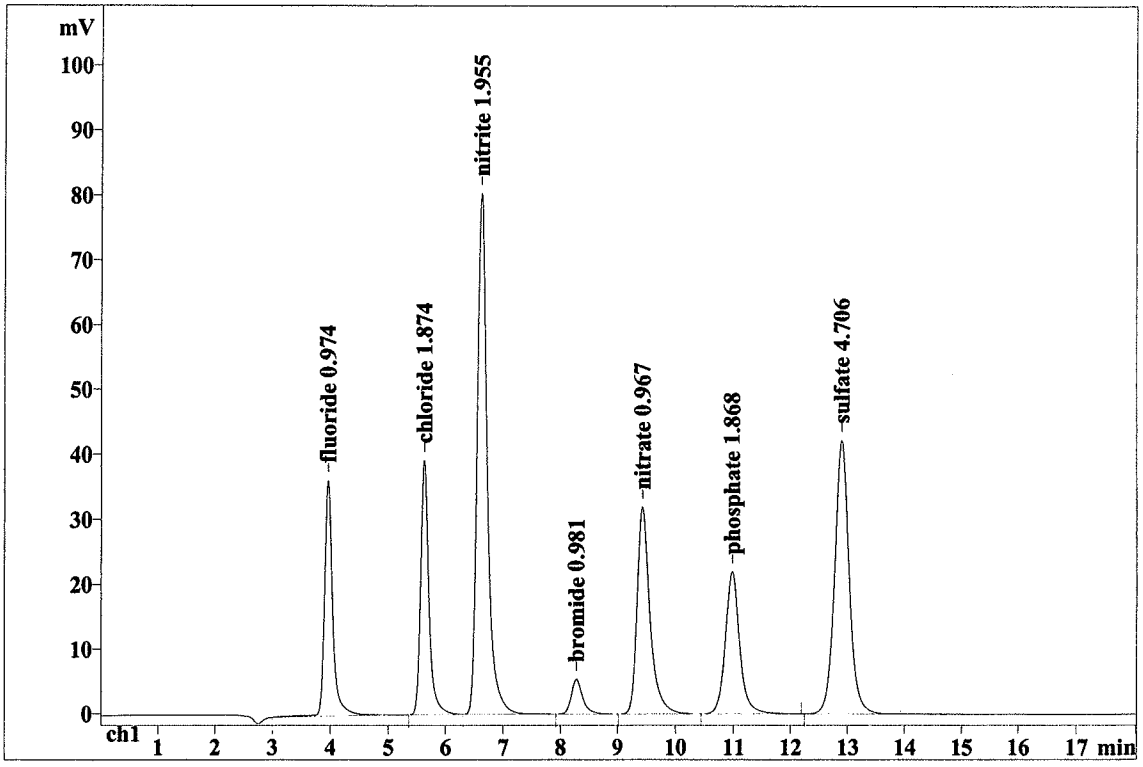
Report date: 12/17/2020 12:12:08 PM
Printed by: TWangc

Ident: AL10-05 ICL010WC
Analysis from: 12/16/2020 5:32:01 PM
File: _2020-12-16_17-32.chw Last save: 12/17/2020 11:52:36 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97274

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 36.34 | 353.192 | 0.974 | fluoride |
| 2 | 5.63 | 39.22 | 391.361 | 1.874 | chloride |
| 3 | 6.61 | 80.40 | 992.166 | 1.955 | nitrite |
| 4 | 8.27 | 5.39 | 76.167 | 0.981 | bromide |
| 5 | 9.43 | 31.99 | 487.124 | 0.967 | nitrate |
| 6 | 10.97 | 21.98 | 385.216 | 1.868 | phosphate |
| 7 | 12.89 | 42.22 | 755.074 | 4.706 | sulfate |
| 7 | 18.00 | 257.54 | 3440.300 | 13.325 | |

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# INITIAL CALIBRATION(S)

IC Result Check FormVersion : L15/AL08(2020)

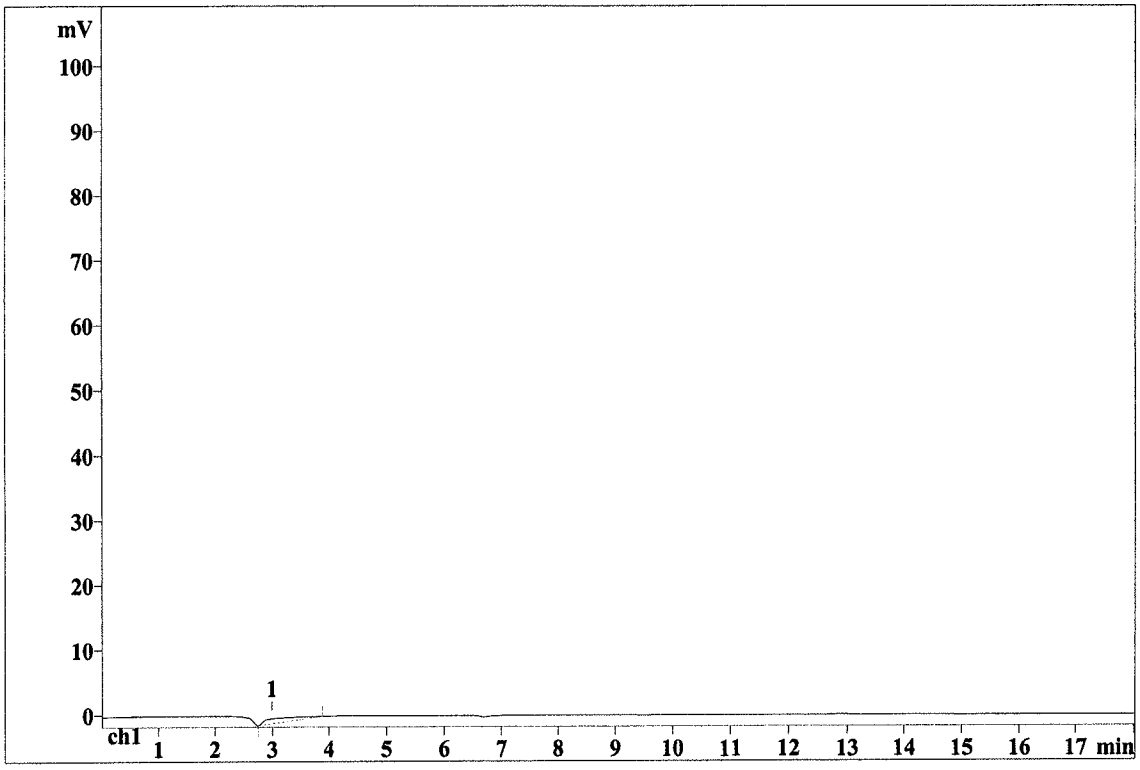
| LFID | LSID | Selection | iodide | chloride | fluoride | nitrite | bromide | nitrate | phosphate | sulfate | RawNetID | DF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL08-01 | IB | OCFIBNPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-15_19-32 | 1 |
| AL08-02 | S0 | OCFIBNPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-15_19-52 | 1 |
| AL08-03 | S1 | OCFIBNPS | 0 | 0.109991 | 0.0649283 | 0.0749662 | 0.24345 | 0.0757 | 0.239607 | 0.233626 | _2020-12-15_20-13 | 1 |
| AL08-04 | S2 | OCFIBNPS | 0 | 0.148312 | 0.105483 | 0.119409 | 0.282551 | 0.116257 | 0.270279 | 0.273066 | _2020-12-15_20-34 | 1 |
| AL08-05 | S3 | OCFIBNPS | 0 | 0.229242 | 0.199874 | 0.202531 | 0.358208 | 0.199356 | 0.335305 | 0.349099 | _2020-12-15_20-55 | 1 |
| AL08-06 | S4 | OCFIBNPS | 0 | 0.483008 | 0.471265 | 0.475574 | 0.59689 | 0.472519 | 0.548758 | 0.587014 | _2020-12-15_21-15 | 1 |
| AL08-07 | S5 | OCFIBNPS | 0 | 0.933858 | 0.958688 | 0.963276 | 1.00274 | 0.964759 | 0.945777 | 0.995432 | _2020-12-15_21-36 | 1 |
| AL08-08 | S6 | OCFIBNPS | 0 | 1.89713 | 1.99436 | 1.97679 | 1.84987 | 2.02141 | 1.81805 | 1.84779 | _2020-12-15_21-57 | 1 |
| AL08-09 | S7 | OCFIBNPS | 0 | 5.04847 | 5.10067 | 5.05804 | 4.62313 | 5.40976 | 4.72029 | 4.64984 | _2020-12-15_22-18 | 1 |
| AL08-10 | S8 | OCFIBNPS | 0 | 10.4993 | 9.95473 | 9.97942 | 9.62693 | 11.1887 | 9.79715 | 9.67273 | _2020-12-15_22-38 | 1 |
| AL08-11 | S9 | OCFIBNPS | 0 | 21.6328 | 18.8165 | 19.1676 | 20.2662 | 22.9461 | 20.1748 | 20.2414 | _2020-12-15_22-59 | 1 |
| AL08-12 | ICV | OCFIBNPS | 0%* | 93.7% | 95.9% | 98.2% | 97.9% | 96.3% | 91.8% | 94.2% | _2020-12-15_23-20 | 1 |
| AL08-13 | ICV1 | OCFIBNPS | 0%* | 92.3% | 97.7% | 96.2% | 98.4% | 96.2% | 96.5% | 99.5% | _2020-12-15_23-41 | 1 |
| AL08-14 | ICB | OCFIBNPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-16_00-01 | 1 |

Report date: 12/16/2020 1:33:06 PM
Printed by: TWangc

Ident: AL08-02 S0
Analysis from: 12/15/2020 7:52:47 PM
File: _2020-12-15_19-52.chw Last save: 12/16/2020 1:32:24 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97255

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 2.97 | 0.75 | 30.327 | 0.000 | |

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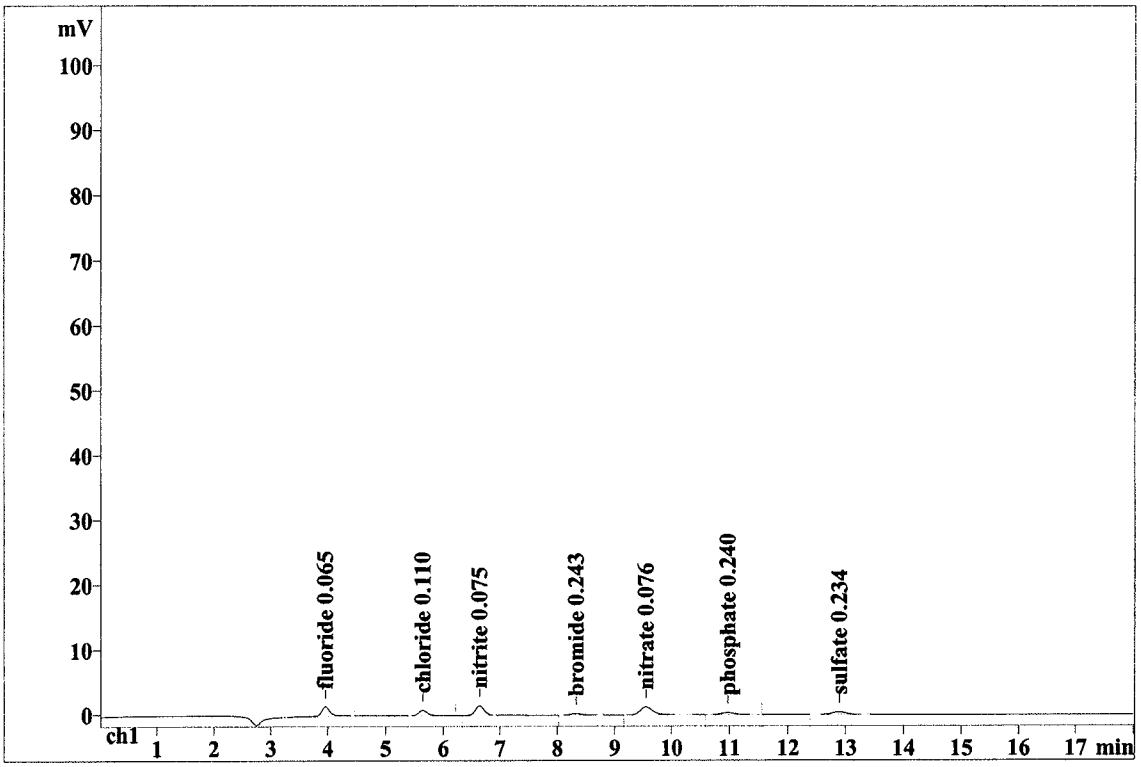
Report date: 12/16/2020 1:33:07 PM
Printed by: TWangc

Ident: AL08-03 S1
Analysis from: 12/15/2020 8:13:32 PM
File: _2020-12-15_20-13.chw Last save: 12/16/2020 1:29:31 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97256

SAMPLE: METHOD 300/9056/4110B
: 0.05 PPM
Vial number: 3
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 1.49 | 17.633 | 0.065 | fluoride |
| 2 | 5.64 | 0.80 | 8.518 | 0.110 | chloride |
| 3 | 6.65 | 1.46 | 15.974 | 0.075 | nitrite |
| 4 | 8.33 | 0.25 | 3.739 | 0.243 | bromide |
| 5 | 9.55 | 1.24 | 20.277 | 0.076 | nitrate |
| 6 | 10.97 | 0.31 | 5.566 | 0.240 | phosphate |
| 7 | 12.89 | 0.40 | 7.779 | 0.234 | sulfate |
| 7 | 18.00 | 5.95 | 79.485 | 1.042 | |

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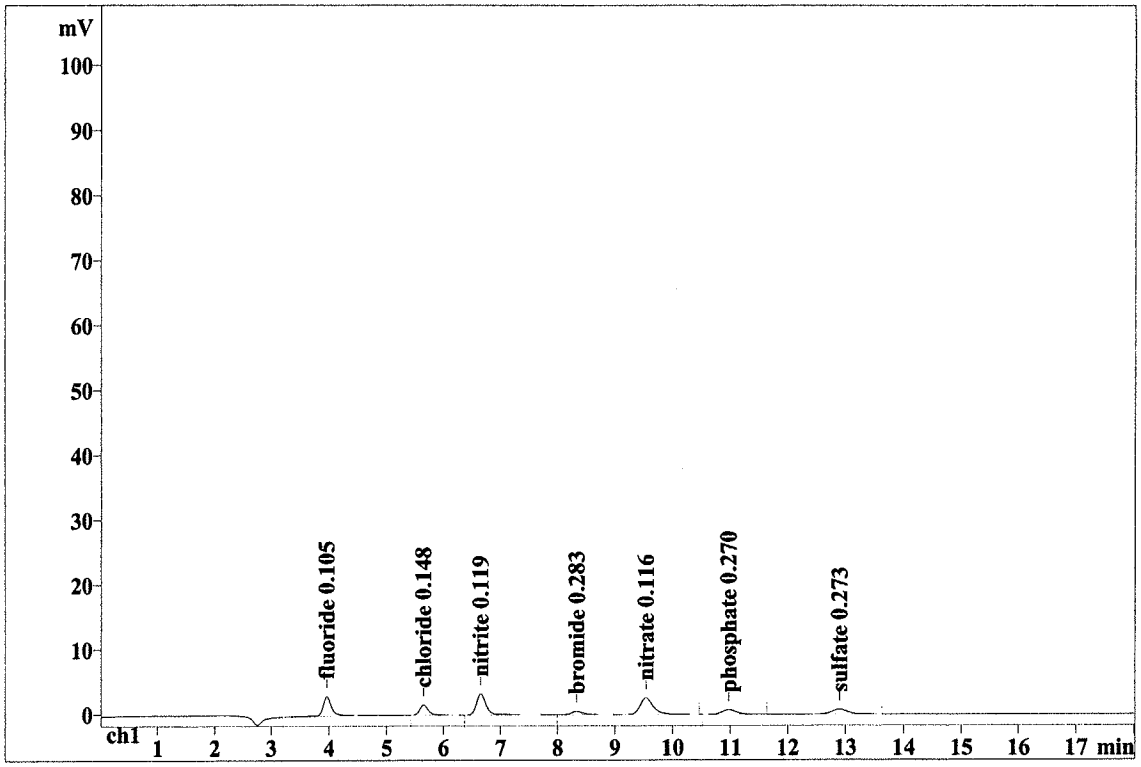
Report date: 12/16/2020 1:33:09 PM
Printed by: TWangc

Ident: AL08-04 S2
Analysis from: 12/15/2020 8:34:17 PM
File: _2020-12-15_20-34.chw Last save: 12/16/2020 1:29:31 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97257

SAMPLE: METHOD 300/9056/4110B
: 0.1 PPM
Vial number: 4
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 3.02 | 32.606 | 0.105 | fluoride |
| 2 | 5.65 | 1.58 | 16.835 | 0.148 | chloride |
| 3 | 6.66 | 3.25 | 39.047 | 0.119 | nitrite |
| 4 | 8.33 | 0.51 | 7.581 | 0.283 | bromide |
| 5 | 9.55 | 2.57 | 41.525 | 0.116 | nitrate |
| 6 | 10.97 | 0.72 | 12.717 | 0.270 | phosphate |
| 7 | 12.90 | 0.74 | 14.368 | 0.273 | sulfate |
| 7 | 18.00 | 12.40 | 164.679 | 1.315 | |

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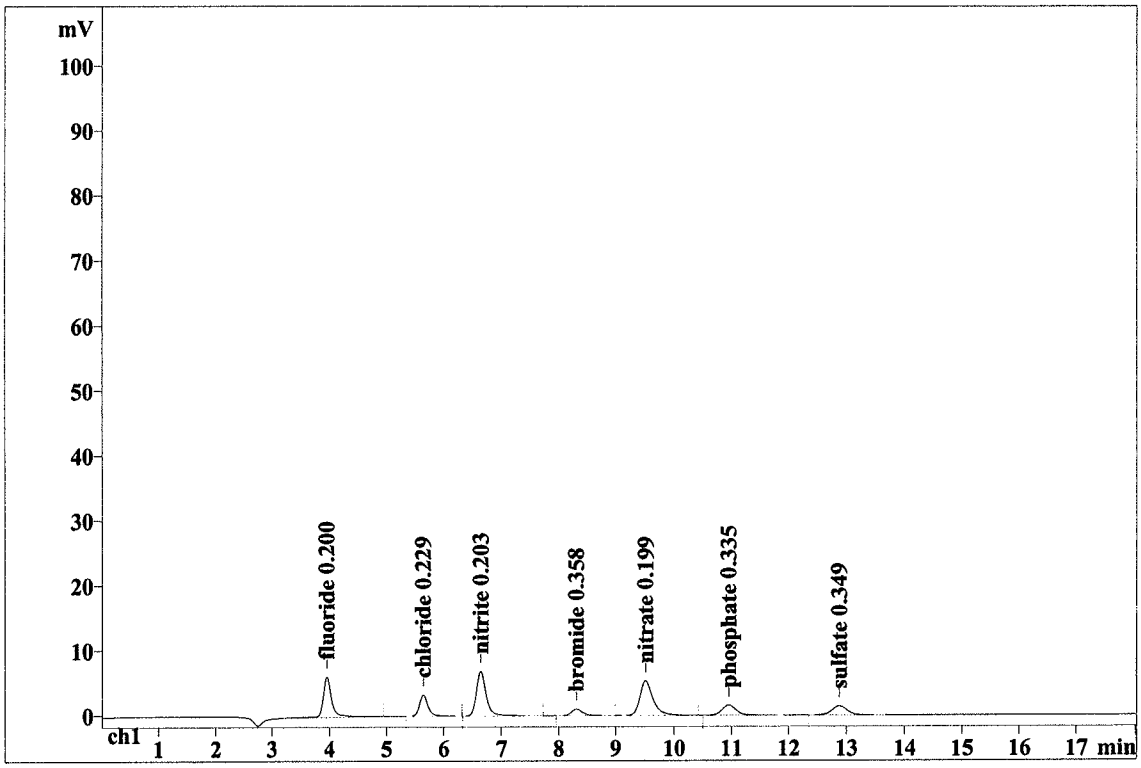
12/17/20

Report date: 12/16/2020 1:33:11 PM
Printed by: TWangc

Ident: AL08-05 S3
Analysis from: 12/15/2020 8:55:02 PM
File: _2020-12-15_20-55.chw Last save: 12/16/2020 1:29:31 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97258

SAMPLE: METHOD 300/9056/4110B
: 0.2 PPM
Vial number: 5
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 6.23 | 67.456 | 0.200 | fluoride |
| 2 | 5.64 | 3.26 | 34.398 | 0.229 | chloride |
| 3 | 6.64 | 6.89 | 82.201 | 0.203 | nitrite |
| 4 | 8.31 | 1.03 | 15.015 | 0.358 | bromide |
| 5 | 9.52 | 5.36 | 85.060 | 0.199 | nitrate |
| 6 | 10.95 | 1.57 | 27.878 | 0.335 | phosphate |
| 7 | 12.88 | 1.41 | 27.071 | 0.349 | sulfate |
| 7 | 18.00 | 25.77 | 339.079 | 1.874 | |

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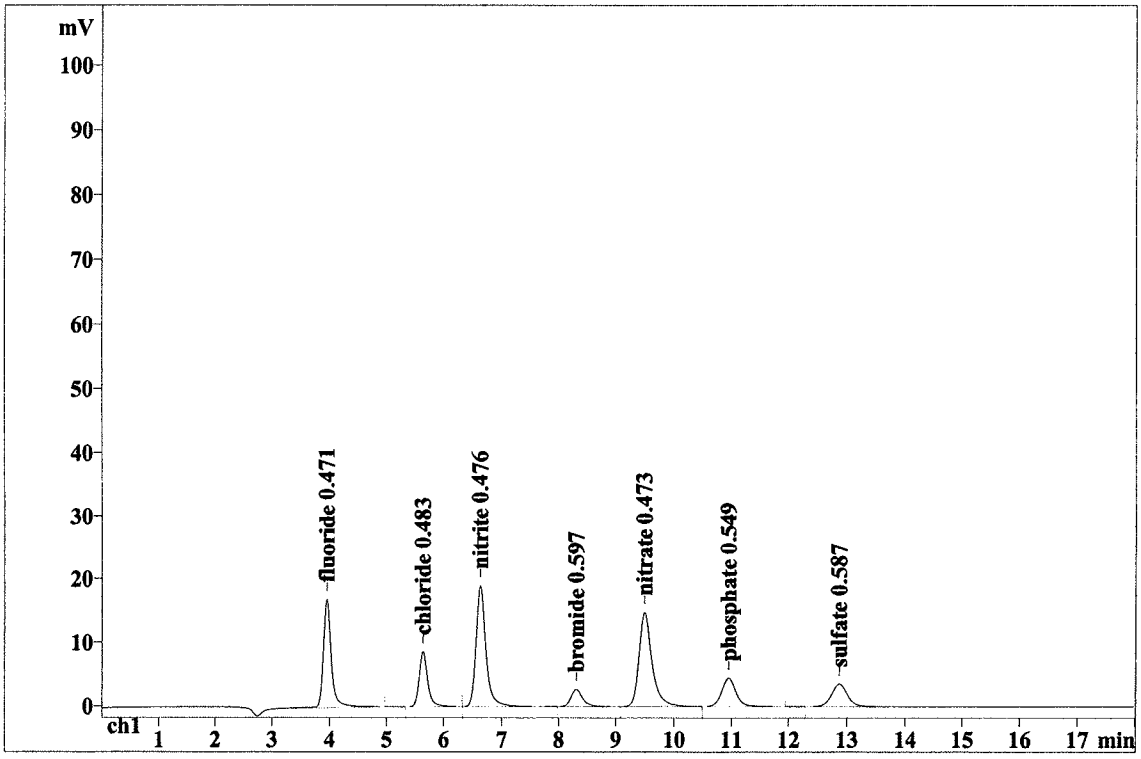
Report date: 12/16/2020 1:33:13 PM
Printed by: TWangc

Ident: AL08-06 S4
Analysis from: 12/15/2020 9:15:46 PM
File: _2020-12-15_21-15.chw Last save: 12/16/2020 1:29:31 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97259

SAMPLE: METHOD 300/9056/4110B
: 0.5 PPM
Vial number: 6
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.95 | 16.98 | 167.656 | 0.471 | fluoride |
| 2 | 5.64 | 8.63 | 89.470 | 0.483 | chloride |
| 3 | 6.64 | 18.93 | 223.955 | 0.476 | nitrite |
| 4 | 8.31 | 2.68 | 38.468 | 0.597 | bromide |
| 5 | 9.49 | 14.76 | 228.172 | 0.473 | nitrate |
| 6 | 10.95 | 4.43 | 77.644 | 0.549 | phosphate |
| 7 | 12.88 | 3.52 | 66.821 | 0.587 | sulfate |
| 7 | 18.00 | 69.93 | 892.185 | 3.635 | |

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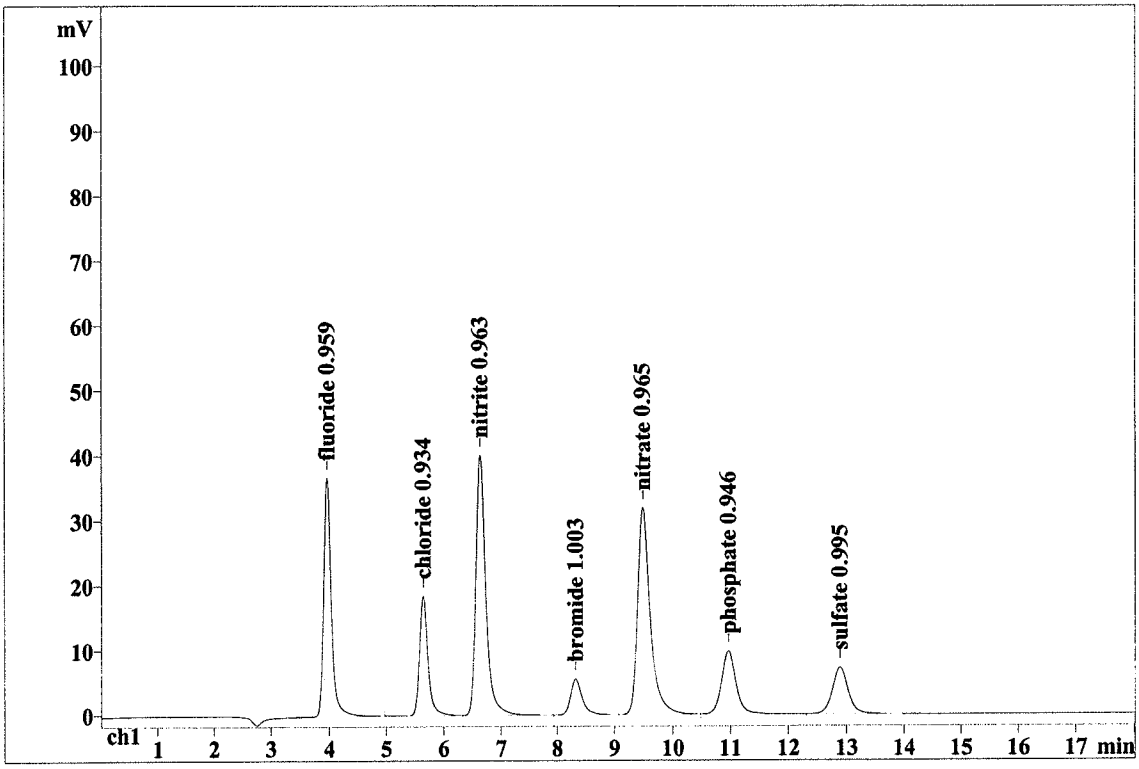
Report date: 12/16/2020 1:33:15 PM
Printed by: TWangc

Ident: AL08-07 S5
Analysis from: 12/15/2020 9:36:31 PM
File: _2020-12-15_21-36.chw Last save: 12/16/2020 1:29:31 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97260

SAMPLE: METHOD 300/9056/4110B
: 1.0 PPM
Vial number: 7
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 36.88 | 347.618 | 0.959 | fluoride |
| 2 | 5.65 | 18.47 | 187.312 | 0.934 | chloride |
| 3 | 6.64 | 40.14 | 477.152 | 0.963 | nitrite |
| 4 | 8.32 | 5.55 | 78.348 | 1.003 | bromide |
| 5 | 9.48 | 31.93 | 486.058 | 0.965 | nitrate |
| 6 | 10.96 | 9.76 | 170.207 | 0.946 | phosphate |
| 7 | 12.89 | 7.21 | 135.057 | 0.995 | sulfate |
| 7 | 18.00 | 149.95 | 1881.752 | 6.765 | |

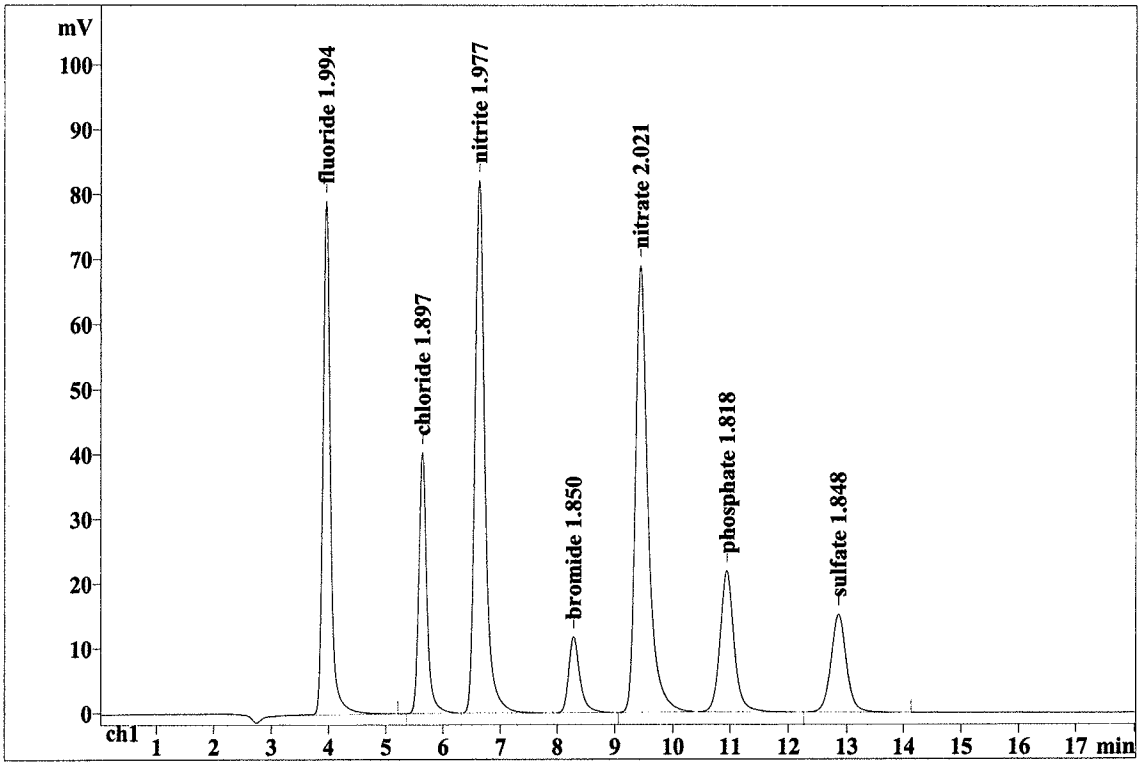
This report has been created by IC Net
METROHM LTD

Report date: 12/16/2020 1:33:17 PM
Printed by: TWangc

Ident: AL08-08 S6
Analysis from: 12/15/2020 9:57:16 PM
File: _2020-12-15_21-57.chw Last save: 12/16/2020 1:29:31 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97261

SAMPLE: METHOD 300/9056/4110B
: 2.0 PPM
Vial number: 8
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 79.22 | 729.997 | 1.994 | fluoride |
| 2 | 5.63 | 40.39 | 396.358 | 1.897 | chloride |
| 3 | 6.62 | 82.17 | 1003.331 | 1.977 | nitrite |
| 4 | 8.29 | 11.78 | 161.587 | 1.850 | bromide |
| 5 | 9.43 | 68.92 | 1039.642 | 2.021 | nitrate |
| 6 | 10.94 | 21.85 | 373.574 | 1.818 | phosphate |
| 7 | 12.86 | 15.19 | 277.465 | 1.848 | sulfate |
| 7 | 18.00 | 319.51 | 3981.955 | 13.405 | |

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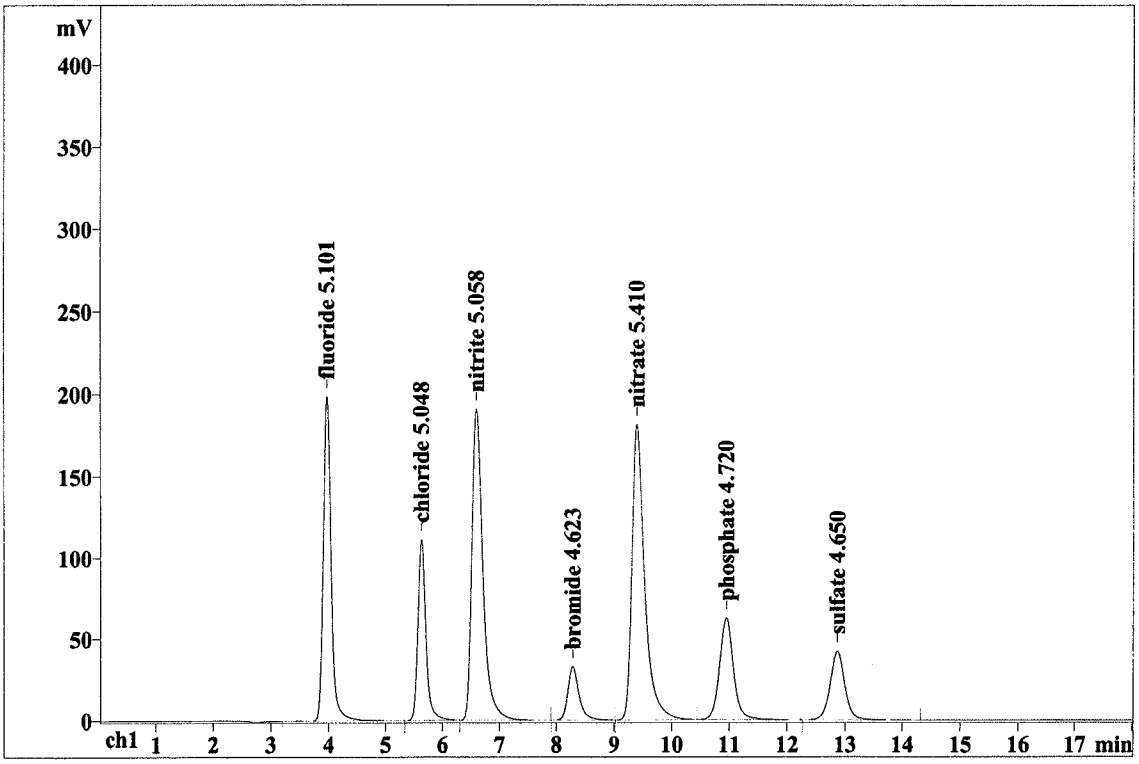
Report date: 12/16/2020 1:33:29 PM
Printed by: TWangc

Ident: AL08-09 S7
Analysis from: 12/15/2020 10:18:01 PM
File: _2020-12-15_22-18.chw Last save: 12/16/2020 1:29:31 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97262

SAMPLE: METHOD 300/9056/4110B
: 5.0 PPM
Vial number: 9
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.97 | 198.56 | 1876.880 | 5.101 | fluoride |
| 2 | 5.63 | 111.17 | 1080.254 | 5.048 | chloride |
| 3 | 6.59 | 190.42 | 2603.006 | 5.058 | nitrite |
| 4 | 8.28 | 32.66 | 434.091 | 4.623 | bromide |
| 5 | 9.39 | 181.08 | 2814.815 | 5.410 | nitrate |
| 6 | 10.95 | 62.31 | 1050.220 | 4.720 | phosphate |
| 7 | 12.87 | 41.89 | 745.616 | 4.650 | sulfate |
| 7 | 18.00 | 818.09 | 10604.882 | 34.610 | |

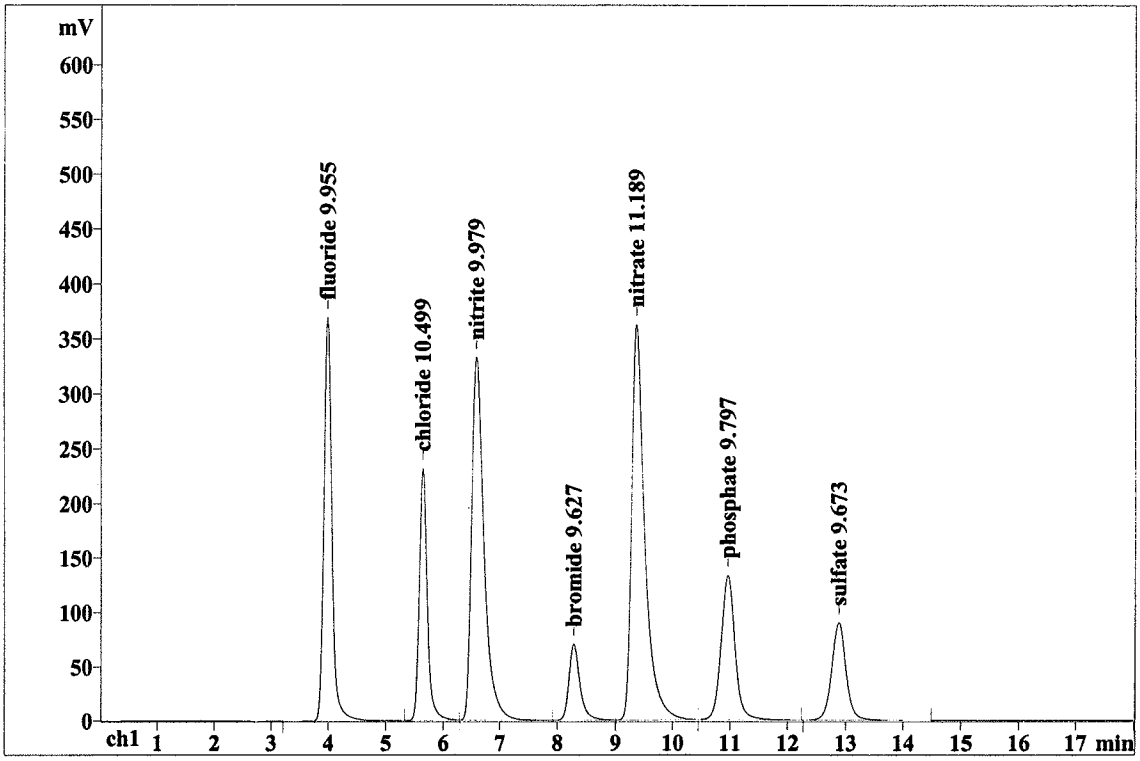
This report has been created by IC Net
METROHM LTD

Report date: 12/16/2020 1:33:33 PM
Printed by: TWangc

Ident: AL08-10 S8
Analysis from: 12/15/2020 10:38:45 PM
File: _2020-12-15_22-38.chw Last save: 12/16/2020 1:29:32 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97263

SAMPLE: METHOD 300/9056/4110B
: 10.0 PPM
Vial number: 10
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.99 | 369.62 | 3669.049 | 9.955 | fluoride |
| 2 | 5.64 | 231.34 | 2263.173 | 10.499 | chloride |
| 3 | 6.58 | 332.61 | 5158.010 | 9.979 | nitrite |
| 4 | 8.28 | 70.27 | 925.770 | 9.627 | bromide |
| 5 | 9.36 | 362.39 | 5842.403 | 11.189 | nitrate |
| 6 | 10.96 | 132.66 | 2233.869 | 9.797 | phosphate |
| 7 | 12.88 | 89.77 | 1584.816 | 9.673 | sulfate |
| 7 | 18.00 | 1588.66 | 21677.089 | 70.719 | |

This report has been created by IC Net
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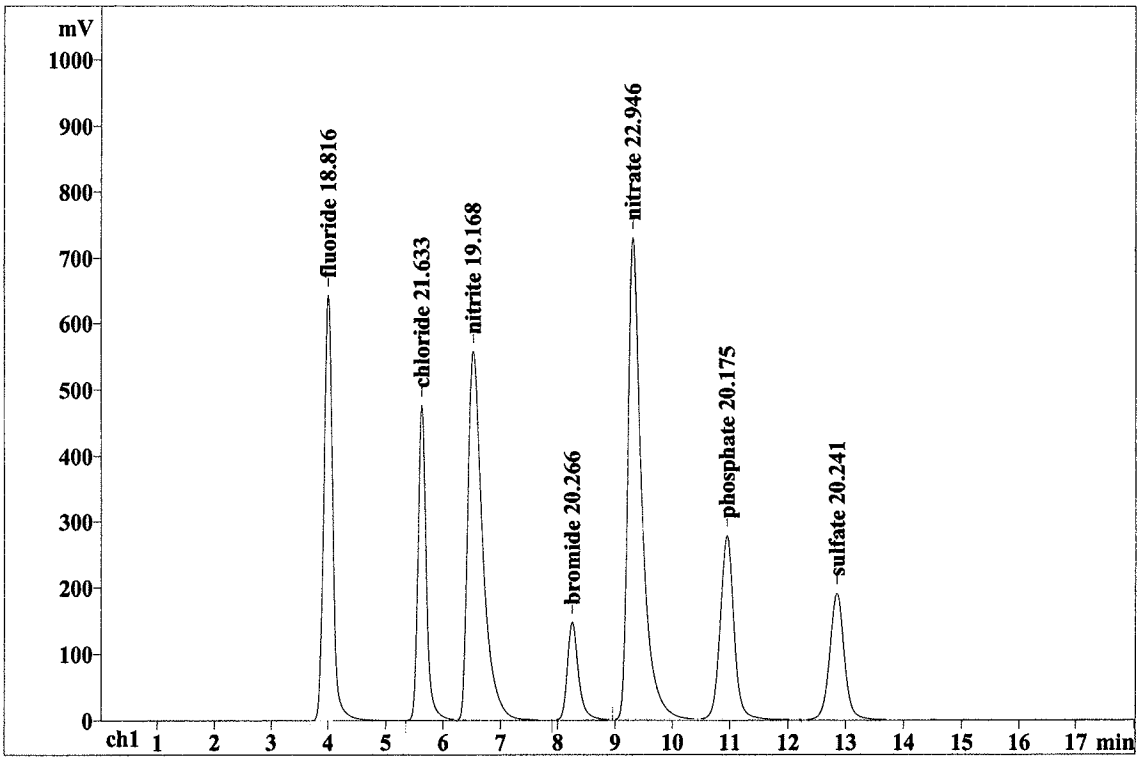
Report date: 12/16/2020 1:33:39 PM
Printed by: TWangc

Ident: AL08-11 S9
Analysis from: 12/15/2020 10:59:30 PM
File: _2020-12-15_22-59.chw Last save: 12/16/2020 1:29:32 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97264

SAMPLE: METHOD 300/9056/4110B
: 20.0 PPM
Vial number: 11
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 4.00 | 643.81 | 6940.889 | 18.816 | fluoride |
| 2 | 5.62 | 476.28 | 4679.355 | 21.633 | chloride |
| 3 | 6.52 | 556.63 | 9928.170 | 19.168 | nitrite |
| 4 | 8.25 | 146.92 | 1971.200 | 20.266 | bromide |
| 5 | 9.30 | 729.46 | 12002.151 | 22.946 | nitrate |
| 6 | 10.94 | 276.64 | 4653.372 | 20.175 | phosphate |
| 7 | 12.85 | 190.04 | 3350.573 | 20.241 | sulfate |
| 7 | 18.00 | 3019.78 | 43525.711 | 143.245 | |

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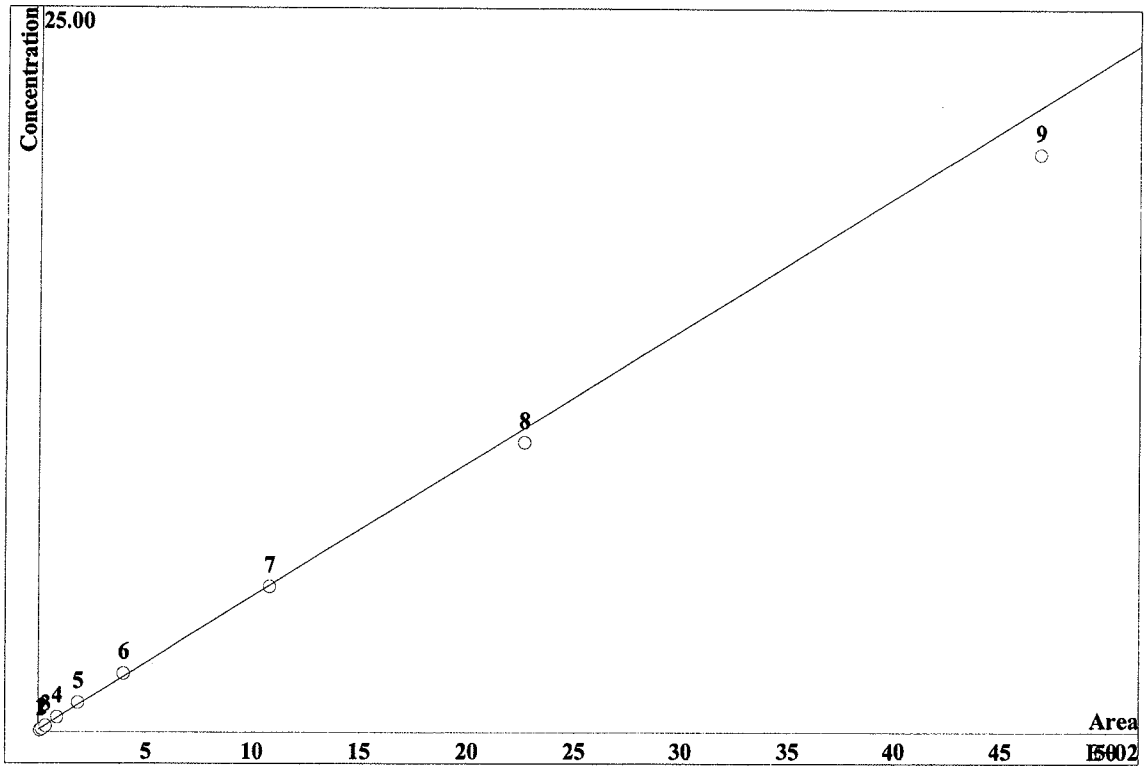
CALIBRATION OF COMPONENT chloride

Method: ICD7-L15.mtw
Equation: Q = 0.00460792·A + 0.0707388
RSD: 5.524 %
Correlation coefficient: 0.999362

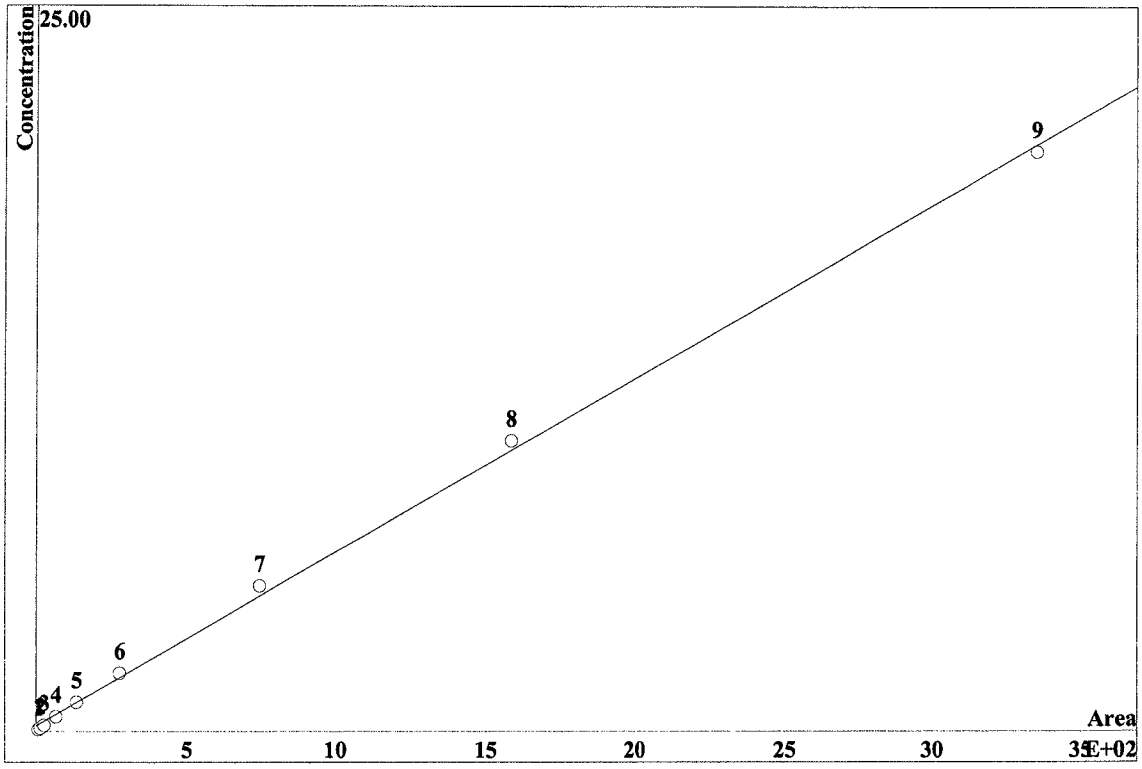



K3 = 0 K2 = 0 K1 = 0.00460792 K0 = 0.0707388
Base: Area
Ref.channel: ch1
ISTD:
Formula: Linear
Weight: 1

| Level | Height | Area | Conc. | Vol/Dil | Retention | Used | File |
|---|---|---|---|---|---|---|---|
| 1 | 0.7959 | 8.518 | 0.05 | 1 | 5.64 | Yes | _2020-12-15_2□ |
| 2 | 1.582 | 16.83 | 0.1 | 1 | 5.64 | Yes | _2020-12-15_2□ |
| 3 | 3.265 | 34.4 | 0.2 | 1 | 5.64 | Yes | _2020-12-15_2□ |
| 4 | 8.626 | 89.47 | 0.5 | 1 | 5.64 | Yes | _2020-12-15_2□ |
| 5 | 18.48 | 187.3 | 1 | 1 | 5.64 | Yes | _2020-12-15_2□ |
| 6 | 40.39 | 396.4 | 2 | 1 | 5.64 | Yes | _2020-12-15_2□ |
| 7 | 111.2 | 1080 | 5 | 1 | 5.64 | Yes | _2020-12-15_2□ |
| 8 | 231.3 | 2263 | 10 | 1 | 5.64 | No | _2020-12-15_2 |
| 9 | 476.3 | 4679 | 20 | 1 | 5.64 | No | _2020-12-15_2 |

CALIBRATION OF COMPONENT sulfate

Method: ICD7-L15.mtw
Equation: Q = 0.00598534·A + 0.187068
RSD: 5.570 %
Correlation coefficient: 0.999442




K3 = 0 K2 = 0 K1 = 0.00598534 K0 = 0.187068
Base: Area
Ref.channel: ch1
ISTD:
Formula: Linear
Weight: 1

| Level | Height | Area | Conc. | Vol/Dil | Retention | Used | File |
|---|---|---|---|---|---|---|---|
| 1 | 0.4038 | 7.779 | 0.05 | 1 | 12.88 | Yes | _2020-12-15_2□ |
| 2 | 0.7397 | 14.37 | 0.1 | 1 | 12.88 | Yes | _2020-12-15_2□ |
| 3 | 1.413 | 27.07 | 0.2 | 1 | 12.88 | Yes | _2020-12-15_2□ |
| 4 | 3.525 | 66.82 | 0.5 | 1 | 12.88 | Yes | _2020-12-15_2□ |
| 5 | 7.211 | 135.1 | 1 | 1 | 12.88 | Yes | _2020-12-15_2□ |
| 6 | 15.19 | 277.5 | 2 | 1 | 12.88 | Yes | _2020-12-15_2□ |
| 7 | 41.89 | 745.6 | 5 | 1 | 12.88 | Yes | _2020-12-15_2□ |
| 8 | 89.77 | 1585 | 10 | 1 | 12.88 | Yes | _2020-12-15_2 |
| 9 | 190 | 3351 | 20 | 1 | 12.88 | Yes | _2020-12-15_2 |

# SECOND SOURCE VERIFICATION

IC Result Check FormVersion : L15/AL08(2020)

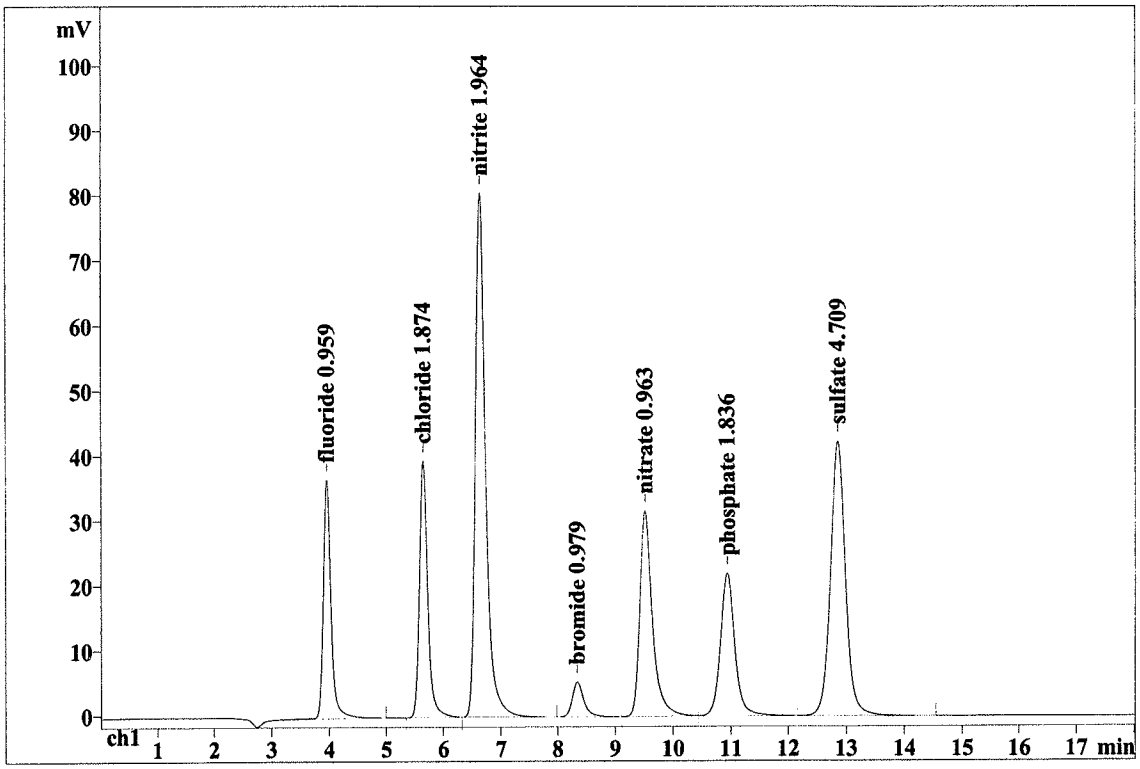
| LFID | LSID | Selection | phosphate | nitrite | nitrate | iodide | fluoride | chloride | bromide | sulfate | RawNetID | DF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL08-01 | IB | PINOFCBS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-15_19-32 | 1 |
| AL08-12 | ICV | PINOFCBS | 91.8% | 98.2% | 96.3% | 0%* | 95.9% | 93.7% | 97.9% | 94.2% | _2020-12-15_23-20 | 1 |
| AL08-13 | ICV1 | PINOFCBS | 96.5% | 96.2% | 96.2% | 0%* | 97.7% | 92.3% | 98.4% | 99.5% | _2020-12-15_23-41 | 1 |
| AL08-14 | ICB | PINOFCBS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-16_00-01 | 1 |

Report date: 12/16/2020 1:33:41 PM
Printed by: TWangc

Ident: AL08-12 ICV
Analysis from: 12/15/2020 11:20:15 PM
File: _2020-12-15_23-20.chw Last save: 12/16/2020 1:29:32 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97265

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 12
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.95 | 36.75 | 347.868 | 0.959 | fluoride |
| 2 | 5.64 | 39.51 | 391.267 | 1.874 | chloride |
| 3 | 6.63 | 80.69 | 996.708 | 1.964 | nitrite |
| 4 | 8.34 | 5.36 | 76.044 | 0.979 | bromide |
| 5 | 9.52 | 31.65 | 484.931 | 0.963 | nitrate |
| 6 | 10.94 | 21.95 | 377.814 | 1.836 | phosphate |
| 7 | 12.85 | 42.28 | 755.538 | 4.709 | sulfate |
| 7 | 18.00 | 258.18 | 3430.171 | 13.284 | |

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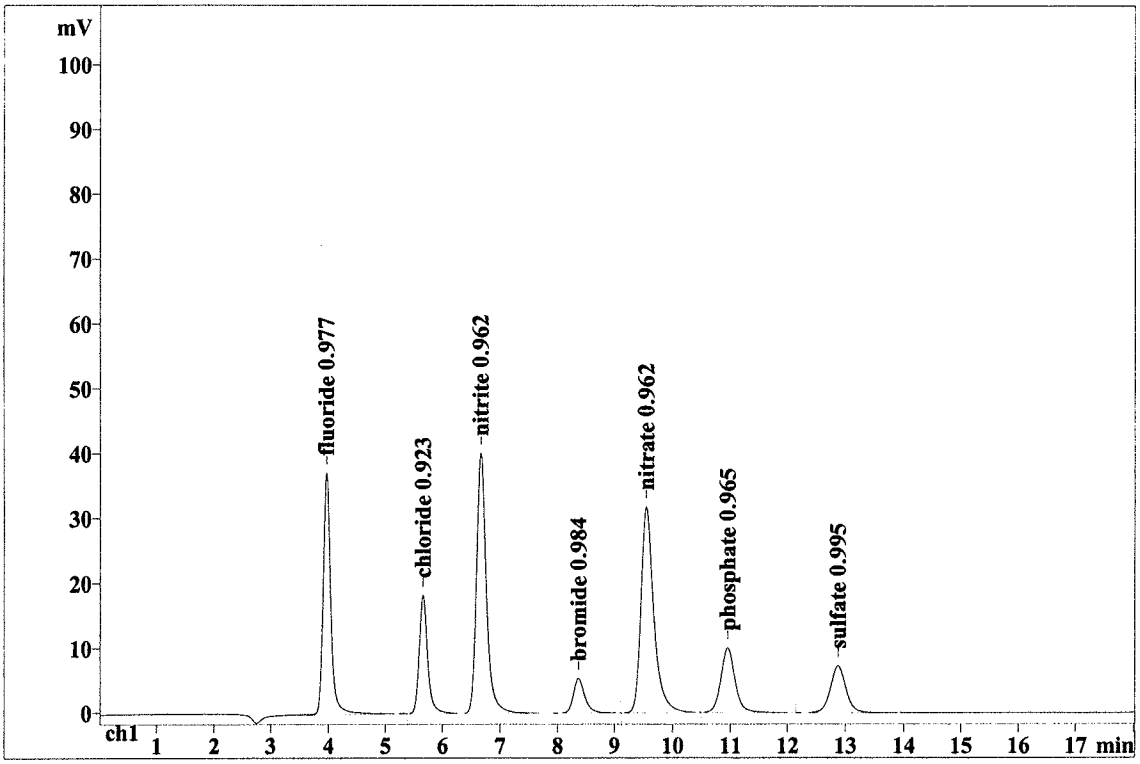
Report date: 12/16/2020 1:33:43 PM
Printed by: TWangc

Ident: AL08-13 ICV1
Analysis from: 12/15/2020 11:41:01 PM
File: _2020-12-15_23-41.chw Last save: 12/16/2020 1:29:32 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97266

SAMPLE: METHOD 300/9056/4110B
: 1.0 PPM
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 37.31 | 354.383 | 0.977 | fluoride |
| 2 | 5.66 | 18.28 | 184.869 | 0.923 | chloride |
| 3 | 6.66 | 40.15 | 476.567 | 0.962 | nitrite |
| 4 | 8.37 | 5.40 | 76.497 | 0.984 | bromide |
| 5 | 9.55 | 31.74 | 484.794 | 0.962 | nitrate |
| 6 | 10.95 | 10.04 | 174.642 | 0.965 | phosphate |
| 7 | 12.88 | 7.24 | 135.062 | 0.995 | sulfate |
| 7 | 18.00 | 150.16 | 1886.815 | 6.768 | |

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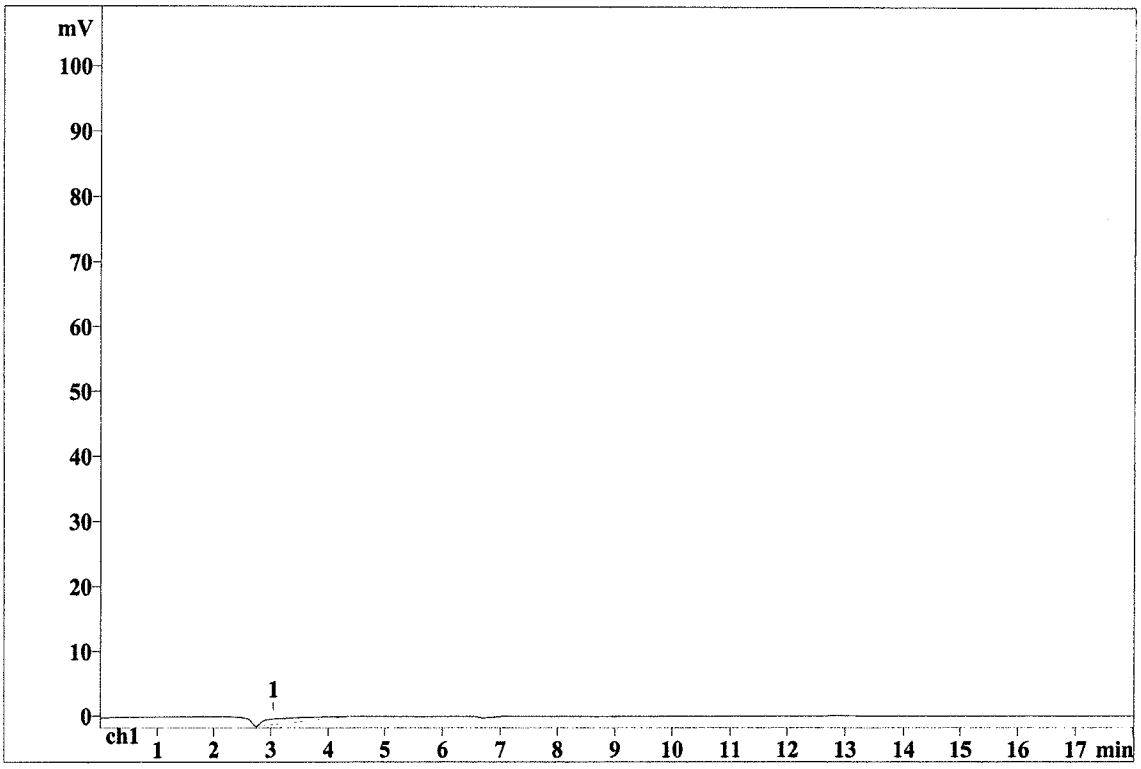
Report date: 12/16/2020 1:33:45 PM
Printed by: TWangc

Ident: AL08-14 ICB
Analysis from: 12/16/2020 12:01:45 AM
File: _2020-12-16_00-01.chw Last save: 12/16/2020 1:32:51 PM

Method: ICD7-L15.mtw Last save: 12/15/2020 9:13:02 PM
Run operator: TWangc
Analysis number: 97267

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 14
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.04 | 0.85 | 50.395 | 0.000 | |

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# DAILY CALIBRATION(S)

Continuing Calibration Summary Form

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG : 20L101
Method : E300.0
ICAL Ref. : 20AL08
InstrumentID: D7
Parameter : CHLORIDE

| LFID | LSID | Recovery (%) | AnalysisDateTime |
|---|---|---|---|
| AL10-01 | CCV2 | 93.9 | 12/16/2015:42 |
| AL10-13 | CCV4 | 93 | 12/16/2020:18 |
| AL10-25 | CCV6 | 93.5 | 12/17/2000:28 |
| AL10-36 | CCV8 | 94.1 | 12/17/2004:37 |
| AL10-47 | CCV10 | 93.9 | 12/17/2008:46 |
| AL10-57 | CCV12 | 96.6 | 12/17/2012:16 |

CCV Acceptance Criteria: 90-110%

Continuing Calibration Summary Form

Client : ARCADIS
Project : PG&E TOPOCK-GMP
SDG : 20L101
Method : E300.0
ICAL Ref. : 20AL08
InstrumentID: D7
Parameter : SULFATE

| LFID | LSID | Recovery (%) | AnalysisDateTime |
|---|---|---|---|
| AL10-01 | CCV2 | 94.1 | 12/16/2015:42 |
| AL10-13 | CCV4 | 93.4 | 12/16/2020:18 |
| AL10-25 | CCV6 | 94.1 | 12/17/2000:28 |
| AL10-36 | CCV8 | 94.5 | 12/17/2004:37 |
| AL10-47 | CCV10 | 95.3 | 12/17/2008:46 |
| AL10-57 | CCV12 | 98.2 | 12/17/2012:16 |

CCV Acceptance Criteria: 90-110%

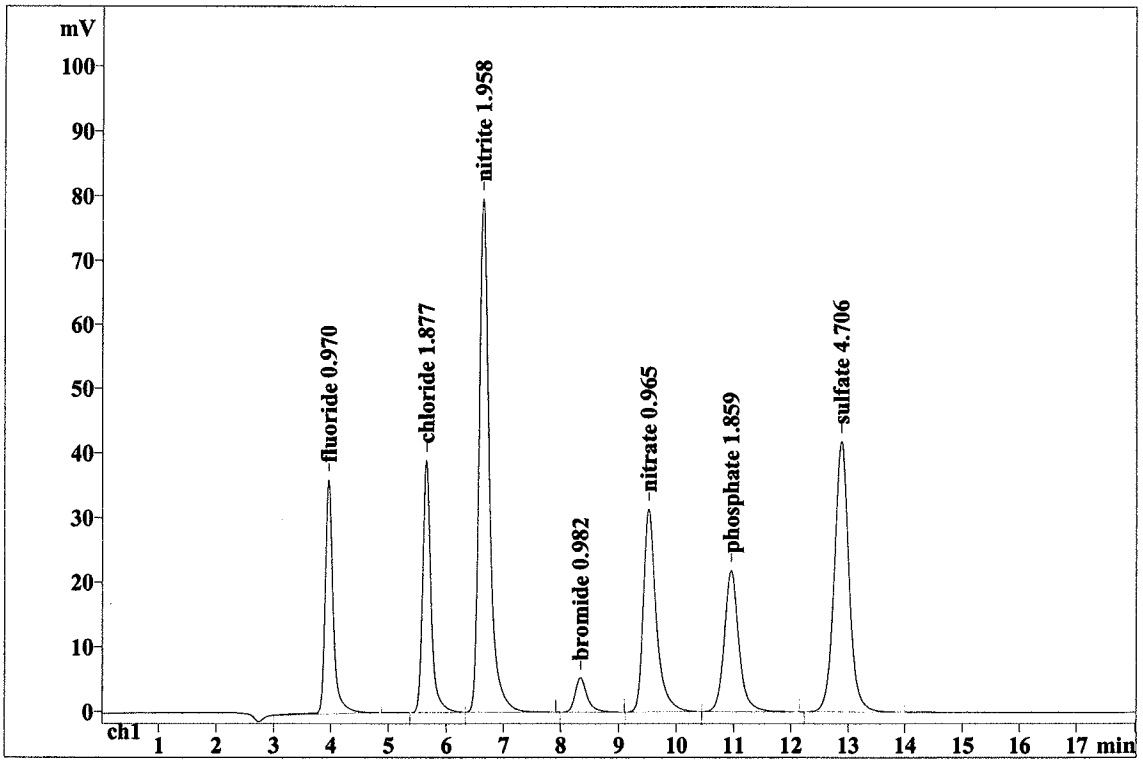
IC Result Check FormVersion : L15/AL08(2020)

| LFID | LSID | Selection | nitrate | chloride | fluoride | iodide | nitrite | bromide | phosphate | sulfate | RawNetID | DF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AL10-01 | CCV2 | NCFOIBPS | 96.5% | 93.9% | 97% | 0%* | 97.9% | 98.2% | 92.9% | 94.1% | _2020-12-16_15-42 | 1 |
| AL10-02 | CCB2 | NCFOIBPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-16_16-25 | 1 |
| AL10-13 | CCV4 | NCFOIBPS | 96.1% | 93% | 96.1% | 0%* | 97% | 97.5% | 92.5% | 93.4% | _2020-12-16_20-18 | 1 |
| AL10-14 | CCB4 | NCFOIBPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-16_20-39 | 1 |
| AL10-25 | CCV6 | NCFOIBPS | 95.9% | 93.5% | 97.4% | 0%* | 97.6% | 97.9% | 91.9% | 94.1% | _2020-12-17_00-28 | 1 |
| AL10-26 | CCB6 | NCFOIBPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-17_01-09 | 1 |
| AL10-36 | CCV8 | NCFOIBPS | 95.2% | 94.1% | 97.7% | 0%* | 97.9% | 98% | 91.2% | 94.5% | _2020-12-17_04-37 | 1 |
| AL10-37 | CCB8 | NCFOIBPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-17_05-18 | 1 |
| AL10-47 | CCV10 | NCFOIBPS | 94.4% | 93.9% | 98.6% | 0%* | 97.7% | 98.1% | 90.2% | 95.3% | _2020-12-17_08-46 | 1 |
| AL10-48 | CCB10 | NCFOIBPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-17_09-06 | 1 |
| AL10-57 | CCV12 | NCFOIBPS | 99.1% | 96.6% | 104.5% | 0%* | 99.5% | 101.1% | 94.6% | 98.2% | _2020-12-17_12-16 | 1 |
| AL10-58 | CCB12 | NCFOIBPS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | _2020-12-17_12-37 | 1 |

Report date: 12/17/2020 11:48:36 AM
Printed by: TWangc

Ident: AL10-01 CCV2
Analysis from: 12/16/2020 3:42:00 PM
File: _2020-12-16_15-42.chw Last save: 12/16/2020 4:00:00 PM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97269

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 1
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 36.18 | 351.761 | 0.970 | fluoride |
| 2 | 5.65 | 39.01 | 392.041 | 1.877 | chloride |
| 3 | 6.64 | 79.66 | 993.569 | 1.958 | nitrite |
| 4 | 8.34 | 5.31 | 76.272 | 0.982 | bromide |
| 5 | 9.52 | 31.38 | 486.158 | 0.965 | nitrate |
| 6 | 10.95 | 21.83 | 383.112 | 1.859 | phosphate |
| 7 | 12.88 | 41.88 | 754.919 | 4.706 | sulfate |
| 7 | 18.00 | 255.25 | 3437.832 | 13.316 | |

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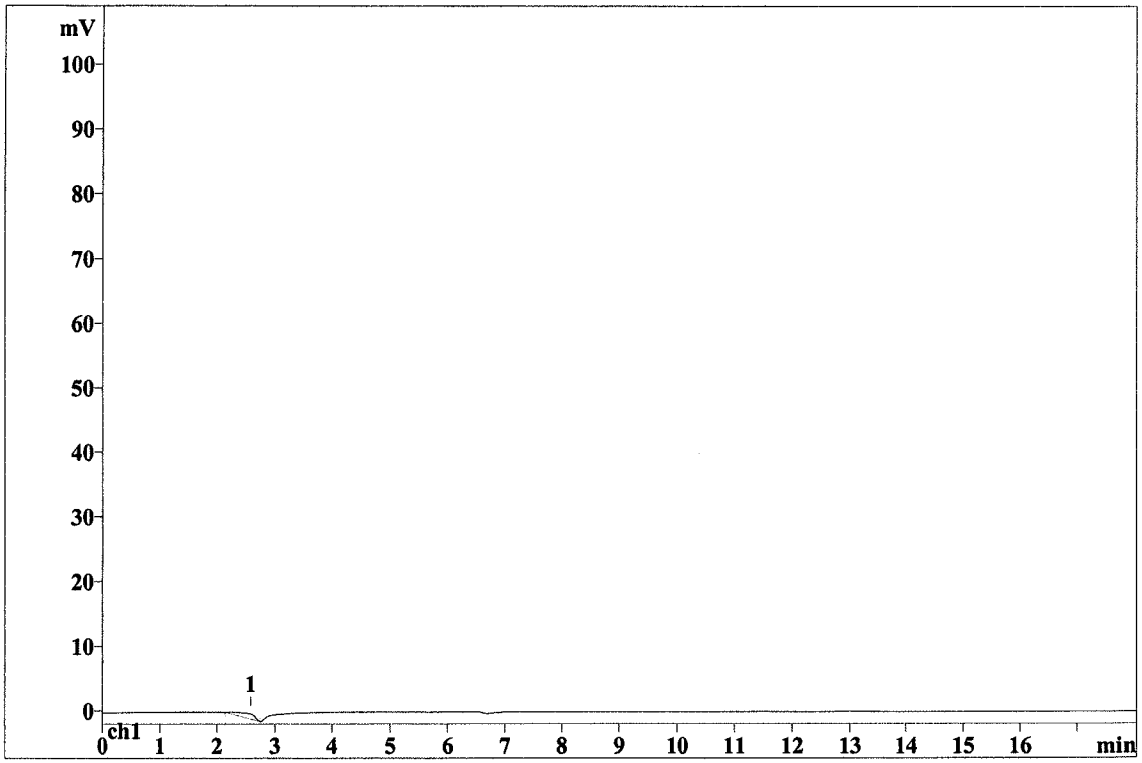
Report date: 12/17/2020 11:49:05 AM
Printed by: TWangc

Ident: AL10-02 CCB2
Analysis from: 12/16/2020 4:25:36 PM
File: _2020-12-16_16-25.chw Last save: 12/16/2020 4:43:36 PM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97271

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 2
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

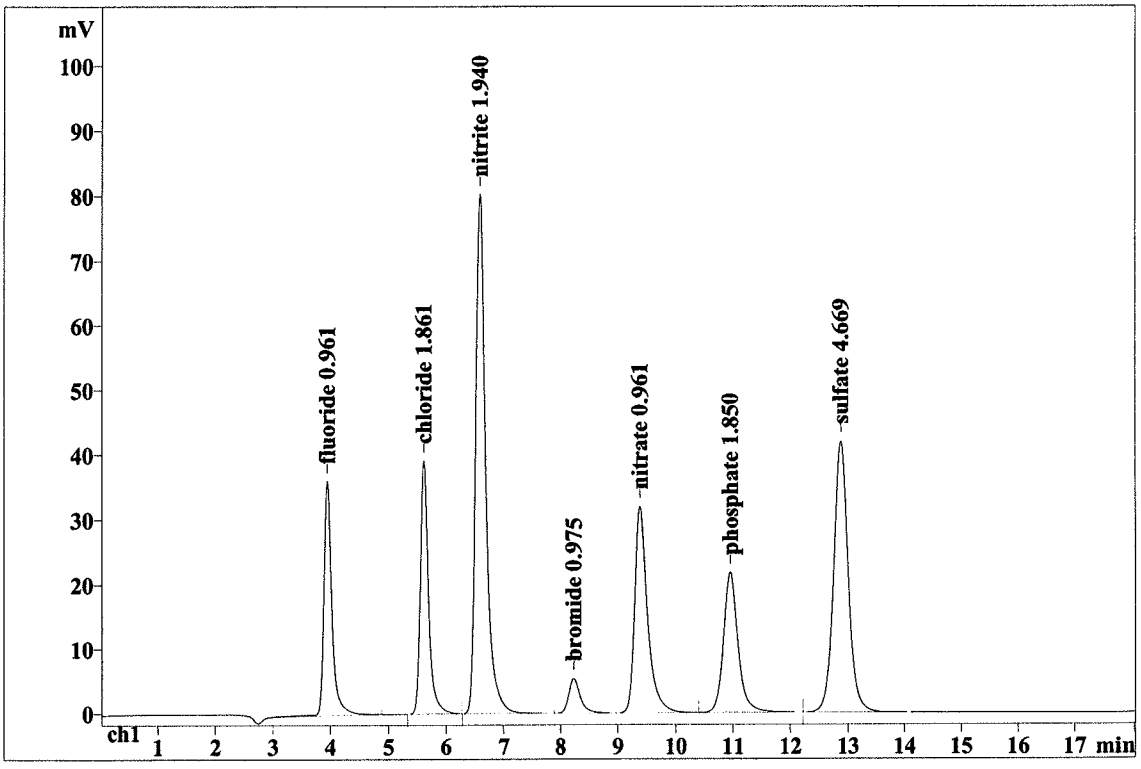
| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 2.58 | 0.81 | 16.806 | 0.000 | |

This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 11:52:54 AM
Printed by: TWangc

Ident: AL10-13 CCV4
Analysis from: 12/16/2020 8:18:55 PM
File: _2020-12-16_20-18.chw Last save: 12/16/2020 8:36:55 PM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97282

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 13
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.95 | 36.27 | 348.427 | 0.961 | fluoride |
| 2 | 5.61 | 39.17 | 388.414 | 1.861 | chloride |
| 3 | 6.58 | 80.32 | 984.074 | 1.940 | nitrite |
| 4 | 8.23 | 5.38 | 75.647 | 0.975 | bromide |
| 5 | 9.38 | 31.97 | 484.095 | 0.961 | nitrate |
| 6 | 10.95 | 21.77 | 381.101 | 1.850 | phosphate |
| 7 | 12.87 | 41.95 | 748.785 | 4.669 | sulfate |
| 7 | 18.00 | 256.84 | 3410.541 | 13.216 | |

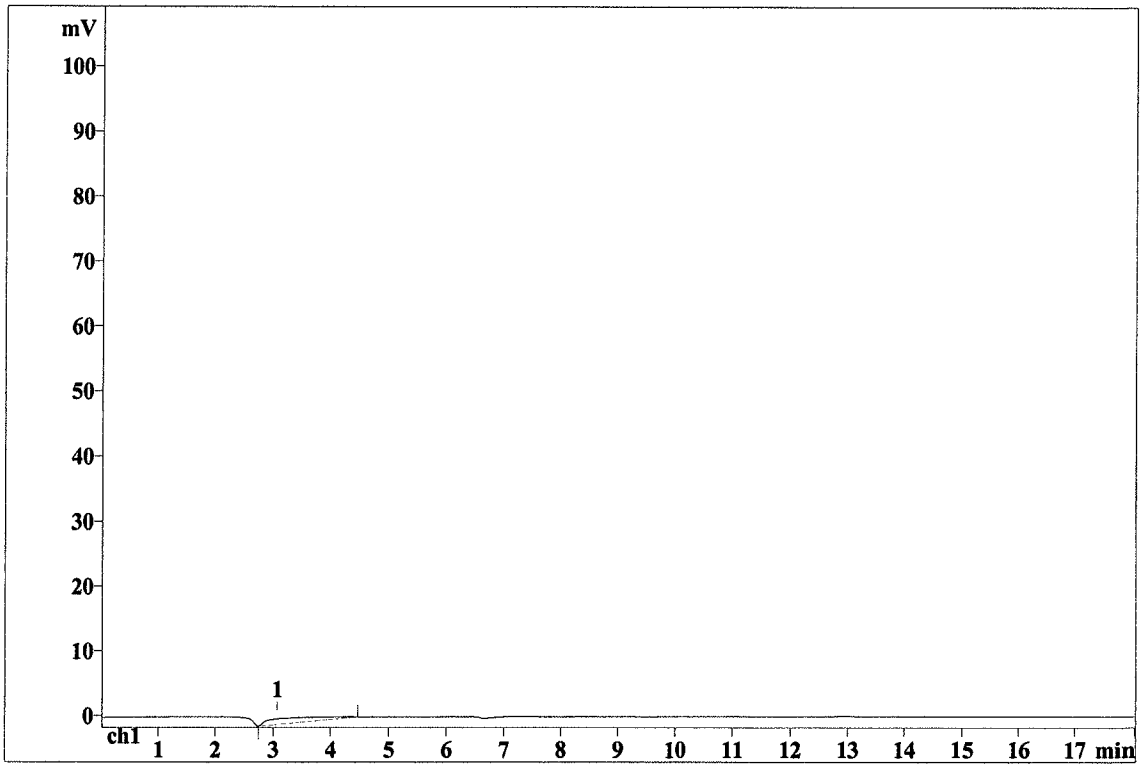
This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 11:53:02 AM
Printed by: TWangc

Ident: AL10-14 CCB4
Analysis from: 12/16/2020 8:39:53 PM
File: _2020-12-16_20-39.chw Last save: 12/16/2020 8:57:53 PM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97283

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 14
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

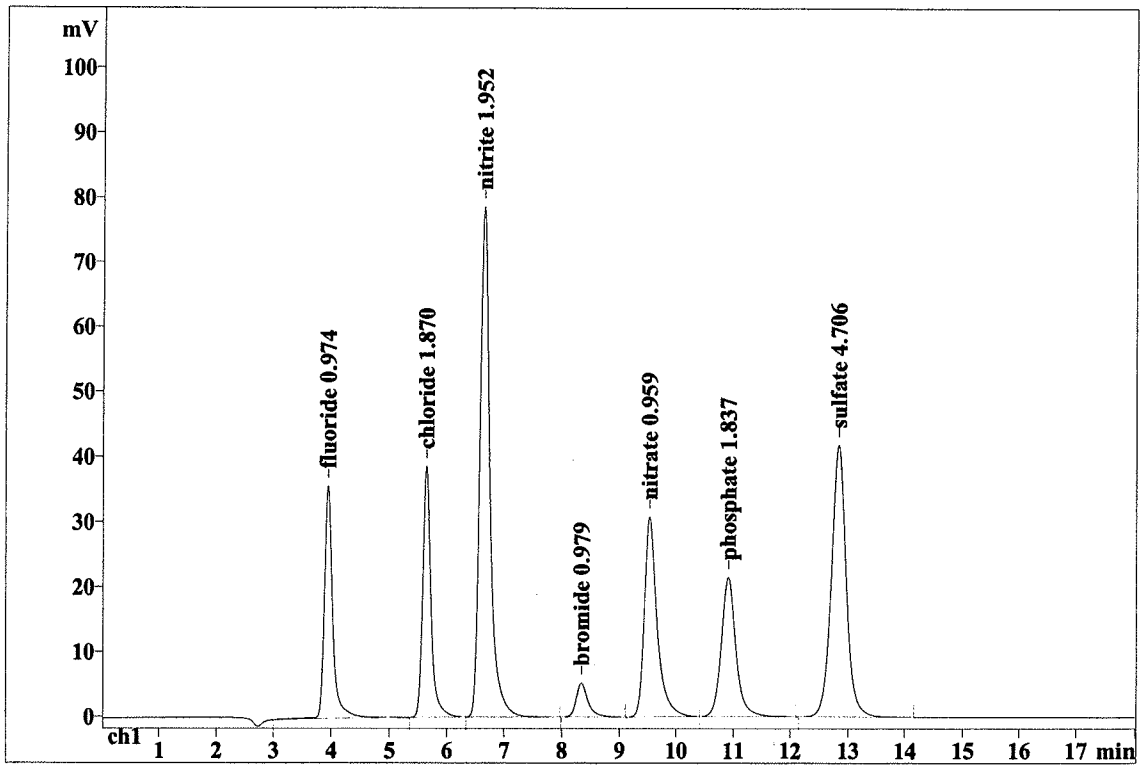
| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.07 | 0.85 | 54.576 | 0.000 | |

This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 11:53:24 AM
Printed by: TWangc

Ident: AL10-25 CCV6
Analysis from: 12/17/2020 12:28:06 AM
File: _2020-12-17_00-28.chw Last save: 12/17/2020 12:46:06 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97294

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 25
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.94 | 35.81 | 353.258 | 0.974 | fluoride |
| 2 | 5.63 | 38.63 | 390.481 | 1.870 | chloride |
| 3 | 6.63 | 78.58 | 990.490 | 1.952 | nitrite |
| 4 | 8.34 | 5.23 | 75.982 | 0.979 | bromide |
| 5 | 9.53 | 30.81 | 483.251 | 0.959 | nitrate |
| 6 | 10.90 | 21.48 | 378.093 | 1.837 | phosphate |
| 7 | 12.82 | 41.79 | 755.040 | 4.706 | sulfate |
| 7 | 17.99 | 252.32 | 3426.596 | 13.278 | |

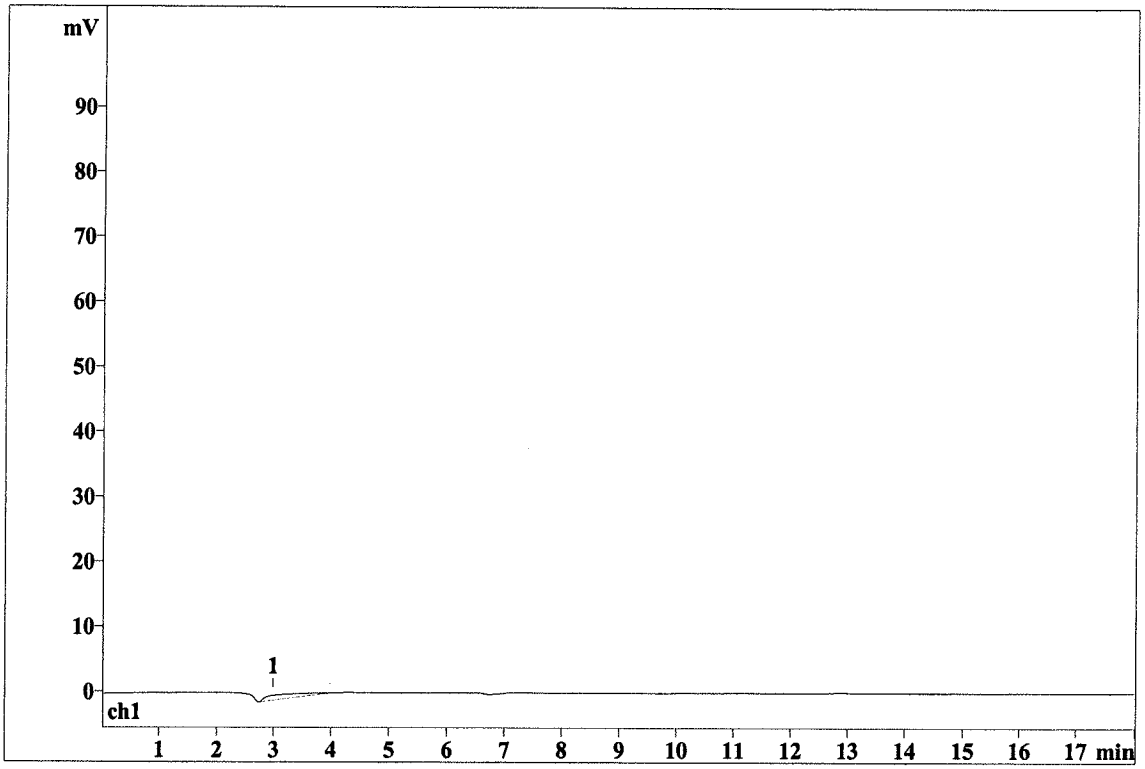
This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 12:13:09 PM
Printed by: TWangc

Ident: AL10-26 CCB6
Analysis from: 12/17/2020 1:09:36 AM
File: _2020-12-17_01-09.chw Last save: 12/17/2020 11:55:44 AM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97296

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 26
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 2.99 | 0.74 | 33.670 | 0.000 | |

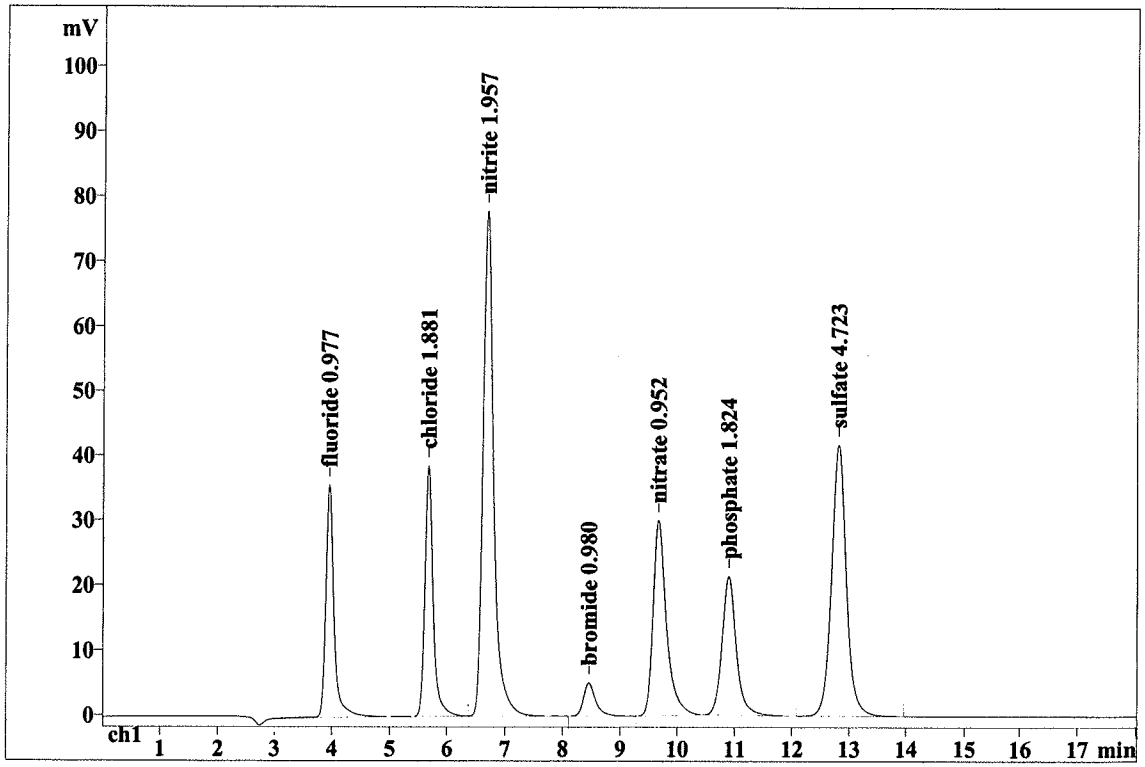
This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 12:18:37 PM
Printed by: TWangc

Ident: AL10-36 CCV8
Analysis from: 12/17/2020 4:37:04 AM
File: _2020-12-17_04-37.chw Last save: 12/17/2020 11:57:53 AM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97306

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 36
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

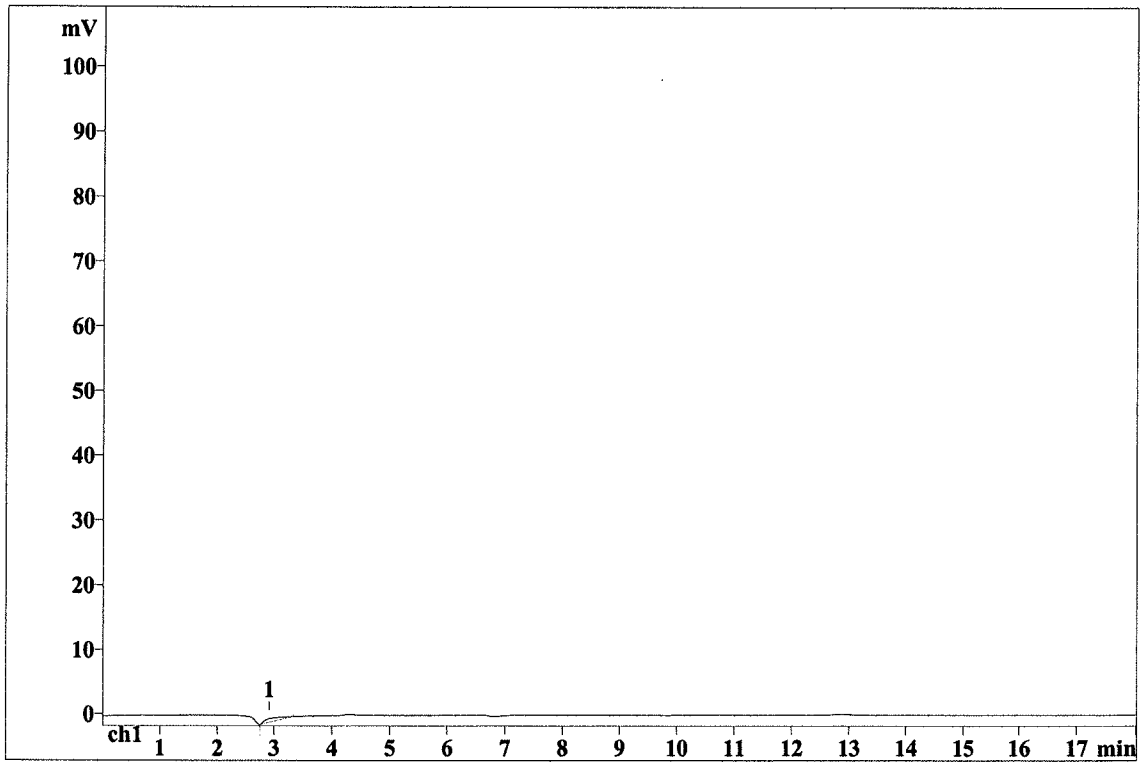
| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.96 | 35.86 | 354.419 | 0.977 | fluoride |
| 2 | 5.67 | 38.61 | 392.858 | 1.881 | chloride |
| 3 | 6.69 | 77.86 | 993.232 | 1.957 | nitrite |
| 4 | 8.46 | 5.14 | 76.157 | 0.980 | bromide |
| 5 | 9.67 | 30.10 | 479.115 | 0.952 | nitrate |
| 6 | 10.89 | 21.33 | 375.028 | 1.824 | phosphate |
| 7 | 12.81 | 41.82 | 757.826 | 4.723 | sulfate |
| 7 | 18.00 | 250.71 | 3428.634 | 13.295 | |

This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 12:06:02 PM
Printed by: TWangc

Ident: AL10-37 CCB8
Analysis from: 12/17/2020 5:18:34 AM
File: _2020-12-17_05-18.chw Last save: 12/17/2020 5:36:34 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97308

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 37
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 2.92 | 0.53 | 10.545 | 0.000 | |

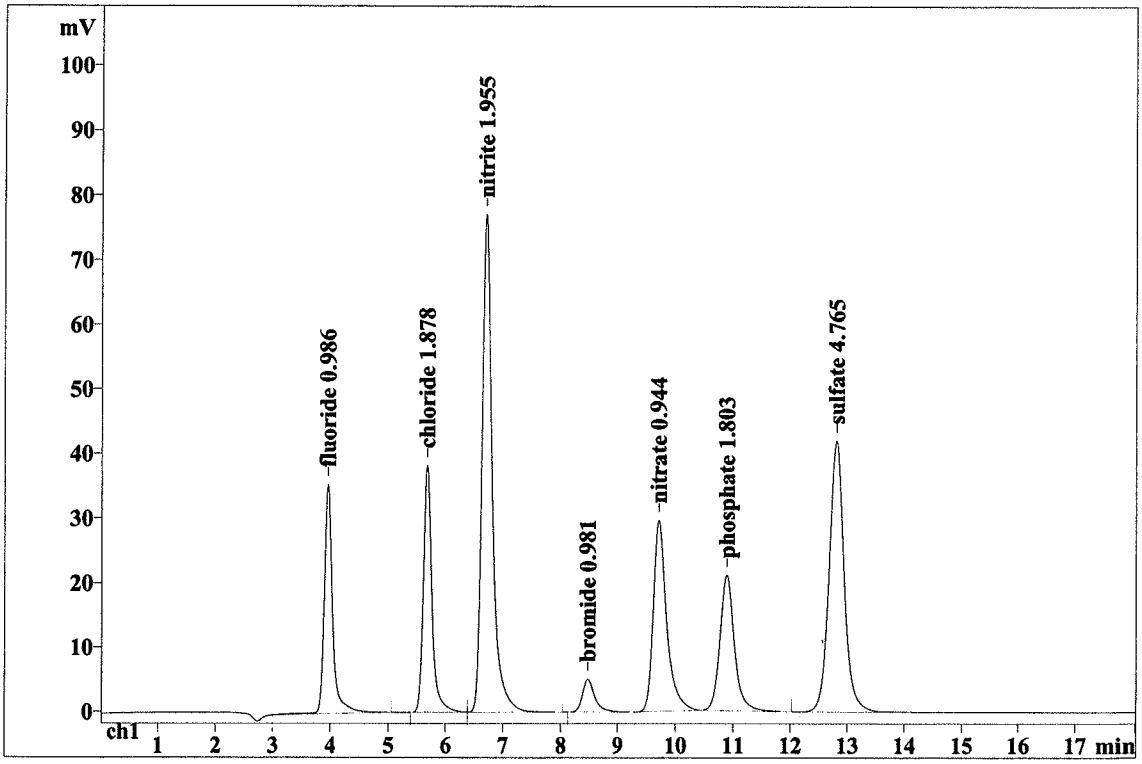
This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 12:19:31 PM
Printed by: TWangc

Ident: AL10-47 CCV10
Analysis from: 12/17/2020 8:46:01 AM
File: _2020-12-17_08-46.chw Last save: 12/17/2020 12:06:51 PM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97318

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 47
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

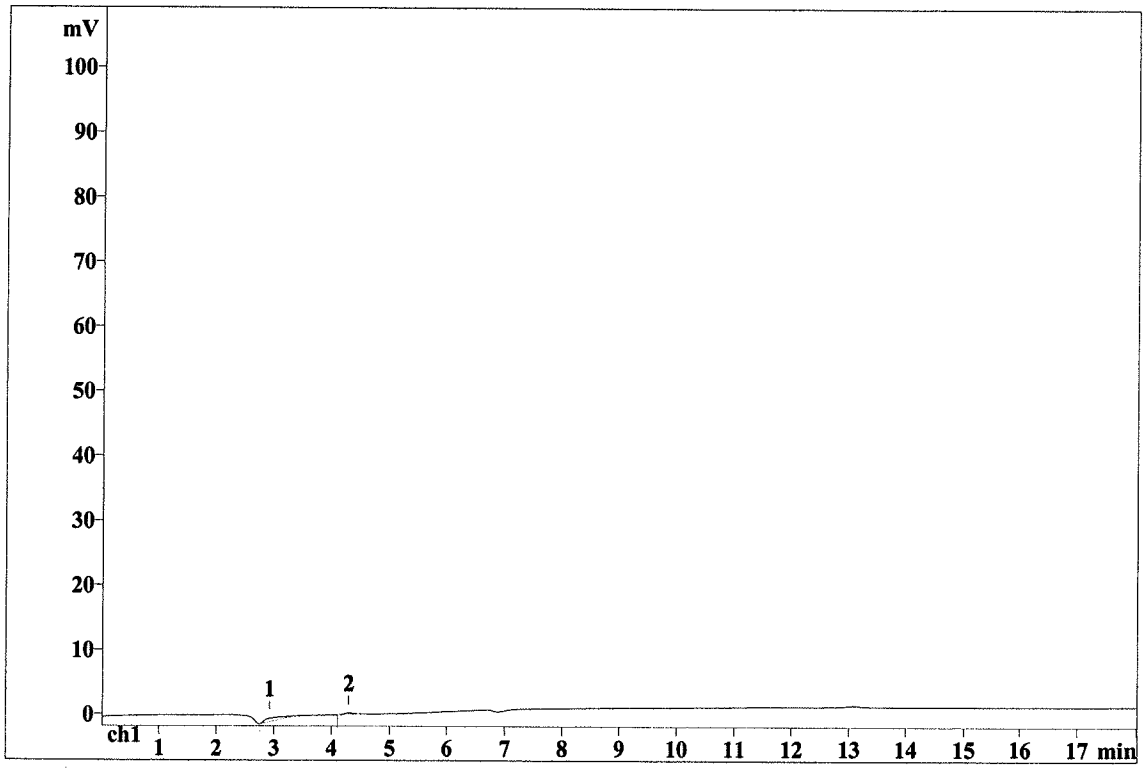
| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.95 | 35.56 | 357.658 | 0.986 | fluoride |
| 2 | 5.68 | 38.28 | 392.246 | 1.878 | chloride |
| 3 | 6.70 | 77.01 | 991.795 | 1.955 | nitrite |
| 4 | 8.48 | 5.08 | 76.180 | 0.981 | bromide |
| 5 | 9.71 | 29.65 | 475.125 | 0.944 | nitrate |
| 6 | 10.89 | 21.03 | 370.165 | 1.803 | phosphate |
| 7 | 12.81 | 41.97 | 764.832 | 4.765 | sulfate |
| 7 | 18.00 | 248.56 | 3428.001 | 13.311 | |

This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 12:08:31 PM
Printed by: TWangc

Ident: AL10-48 CCB10
Analysis from: 12/17/2020 9:06:57 AM
File: _2020-12-17_09-06.chw Last save: 12/17/2020 9:24:58 AM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97319

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 48
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 2.92 | 0.54 | 11.416 | 0.000 | |
| 2 | 4.30 | 0.22 | 2.333 | 0.000 | |
| 2 | 18.00 | 0.76 | 13.749 | 0.000 | |

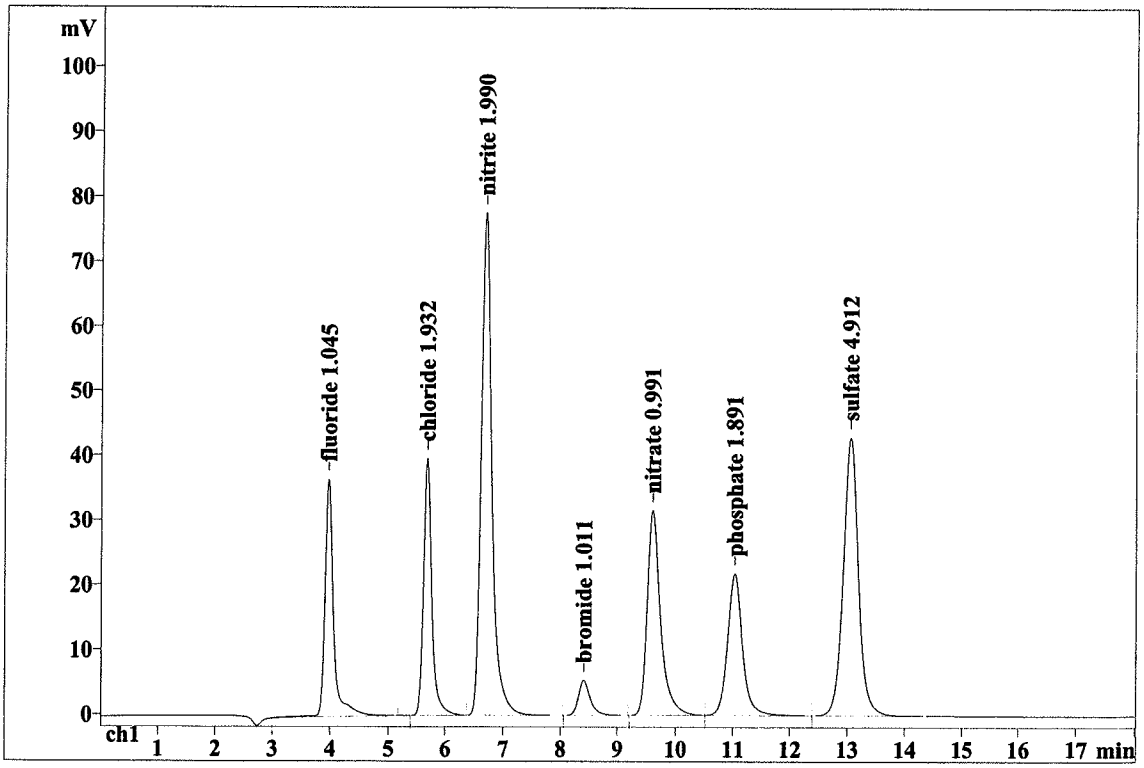
This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 12:36:13 PM
Printed by: TWangc

Ident: AL10-57 CCV12
Analysis from: 12/17/2020 12:16:52 PM
File: _2020-12-17_12-16.chw Last save: 12/17/2020 12:34:52 PM

Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97328

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 57
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

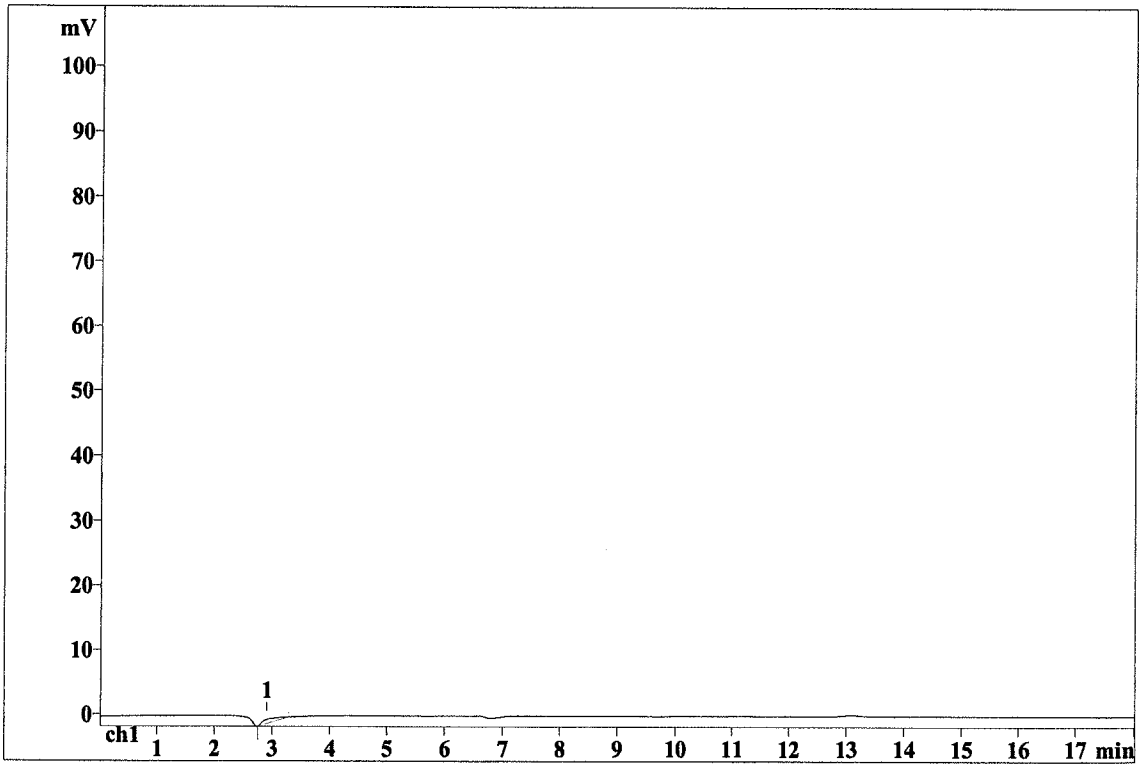
| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 3.97 | 36.65 | 379.653 | 1.045 | fluoride |
| 2 | 5.68 | 39.64 | 403.823 | 1.932 | chloride |
| 3 | 6.67 | 77.67 | 1010.194 | 1.990 | nitrite |
| 4 | 8.41 | 5.42 | 79.191 | 1.011 | bromide |
| 5 | 9.61 | 31.65 | 499.660 | 0.991 | nitrate |
| 6 | 11.02 | 21.83 | 390.634 | 1.891 | phosphate |
| 7 | 13.05 | 42.96 | 789.412 | 4.912 | sulfate |
| 7 | 18.00 | 255.82 | 3552.568 | 13.772 | |

This report has been created by IC Net
METROHM LTD

Report date: 12/17/2020 12:57:01 PM
Printed by: TWangc

Ident: AL10-58 CCB12
Analysis from: 12/17/2020 12:37:46 PM
File: _2020-12-17_12-37.chw Last save: 12/17/2020 12:55:46 PM
Modified!
Method: ICD7-L15.mtw Last save: 12/16/2020 3:43:03 PM
Run operator: TWangc
Analysis number: 97329

SAMPLE: METHOD 300/9056/4110B
:
Vial number: 58
Volume: 1.0 µL
Dilution: 1.00
Amount: 1.0000




Quantitation method: Custom

| No | Retention min | Height mV | Area mV*sec | Conc. mg/L | Name |
|---|---|---|---|---|---|
| 1 | 2.91 | 0.64 | 12.196 | 0.000 | |

This report has been created by IC Net
METROHM LTD

# ANALYTICAL LOG(S)

**Note:** For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence. For dillution preparation (sample aliquot/final volume), refer to sample info

**Comments:**

| | CONCENTRATIONS (PPM) |
|---|---|
| $S_1$ | 0.05 |
| $S_2$ | 0.1 |
| $S_3$ | 0.2 |
| $S_4$ | 0.5 |
| $S_5$ | 1.0 |
| $S_6$ | 2.0 |
| $S_7$ | 5.0 |
| $S_8$ | 10.0 |
| $S_9$ | 20.0 |

| | LINEARITY (PPM) |
|---|---|
| F | 10 |
| Cl | 5 |
| $NO_2$ | 10 |
| Br | 20 |
| $NO_3$ | 2 |
| $PO_4$ | 20 |
| $SO_4$ | 20 |

**IC ELUENT PREPARATION** Expiration Date: 01/07/21

| Std ID | Aliquot | Final Vol* |
|---|---|---|
| SP2-01-25-01 | 20 mL | 2 L |
| SP2-01-25-02 | 20 mL | |

**IC REGENERANT PREPARATION** Expiration Date: 01/15/21

| Std ID | Aliquot | Final Vol* |
|---|---|---|
| SP2-01-41-02 | 100 mL | 1 L |

* Reagent Water ID: SWIA-009-10-04

**Book #:** AD7-034
**Instrument No.:** D7
**Pipette ID's:** 039380124
SW3-02-02-02
439350100
**Analytical Sequence:** AL08
**Method File:** IC07-L15.mtw
**Analytical Batch:** N/A

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-300.0 | 13 |
| ☑ EMAX-4110B | 6 |
| ☑ EMAX-9056 | 9 |
| ☐ EMAX- | |
| **STANDARDS ID** | |
| ICAL | SW3B-15-12-03 |
| ICV | SW3B-15-12-01 |
| ~~CCV~~ ICV1 TW 12/15/20 | SW3B-15-13-01 |
| LCS | — |
| MS | — |

Filters Lot #:
0.45 µm: —
0.22 µm: —

Snap Seal Containers Lot #:
4 oz: 28619010
1.5 oz: —

Column: Metrosep A Supp 5-150
Flow Rate: 0.70 ml/min

| ELECTRONIC DATA ARCHIVAL | |
|---|---|
| Location | Date |
| ☐ IC-METROHM | |
| ☐ External Hard Drive | |

Analyzed By: TW
Date: 12/15/20

| File Name | Method | Ident | Vial | Volume | Dilution | Amount | Internal Standard Amount | Calibration Level | Sample Info 1 | Sample Info 2 |
|---|---|---|---|---|---|---|---|---|---|---|
| 2020-12-15_19-32.chw | ICD7-L15.mtw | AL08-01 IB | 1 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| 2020-12-15_19-52.chw | ICD7-L15.mtw | AL08-02 S0 | 2 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| 2020-12-15_20-13.chw | ICD7-L15.mtw | AL08-03 S1 | 3 | 1.0 | 1.0 | 1.0 | 100.0 | 1 | METHOD 300/9056/4110B | 0.05 PPM |
| 2020-12-15_20-34.chw | ICD7-L15.mtw | AL08-04 S2 | 4 | 1.0 | 1.0 | 1.0 | 100.0 | 2 | METHOD 300/9056/4110B | 0.1 PPM |
| 2020-12-15_20-55.chw | ICD7-L15.mtw | AL08-05 S3 | 5 | 1.0 | 1.0 | 1.0 | 100.0 | 3 | METHOD 300/9056/4110B | 0.2 PPM |
| 2020-12-15_21-15.chw | ICD7-L15.mtw | AL08-06 S4 | 6 | 1.0 | 1.0 | 1.0 | 100.0 | 4 | METHOD 300/9056/4110B | 0.5 PPM |
| 2020-12-15_21-36.chw | ICD7-L15.mtw | AL08-07 S5 | 7 | 1.0 | 1.0 | 1.0 | 100.0 | 5 | METHOD 300/9056/4110B | 1.0 PPM |
| 2020-12-15_21-57.chw | ICD7-L15.mtw | AL08-08 S6 | 8 | 1.0 | 1.0 | 1.0 | 100.0 | 6 | METHOD 300/9056/4110B | 2.0 PPM |
| 2020-12-15_22-18.chw | ICD7-L15.mtw | AL08-09 S7 | 9 | 1.0 | 1.0 | 1.0 | 100.0 | 7 | METHOD 300/9056/4110B | 5.0 PPM |
| 2020-12-15_22-38.chw | ICD7-L15.mtw | AL08-10 S8 | 10 | 1.0 | 1.0 | 1.0 | 100.0 | 8 | METHOD 300/9056/4110B | 10.0 PPM |
| 2020-12-15_22-59.chw | ICD7-L15.mtw | AL08-11 S9 | 11 | 1.0 | 1.0 | 1.0 | 100.0 | 9 | METHOD 300/9056/4110B | 20.0 PPM |
| 2020-12-15_23-20.chw | ICD7-L15.mtw | AL08-12 ICV | 12 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| 2020-12-15_23-41.chw | ICD7-L15.mtw | AL08-13 ICV1 | 13 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1.0 PPM |
| 2020-12-16_00-01.chw | ICD7-L15.mtw | AL08-14 ICB | 14 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |

TW 12/16/20
FINAL

EMAX LABORATORIES, INC.

# ANALYSIS RUN LOG
*for*
# ION CHROMATOGRAPHY

**Note:** For samples and relevant QCs/Standards analyzed, refer to attached analytical sequence. For dillution preparation (sample aliquot/final volume), refer to sample info

**Comments:**

| | |
|---|---|
| **Book #:** | AD7-034 |
| **Instrument No.:** | D7 |
| **Pipette ID's:** | 039380124 |
| | SW3-02-02-02 |
| | 439350100 |
| **Analytical Sequence:** | ALIO |
| **Method File:** | ICD7-L15.mtw |
| **Analytical Batch:** | ICL010W |

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-300.0 | 13 |
| ☐ EMAX-4110B | 6 |
| ☑ EMAX-9056 | 9 |
| ☐ EMAX- | |
| **STANDARDS ID** | |
| ICAL | — |
| ICV | — |
| CCV | SW3B-15-14-01 |
| LCS | SW3B-15-14-02 |
| MS | SCP refer to LCS Parent ID |

| Filters Lot #: | Snap Seal Containers Lot #: |
|---|---|
| 0.45 µm: 00191103 | 4 oz: |
| 0.22 µm: 00297103 | 1.5 oz: 17320006 |

Column: Metrosep A Supp 5-150

Flow Rate: 0.70 ml/min

IC ELUENT PREPARATION Expiration Date: 01/07/21

| Std ID | Aliquot | Final Vol* |
|---|---|---|
| SP2-01-25-01 | 20 mL | 2 L |
| SP2-01-25-02 | 20 mL | |

IC REGENERANT PREPARATION Expiration Date: 01/15/21

| Std ID | Aliquot | Final Vol* |
|---|---|---|
| SP2-01-41-02 | 100 mL | 1 L |

* Reagent Water ID: SW1A-009-10-04

| ELECTRONIC DATA ARCHIVAL | |
|---|---|
| Location | Date |
| ☐ IC-METROHM | |
| ☐ External Hard Drive | |

Analyzed By: lo/TW

Date: ~~12/16/20~~ 12/16/20
lo 12/16/20

| File Name | Method | Ident | Vial | Volume | Dilution | Amount | Internal Standard Amount | Calibration Level | Sample Info 1 | Sample Info 2 |
|---|---|---|---|---|---|---|---|---|---|---|
| _2020-12-16_15-42.chw | ICD7-L15.mtw | AL10-01 CCV2 | 1 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-16_16-25.chw | ICD7-L15.mtw | AL10-02 CCB2 | 2 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-16_16-50.chw | ICD7-L15.mtw | AL10-03 ICL010WB | 3 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-16_17-11.chw | ICD7-L15.mtw | AL10-04 ICL010WL | 4 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-16_17-32.chw | ICD7-L15.mtw | AL10-05 ICL010WC | 5 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-16_17-53.chw | ICD7-L15.mtw | AL10-06 L108-04I DF=20 | 6 | 1.0 | 20.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 2ml/40ml |
| _2020-12-16_18-14.chw | ICD7-L15.mtw | AL10-07 L108-05I DF=20 | 7 | 1.0 | 20.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 2ml/40ml |
| _2020-12-16_18-34.chw | ICD7-L15.mtw | AL10-08 L101-02I DF=20 | 8 | 1.0 | 20.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/20ml |
| _2020-12-16_18-55.chw | ICD7-L15.mtw | AL10-09 L101-08I DF=10 | 9 | 1.0 | 10.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 2ml/20ml |
| _2020-12-16_19-16.chw | ICD7-L15.mtw | AL10-10 L101-10I DF=20 | 10 | 1.0 | 20.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/20ml |
| _2020-12-16_19-37.chw | ICD7-L15.mtw | AL10-11 L108-01I DF=100 | 11 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml |
| _2020-12-16_19-58.chw | ICD7-L15.mtw | AL10-12 L108-02I DF=100 | 12 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml |
| _2020-12-16_20-18.chw | ICD7-L15.mtw | AL10-13 CCV4 | 13 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-16_20-39.chw | ICD7-L15.mtw | AL10-14 CCB4 | 14 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-16_21-00.chw | ICD7-L15.mtw | AL10-15 L108-04J DF=100 | 15 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.4ml/40ml |
| _2020-12-16_21-21.chw | ICD7-L15.mtw | AL10-16 L108-04JD DF=100 | 16 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.4ml/40ml |
| _2020-12-16_21-42.chw | ICD7-L15.mtw | AL10-17 L108-04JM DF=100 | 17 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.4ml/40ml |
| _2020-12-16_22-02.chw | ICD7-L15.mtw | AL10-18 L108-04JS DF=100 | 18 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.4ml/40ml |
| _2020-12-16_22-23.chw | ICD7-L15.mtw | AL10-19 L108-05J DF=100 | 19 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.4ml/40ml |
| _2020-12-16_22-44.chw | ICD7-L15.mtw | AL10-20 L108-05JD DF=100 | 20 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.4ml/40ml |
| _2020-12-16_23-05.chw | ICD7-L15.mtw | AL10-21 L108-05JM DF=100 | 21 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.4ml/40ml |
| _2020-12-16_23-25.chw | ICD7-L15.mtw | AL10-22 L108-05JS DF=100 | 22 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.4ml/40ml |
| _2020-12-16_23-46.chw | ICD7-L15.mtw | AL10-23 L108-06I DF=100 | 23 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml |
| _2020-12-17_00-07.chw | ICD7-L15.mtw | AL10-24 L108-07I DF=100 | 24 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml, STRONG ODOR |
| _2020-12-17_00-28.chw | ICD7-L15.mtw | AL10-25 CCV6 | 25 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-17_01-09.chw | ICD7-L15.mtw | AL10-26 CCB6 | 26 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-17_01-30.chw | ICD7-L15.mtw | AL10-27 L108-08I DF=100 | 27 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml, ODOR |
| _2020-12-17_01-51.chw | ICD7-L15.mtw | AL10-28 L101-02J DF=40 | 28 | 1.0 | 40.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml |
| _2020-12-17_02-11.chw | ICD7-L15.mtw | AL10-29 L101-02K DF=800 | 29 | 1.0 | 800.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml INTERMEDIATE, 1ml/20ml DF=800 |
| _2020-12-17_02-32.chw | ICD7-L15.mtw | AL10-30 L101-04I DF=40 | 30 | 1.0 | 40.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml |
| _2020-12-17_02-53.chw | ICD7-L15.mtw | AL10-31 L101-04J DF=800 | 31 | 1.0 | 800.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml INTERMEDIATE, 1ml/20ml DF=800 |
| _2020-12-17_03-14.chw | ICD7-L15.mtw | AL10-32 L101-06I DF=100 | 32 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml |
| _2020-12-17_03-34.chw | ICD7-L15.mtw | AL10-33 L101-06J DF=1000 | 33 | 1.0 | 1000.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml INTERMEDIATE, 2ml/20ml DF=10 |
| _2020-12-17_03-55.chw | ICD7-L15.mtw | AL10-34 L101-08J DF=100 | 34 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml |
| _2020-12-17_04-16.chw | ICD7-L15.mtw | AL10-35 L101-13I DF=40 | 35 | 1.0 | 40.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml |
| _2020-12-17_04-37.chw | ICD7-L15.mtw | AL10-36 CCV8 | 36 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-17_05-18.chw | ICD7-L15.mtw | AL10-37 CCB8 | 37 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-17_05-39.chw | ICD7-L15.mtw | AL10-38 L101-09I DF=40 | 38 | 1.0 | 40.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml |
| _2020-12-17_06-00.chw | ICD7-L15.mtw | AL10-39 L101-09K DF=800 | 39 | 1.0 | 800.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml INTERMEDIATE, 1ml/20ml DF=800 |
| _2020-12-17_06-20.chw | ICD7-L15.mtw | AL10-40 L101-10J DF=100 | 40 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml |
| _2020-12-17_06-41.chw | ICD7-L15.mtw | AL10-41 L101-10K DF=1000 | 41 | 1.0 | 1000.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml INTERMEDIATE, 2ml/20ml DF=10 |
| _2020-12-17_07-02.chw | ICD7-L15.mtw | AL10-42 L101-11I DF=100 | 42 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml |
| _2020-12-17_07-23.chw | ICD7-L15.mtw | AL10-43 L101-11J DF=1000 | 43 | 1.0 | 1000.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml INTERMEDIATE, 2ml/20ml DF=10 |
| _2020-12-17_07-43.chw | ICD7-L15.mtw | AL10-44 L101-12I DF=40 | 44 | 1.0 | 40.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml |
| _2020-12-17_08-04.chw | ICD7-L15.mtw | AL10-45 L101-12J DF=800 | 45 | 1.0 | 800.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml INTERMEDIATE, 1ml/20ml DF=800 |
| _2020-12-17_08-25.chw | ICD7-L15.mtw | AL10-46 L101-13J DF=800 | 46 | 1.0 | 800.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/40ml INTERMEDIATE, 1ml/20ml DF=800 |
| _2020-12-17_08-46.chw | ICD7-L15.mtw | AL10-47 CCV10 | 47 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-17_09-06.chw | ICD7-L15.mtw | AL10-48 CCB10 | 48 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-17_09-30.chw | ICD7-L15.mtw | AL10-49 L108-02J DF=20 | 49 | 1.0 | 20.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 1ml/20ml |
| _2020-12-17_09-51.chw | ICD7-L15.mtw | AL10-50 L108-06J DF=400 | 50 | 1.0 | 400.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.1ml/40ml |
| _2020-12-17_10-12.chw | ICD7-L15.mtw | AL10-51 L108-07J DF=200 | 51 | 1.0 | 200.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.1ml/20ml, STRONG ODOR |
| _2020-12-17_10-33.chw | ICD7-L15.mtw | AL10-52 L101-04K DF=1000 | 52 | 1.0 | 1000.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml INTERMEDIATE, 2ml/20ml DF=10 |
| _2020-12-17_10-53.chw | ICD7-L15.mtw | AL10-53 L101-06K DF=2000 | 53 | 1.0 | 2000.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml INTERMEDIATE, 1ml/20ml DF=20 |
| _2020-12-17_11-14.chw | ICD7-L15.mtw | AL10-54 L101-10T DF=2000 | 54 | 1.0 | 2000.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml INTERMEDIATE, 1ml/20ml DF=20 |
| _2020-12-17_11-35.chw | ICD7-L15.mtw | AL10-55 L101-13K DF=100 | 55 | 1.0 | 100.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml |
| _2020-12-17_11-56.chw | ICD7-L15.mtw | AL10-56 L101-13T DF=2000 | 56 | 1.0 | 2000.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | 0.2ml/20ml INTERMEDIATE, 1ml/20ml DF=20 |
| _2020-12-17_12-16.chw | ICD7-L15.mtw | AL10-57 CCV12 | 57 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |
| _2020-12-17_12-37.chw | ICD7-L15.mtw | AL10-58 CCB12 | 58 | 1.0 | 1.0 | 1.0 | 100.0 | 0 | METHOD 300/9056/4110B | |

# RETENTION TIME WINDOW

# TWENTY-FOUR HOUR RETENTION TIME WINDOW
## METHOD 300.0

| | | | |
|---|---|---|---|
| **Lab name:** | **EMAX** | **Method:** | **EMAX-300.0** |
| Instrument ID: | D7 (800IC) | IC column: | METROSEP A SUPP 5 |
| | | Column size: | 150X4.0mm |

| Compound | Retention time Window | |
|---|---|---|
| FLUORIDE | (+/-) | 0.090 |
| CHLORIDE | (+/-) | 0.135 |
| NITRITE | (+/-) | 0.151 |
| BROMIDE | (+/-) | 0.238 |
| NITRATE | (+/-) | 0.272 |
| PHOSPHATE | (+/-) | 0.393 |
| SULFATE | (+/-) | 0.537 |
| IODIDE | (+/-) | 0.708 |

AA
8/13/14

# TWENTY FOUR HOUR RETENTION TIME WINDOW
## METHOD 300.0

**Lab name:** **EMAX** **Method:** **EMAX-300.0**

Instrument ID: D7 (800 IC) IC column: METROSEP A SUPP 5
Column size: 150X4.0mm

| Compound | ICAL Mean RT | from | to | RTW |
|---|---|---|---|---|
| **FLUORIDE** | **3.97** | 3.88 | 4.06 | **0.090** |
| **CHLORIDE** | **5.64** | 5.50 | 5.77 | **0.135** |
| **NITRITE** | **6.62** | 6.46 | 6.77 | **0.151** |
| **BROMIDE** | **8.30** | 8.06 | 8.54 | **0.238** |
| **NITRATE** | **9.45** | 9.18 | 9.72 | **0.272** |
| **PHOSPHATE** | **10.95** | 10.56 | 11.35 | **0.393** |
| **SULFATE** | **12.88** | 12.17 | 13.59 | **0.708** |

ICD7-L15.MTW

CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD SM2320B
TOTAL ALKALINITY

A total of nine(9) water samples were received on 12/10/20 to be analyzed for Total Alkalinity in accordance with Method SM2320B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Calibration was performed as prescribed by the method and was verified using a secondary source (ICV). All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Alkalinity was not detected in ALL008WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. ALL008WL/ALL008WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) MS was analyzed. Percent recovery for Alkalinity was within MS QC limits in L101-02M. Sample duplicate was analyzed and RPD was within expected value. Refer to Matrix QC summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

METHOD SM2320B
TOTAL ALKALINITY

Client : ARCADIS
Project : PG&E TOPOCK-GMP
Batch No. : 20L101

Matrix : WATER
InstrumentID : E5

| CLIENT SAMPLE ID | EMAX SAMPLE ID | RESULTS (mg/L) | PREP. FACTOR | MOIST (%) | RL (mg/L) | MDL (mg/L) | ANALYSIS DATETIME | PREPARATION DATETIME | DATA FILE ID | CAL REF | PREP BATCH | COLLECTION DATETIME | RECEIVED DATETIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MBLK1W | ALL008WB | ND | 1 | NA | 5 | 5 | 12/17/2017:51 | NA | 20E5L3005 | 20E5L30 | ALL008W | NA | NA |
| LCS1W | ALL008WL | 28.4 | 1 | NA | 5 | 5 | 12/17/2017:58 | NA | 20E5L3006 | 20E5L30 | ALL008W | NA | NA |
| LCD1W | ALL008WC | 28.6 | 1 | NA | 5 | 5 | 12/17/2018:05 | NA | 20E5L3007 | 20E5L30 | ALL008W | NA | NA |
| MW-54-085-Q420 | L101-02 | 155 | 1 | NA | 5 | 5 | 12/17/2018:13 | NA | 20E5L3008 | 20E5L30 | ALL008W | 12/09/2009:06 | 12/10/20 |
| MW-54-085-Q420DUP | L101-02D | 151 | 1 | NA | 5 | 5 | 12/17/2018:21 | NA | 20E5L3009 | 20E5L30 | ALL008W | 12/09/2009:06 | 12/10/20 |
| MW-54-085-Q420MS | L101-02M | 876 | 1 | NA | 5 | 5 | 12/17/2018:35 | NA | 20E5L3010 | 20E5L30 | ALL008W | 12/09/2009:06 | 12/10/20 |
| MW-54-140-Q420 | L101-04 | 107 | 1 | NA | 5 | 5 | 12/17/2018:42 | NA | 20E5L3011 | 20E5L30 | ALL008W | 12/09/2008:22 | 12/10/20 |
| MW-54-195-Q420 | L101-06 | 62.6 | 1 | NA | 5 | 5 | 12/17/2018:49 | NA | 20E5L3012 | 20E5L30 | ALL008W | 12/09/2007:36 | 12/10/20 |
| MW-55-045-Q420 | L101-08 | 155 | 1 | NA | 5 | 5 | 12/17/2018:57 | NA | 20E5L3013 | 20E5L30 | ALL008W | 12/09/2009:23 | 12/10/20 |
| MW-55-120-Q420 | L101-09 | 74.2 | 1 | NA | 5 | 5 | 12/17/2019:04 | NA | 20E5L3014 | 20E5L30 | ALL008W | 12/09/2008:42 | 12/10/20 |
| MW-56D-Q420 | L101-10 | 136 | 1 | NA | 5 | 5 | 12/17/2019:28 | NA | 20E5L3017 | 20E5L30 | ALL008W | 12/09/2011:11 | 12/10/20 |
| MW-56M-Q420 | L101-11 | 437 | 1 | NA | 5 | 5 | 12/17/2019:38 | NA | 20E5L3018 | 20E5L30 | ALL008W | 12/09/2010:29 | 12/10/20 |
| MW-56S-Q420 | L101-12 | 640 | 1 | NA | 5 | 5 | 12/17/2019:48 | NA | 20E5L3019 | 20E5L30 | ALL008W | 12/09/2011:41 | 12/10/20 |
| MW-924-Q420 | L101-13 | 438 | 1 | NA | 5 | 5 | 12/17/2019:59 | NA | 20E5L3020 | 20E5L30 | ALL008W | 12/09/2010:39 | 12/10/20 |

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : METHOD SM2320B

MATRIX : WATER % MOISTURE: NA

| | | | |
|---|---|---|---|
| DILUTION FACTOR: | 1 | 1 | 1 |
| SAMPLE ID : | MBLK1W | LCS1W | LCD1W |
| LAB SAMPLE ID : | ALL008WB | ALL008WL | ALL008WC |
| LAB FILE ID : | 20E5L3005 | 20E5L3006 | 20E5L3007 |
| DATE EXTRACTED : | NA | NA | NA |
| DATE ANALYZED : | 12/17/2017:51 | 12/17/2017:58 | 12/17/2018:05 |
| PREP BATCH : | ALL008W | ALL008W | ALL008W |
| CALIBRATION REF: | 20E5L30 | 20E5L30 | 20E5L30 |

ACCESSION:

| PARAMETER | MB RESULT (mg/L) | SPIKE AMT (mg/L) | BS RESULT (mg/L) | BS REC (%) | SPIKE AMT (mg/L) | BSD RESULT (mg/L) | BSD REC (%) | RPD (%) | QC LIMIT (%) | MAX RPD (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| ALKALINITY | ND | 27.5 | 28.4 | 103 | 27.5 | 28.6 | 104 | 1 | 85-115 | 20 |

EMAX QUALITY CONTROL DATA
MATRIX SPIKE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SM2320B

| | | |
|---|---|---|
| MATRIX | : WATER | % MOISTURE:NA |
| DILUTION FACTOR | : 1 | 1 |
| SAMPLE ID | : MW-54-085-Q420 | MW-54-085-Q420MS |
| LAB SAMPLE ID | : L101-02 | L101-02M |
| LAB FILE ID | : 20E5L3008 | 20E5L3010 |
| DATE PREPARED | : NA | NA |
| DATE ANALYZED | : 12/17/2018:13 | 12/17/2018:35 |
| PREP BATCH | : ALL008W | ALL008W |
| CALIBRATION REF | : 20E5L30 | 20E5L30 |

ACCESSION:

| PARAMETER | PARENT RESULT (mg/L) | SPIKE AMT (mg/L) | MS RESULT (mg/L) | MS REC (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| ALKALINITY | 155 | 800 | 876 | 90 | 75-125 |

EMAX QUALITY CONTROL DATA
SAMPLE DUPLICATE ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : METHOD SM2320B

MATRIX : WATER

| | | |
|---|---|---|
| DILUTION FACTOR: | 1 | 1 |
| SAMPLE ID : | MW-54-085-Q420 | MW-54-085-Q420DUP |
| LAB SAMPLE ID : | L101-02 | L101-02D |
| LAB FILE ID : | 20E5L3008 | 20E5L3009 |
| DATE PREPARED : | NA | NA |
| DATE ANALYZED : | 12/17/2018:13 | 12/17/2018:21 |
| PREP BATCH : | ALL008W | ALL008W |
| CALIBRATION REF: | 20E5L302 | 20E5L302 |

ACCESSION:

| PARAMETER | PARENT RESULT (mg/L) | DUP RESULT (mg/L) | RPD (%) | MAX RPD (%) |
|---|---|---|---|---|
| ALKALINITY | 155 | 151 | 3 | 20 |

EMAX LABORATORIES, INC.

# ANALYSIS RUN LOG
*for*
# ALKALINITY

**Note:** For samples and relevent QCs/Standards analyzed, refer to attached analytical sequence.

☑ Titration end point: pH 4.5 ± 0.04

☑ Low alkalinity: pH 4.2 ± 0.04

**Micropipette ID:** SW3-02-02-02

**MS/MSD amount of spike:** 1 mL of SW2B-21-10-04 (32,000 mg/L ALK.) to 40 mL FINAL VOLUME; EXPECTED CONCENTRATION of 800 mg/L ALK

**Reagent Water:** RW1-20-002

**Comments:**

ICV: 1 mL of SW2B-21-10-04 (32,000 mg/L ALK.) to 40 mL FINAL VOLUME; EXPECTED CONCENTRATION OF 800 mg/L ALK

**Book#:** AAL-044

**Instrument No.:** ☐ 53 ☑ E5

**Analytical Batch:** 20E5L30

**Analytical Sequence:** ALL008

| SOP # | Rev. # |
|---|---|
| ☑ EMAX-2320B | 6 |
| ☐ EMAX- | |

| STANDARDS ID | | Conc. (mg/L) |
|---|---|---|
| 0.02N HCL | SWR1-02-24-07 | 0.02N |
| LCS | SW1-02-02-28 | 27.5 |
| MS/MSD | SW2B-21-10-04 | 32,000 |
| ICV | SW2B-21-10-04 | 32,000 |
| CCV | SW1-02-07-23 | 79 |

| pH Buffer | ID |
|---|---|
| pH 4 | LO 12/17/20 SW1-02-07-01 |
| pH 7 | SW1-02-07-02 |
| pH 10 | SW1-02-07-03 |
| pH 8.0 (Check) | SW1-02-07-~~22~~ 22 LO 12/17/20 |
| pH Strip | HC998032 |

Analyzed By: LO

Date: 12/17/20

# PC-TitratION PLUS

## pH and Alkalinity In-Run Report

**Run Number** 1277 **Analytical Batch#** 20E5L30

| Seq. # | SampleID | Data File Name | RunDate | RunTime | pH | Volume @pH 8.3 | Volume @pH 4.5 | Volume @pH 4.2 | palk-ppm | talk-ppm | bcarb-ppm | carb-ppm | hydr-ppm | Review Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | ICV PH7.99 | 20E5L30 | 12/17/20 | 5:21 PM | 7.97 | -1.00 | -1.00 | -1.00 | -1.00 | -1.00 | -1.00 | -1.00 | -1.00 | |
| 2 | ICV | 20E5L30 | 12/17/20 | 5:32 PM | 10.89 | 8.92 | 17.82 | -1.00 | 372.95 | 744.85 | .00 | 743.79 | 1.06 | |
| 3 | INSTR. CHECK | 20E5L30 | 12/17/20 | 5:40 PM | 9.42 | .04 | .16 | .20 | 1.81 | 4.96 | 1.35 | 3.61 | .00 | |
| 4 | ICB | 20E5L30 | 12/17/20 | 5:46 PM | 6.56 | .00 | .09 | .13 | .00 | 1.91 | 1.91 | .00 | .00 | |
| 5 | ALL008WB | 20E5L30 | 12/17/20 | 5:51 PM | 6.09 | .00 | .07 | .11 | .00 | 1.39 | 1.39 | .00 | .00 | |
| 6 | ALL008WL | 20E5L30 | 12/17/20 | 5:58 PM | 7.83 | .00 | .68 | -1.00 | .00 | 28.39 | 28.39 | .00 | .00 | |
| 7 | ALL008WC | 20E5L30 | 12/17/20 | 6:05 PM | 7.90 | .00 | .68 | -1.00 | .00 | 28.61 | 28.61 | .00 | .00 | |
| 8 | L101-02 | 20E5L30 | 12/17/20 | 6:13 PM | 7.85 | .00 | 3.71 | -1.00 | .00 | 155.21 | 155.21 | .00 | .00 | |
| 9 | L101-02D | 20E5L30 | 12/17/20 | 6:21 PM | 7.88 | .00 | 3.61 | -1.00 | .00 | 150.73 | 150.73 | .00 | .00 | |
| 10 | L101-02M | 20E5L30 | 12/17/20 | 6:35 PM | 9.94 | 8.50 | 20.95 | -1.00 | 355.12 | 875.60 | 165.36 | 710.24 | .00 | |
| 11 | L101-04 | 20E5L30 | 12/17/20 | 6:42 PM | 8.29 | .00 | 2.55 | -1.00 | .00 | 106.58 | 106.58 | .00 | .00 | |
| 12 | L101-06 | 20E5L30 | 12/17/20 | 6:49 PM | 8.14 | .00 | 1.50 | -1.00 | .00 | 62.63 | 62.63 | .00 | .00 | |
| 13 | L101-08 | 20E5L30 | 12/17/20 | 6:57 PM | 8.14 | .00 | 3.71 | -1.00 | .00 | 155.29 | 155.29 | .00 | .00 | |
| 14 | L101-09 | 20E5L30 | 12/17/20 | 7:04 PM | 8.10 | .00 | 1.77 | -1.00 | .00 | 74.18 | 74.18 | .00 | .00 | |
| 15 | CCV1 | 20E5L30 | 12/17/20 | 7:11 PM | 9.11 | 1.33 | 2.08 | -1.00 | 55.61 | 87.01 | .00 | 62.81 | 24.20 | |
| 16 | CCB1 | 20E5L30 | 12/17/20 | 7:20 PM | 8.33 | .00 | .16 | .20 | .00 | 5.05 | 5.05 | .00 | .00 | |
| 17 | L101-10 | 20E5L30 | 12/17/20 | 7:28 PM | 7.87 | .00 | 3.26 | -1.00 | .00 | 136.39 | 136.39 | .00 | .00 | |
| 18 | L101-11 | 20E5L30 | 12/17/20 | 7:38 PM | 7.77 | .00 | 10.45 | -1.00 | .00 | 436.65 | 436.65 | .00 | .00 | |

Analyzed by: LD Reviewed by: LD Date: 12/17/20



*PC-TitratION PLUS by Man-Tech Associates, Inc.*

pH AND ALKALINITY IN-RUN REPORT.SRW

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**Run Number** 1277 **Analytical Batch#** 20E5L30

| Seq. # | SampleID | Data File Name | RunDate | RunTime | pH | Volume @pH 8.3 | Volume @pH 4.5 | Volume @pH 4.2 | palk-ppm | talk-ppm | bcarb-ppm | carb-ppm | hydr-ppm | Review Notes |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 19 | L101-12 | 20E5L30 | 12/17/20 | 7:48 PM | 7.63 | .00 | 15.31 | -1.00 | .00 | 639.96 | 639.96 | .00 | .00 | |
| 20 | L101-13 | 20E5L30 | 12/17/20 | 7:59 PM | 7.78 | .00 | 10.47 | -1.00 | .00 | 437.79 | 437.79 | .00 | .00 | |
| 21 | CCV2 | 20E5L30 | 12/17/20 | 8:06 PM | 9.08 | 1.25 | 2.01 | -1.00 | 52.32 | 84.17 ✓ | .00 | 63.69 | 20.48 | |
| 22 | CCB2 | 20E5L30 | 12/17/20 | 8:13 PM | 7.23 | .00 | .12 | .16 | .00 | 3.11 | 3.11 | .00 | .00 | |

Analyzed by: LD Reviewed by: LD Date: 12/17/20



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pH AND ALKALINITY IN-RUN REPORT.SRW

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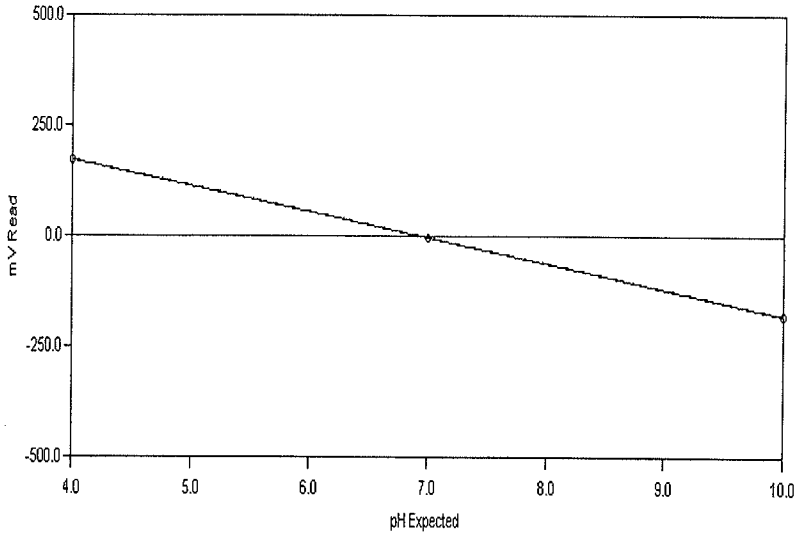
# *PC-TitratION PLUS*
## Calibration Report

### Calibration Record # 925




**Calibration Settings**

| | | | |
|---|---|---|---|
| Calibration ID | PH CAL 4-7-10 | Date | 12/17/2020 |
| Channel | 1 | Time | 5:18 PM |
| Probe Type | pH | Temperature | 298.09 K 24.94 C |
| Probe ID | PH ELECTRODE | Analysis Type | Single Line Fit |

**Calibration Results**

| | | | |
|---|---|---|---|
| Slope | -58.673 | CorrCoeff | 1.0000 |
| Intercept | -5.327 | Equation: Y = ( -58.673) X + ( -5.327 ) | |

**Calibration Validity** **True** Operator

| | Result | Minimum | Maximum |
|---|---|---|---|
| **Slope** | -58.673 | -65.00 | -53.00 |
| **Intercept** | -5.327 | -40.00 | 40.00 |
| **Correlation Coefficient** | 1.0000 | 0.99 | 1.00 |

Note: "True" means the calibration was within the specified ranges
"False" means the calibration was NOT within the specified ranges

| **Calibration Data** | **Standard** | **Reading** |
|---|---|---|
| | 4.00 | 170.65 |
| | 7.00 | -5.24 |
| | 10.00 | -181.39 |


CALRPRT.SRW
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# PC-Titrate For Windows

## Running List Report

### Order Number - 20E5L30

| | Schedule | Sample Id | Vial | Weight | Volume |
|---|---|---|---|---|---|
| 1 | PH CAL | CAL | 1 | .00 | 25.00 |
| 2 | PH ONLY | ICV PH7.99 | 4 | .00 | 25.00 |
| 3 | PH-ALK | ICV | 5 | .00 | 25.00 |
| 4 | PH-ALK | INSTR. CHECK | 6 | .00 | 25.00 |
| 5 | PH-ALK | ICB | 7 | .00 | 25.00 |
| 6 | PH-ALK | ALL008WB | 8 | .00 | 25.00 |
| 7 | PH-ALK | ALL008WL | 9 | .00 | 25.00 |
| 8 | PH-ALK | ALL008WC | 10 | .00 | 25.00 |
| 9 | PH-ALK | L101-02 | 11 | .00 | 25.00 |
| 10 | PH-ALK | L101-02D | 12 | .00 | 25.00 |
| 11 | PH-ALK | L101-02M | 13 | .00 | 25.00 |
| 12 | PH-ALK | L101-04 | 14 | .00 | 25.00 |
| 13 | PH-ALK | L101-06 | 15 | .00 | 25.00 |
| 14 | PH-ALK | L101-08 | 16 | .00 | 25.00 |
| 15 | PH-ALK | L101-09 | 17 | .00 | 25.00 |
| 16 | PH-ALK | CCV1 | 18 | .00 | 25.00 |
| 17 | PH-ALK | CCB1 | 19 | .00 | 25.00 |
| 18 | PH-ALK | L101-10 | 20 | .00 | 25.00 |
| 19 | PH-ALK | L101-11 | 21 | .00 | 25.00 |
| 20 | PH-ALK | L101-12 | 22 | .00 | 25.00 |
| 21 | PH-ALK | L101-13 | 23 | .00 | 25.00 |
| 22 | PH-ALK | CCV2 | 24 | .00 | 25.00 |
| 23 | PH-ALK | CCB2 | 25 | .00 | 25.00 |



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runninglist.SRW

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CASE NARRATIVE

Client : ARCADIS

Project: PG&E TOPOCK-GMP

SDG : 20L101

METHOD SM2540C
TOTAL DISSOLVED SOLIDS

A total of nine(9) water samples were received on 12/10/20 to be analyzed for Total Dissolved Solids in accordance with Method SM2540C and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Balance calibration verifications were carried out on a frequency specified by the method. All calibration requirements were within acceptance criteria.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. Total Dissolved Solids was not detected in TDL004WB. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for Total Dissolved Solids was within LCS QC limits in TDL004WL. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

METHOD SM2540C
TOTAL DISSOLVED SOLIDS

Client : ARCADIS
Project : PG&E TOPOCK-GMP
Batch No. : 20L101

Matrix : WATER
InstrumentID : 402426

| CLIENT SAMPLE ID | EMAX SAMPLE ID | RESULTS (mg/L) | DFxPREP FACTOR | MOIST (%) | RL (mg/L) | MDL (mg/L) | ANALYSIS DATETIME | PREPARATION DATETIME | DATA FILE ID | CAL REF | PREP BATCH | COLLECTION DATETIME | RECEIVED DATETIME |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MBLK1W | TDL004WB | ND | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00401 | 20TDL004 | TDL004W | NA | NA |
| LCS1W | TDL004WL | 1080 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00402 | 20TDL004 | TDL004W | NA | NA |
| MW-54-085-Q420 | L101-02 | 5780 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00405 | 20TDL004 | TDL004W | 12/09/2009:06 | 12/10/20 |
| MW-54-140-Q420 | L101-04 | 7790 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00406 | 20TDL004 | TDL004W | 12/09/2008:22 | 12/10/20 |
| MW-54-195-Q420 | L101-06 | 11500 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00407 | 20TDL004 | TDL004W | 12/09/2007:36 | 12/10/20 |
| MW-55-045-Q420 | L101-08 | 751 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00408 | 20TDL004 | TDL004W | 12/09/2009:23 | 12/10/20 |
| MW-55-120-Q420 | L101-09 | 4050 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00409 | 20TDL004 | TDL004W | 12/09/2008:42 | 12/10/20 |
| MW-56D-Q420 | L101-10 | 14200 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00410 | 20TDL004 | TDL004W | 12/09/2011:11 | 12/10/20 |
| MW-56M-Q420 | L101-11 | 9310 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00411 | 20TDL004 | TDL004W | 12/09/2010:29 | 12/10/20 |
| MW-56S-Q420 | L101-12 | 3980 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00412 | 20TDL004 | TDL004W | 12/09/2011:41 | 12/10/20 |
| MW-924-Q420 | L101-13 | 9490 | 1 | NA | 10 | 10 | 12/14/2015:51 | NA | 20TDL00413 | 20TDL004 | TDL004W | 12/09/2010:39 | 12/10/20 |

EMAX QUALITY CONTROL DATA
LCS ANALYSIS

CLIENT : ARCADIS
PROJECT : PG&E TOPOCK-GMP
BATCH NO. : 20L101
METHOD : SM2540C

MATRIX : WATER
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : TDL004WB TDL004WL
LAB FILE ID : 20TDL00401 20TDL00402
DATE PREPARED : NA NA
DATE ANALYZED : 12/14/2015:51 12/14/2015:51
PREP BATCH : TDL004W TDL004W
CALIBRATION REF: 20TDL004 20TDL004

ACCESSION:

| PARAMETER | MB RESULT (mg/L) | SPIKE AMT (mg/L) | BS RESULT (mg/L) | BS REC (%) | QC LIMIT (%) |
|---|---|---|---|---|---|
| Total dissolved solids | ND | 1000 | 1080 | 108 | 75-125 |

EMAX LABORATORIES, INC.

# TOTAL DISSOLVED SOLIDS

20TDL004

| DataFileID | Sample ID | Sample Amt(ml) | Dish # | Dish (g) | 1stDry Wt+Dish(g) | DateTime | 2ndDry Wt+Dish(g) | DateTime | FinalDry Wt+Dish(g) | DateTime | Rdgs(<0.5mg) | Solids (mg) | TDS (mg/L) | Result (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20TDL00401 | TDL004WB | 100 | B | 83.4761 | 83.4766 | 12/15/20 12:53 | 83.4762 | 12/15/20 15:07 | | | 0.4 | 0.1 | 1 | ND |
| 20TDL00402 | TDL004WL | 20 | L | 21.39899 | 21.42095 | 12/15/20 12:54 | 21.42059 | 12/15/20 15:08 | | | 0.36 | 21.6 | 1080 | 1080 |
| 20TDL00403 | L089-03 | 20 | 1 | 21.51455 | 21.56456 | 12/15/20 12:54 | 21.56426 | 12/15/20 15:08 | | | 0.3 | 49.71 | 2485.5 | 2490 |
| 20TDL00404 | L089-03D | 20 | 2 | 21.33767 | 21.38611 | 12/15/20 12:54 | 21.3863 | 12/15/20 15:08 | | | 0.19 | 48.63 | 2431.5 | 2430 |
| 20TDL00405 | L101-02 | 10 | 3 | 21.34627 | 21.40432 | 12/15/20 12:54 | 21.40408 | 12/15/20 15:08 | | | 0.24 | 57.81 | 5781 | 5780 |
| 20TDL00406 | L101-04 | 5 | 4 | 21.27892 | 21.31808 | 12/15/20 12:54 | 21.31789 | 12/15/20 15:09 | | | 0.19 | 38.97 | 7794 | 7790 |
| 20TDL00407 | L101-06 | 5 | 5 | 21.2513 | 21.30888 | 12/15/20 12:55 | 21.30897 | 12/15/20 15:09 | | | 0.09 | 57.67 | 11534 | 11500 |
| 20TDL00408 | L101-08 | 20 | 6 | 21.29973 | 21.31442 | 12/15/20 12:55 | 21.31476 | 12/15/20 15:09 | | | 0.34 | 15.03 | 751.5 | 751 |
| 20TDL00409 | L101-09 | 10 | 7 | 21.44232 | 21.48249 | 12/15/20 12:55 | 21.48279 | 12/15/20 15:09 | | | 0.3 | 40.47 | 4047 | 4050 |
| 20TDL00410 | L101-10 | 5 | 8 | 21.43466 | 21.50597 | 12/15/20 12:55 | 21.50552 | 12/15/20 15:09 | | | 0.45 | 70.86 | 14172 | 14200 |
| 20TDL00411 | L101-11 | 5 | 9 | 21.40294 | 21.4499 | 12/15/20 12:56 | 21.4495 | 12/15/20 15:10 | | | 0.4 | 46.56 | 9312 | 9310 |
| 20TDL00412 | L101-12 | 20 | 10 | 21.43045 | 21.51037 | 12/15/20 12:56 | 21.51014 | 12/15/20 15:10 | | | 0.23 | 79.69 | 3984.5 | 3980 |
| 20TDL00413 | L101-13 | 5 | 11 | 21.24676 | 21.29425 | 12/15/20 12:56 | 21.2942 | 12/15/20 15:10 | | | 0.05 | 47.44 | 9488 | 9490 |
| 20TDL00414 | L105-01 | 20 | 12 | 21.29334 | 21.30944 | 12/15/20 12:56 | 21.30957 | 12/15/20 15:10 | | | 0.13 | 16.23 | 811.5 | 812 |
| 20TDL00415 | L105-02 | 20 | 13 | 21.17476 | 21.19814 | 12/15/20 12:56 | 21.19822 | 12/15/20 15:10 | | | 0.08 | 23.46 | 1173 | 1170 |
| 20TDL00416 | L105-03 | 100 | 14 | 89.2162 | 89.2167 | 12/15/20 12:57 | 89.2165 | 12/15/20 15:11 | | | 0.2 | 0.3 | 3 | ND |
| 20TDL00417 | L496-01 | 20 | 15 | 21.47521 | 21.49586 | 12/15/20 12:57 | 21.49584 | 12/15/20 15:11 | | | 0.02 | 20.63 | 1031.5 | 1030 |
| 20TDL00418 | L496-03 | 20 | 16 | 21.36397 | 21.37929 | 12/15/20 12:57 | 21.37925 | 12/15/20 15:11 | | | 0.04 | 15.28 | 764 | 764 |
| 20TDL00419 | L496-04 | 20 | 17 | 21.35691 | 21.38292 | 12/15/20 12:57 | 21.38257 | 12/15/20 15:11 | | | 0.35 | 25.66 | 1283 | 1280 |
| 20TDL00420 | L496-04D | 20 | 18 | 21.30566 | 21.33105 | 12/15/20 12:57 | 21.33117 | 12/15/20 15:12 | | | 0.12 | 25.51 | 1275.5 | 1280 |

**Beginning Balance Check**

| Std. Wt. (g) | Balance Rdg (g) | Date | Comments |
|---|---|---|---|
| 0.1 | 0.1001 | 12/14/20 15:50 | PASSED |
| 5 | 5.0000 | 12/14/20 15:50 | PASSED |
| 100 | 100.0018 | 12/14/20 15:51 | PASSED |

**Ending Balance Check**

| Std. Wt (g) | Balance Rdg (g) | Date | Comments |
|---|---|---|---|
| 0.1 | 0.1003 | 12/14/20 15:56 | PASSED |
| 5 | 5.0002 | 12/14/20 15:56 | PASSED |
| 100 | 100.0023 | 12/14/20 15:56 | PASSED |

**Beginning Balance Check**

| Std. Wt (g) | Balance Rdg (g) | Date | Comments |
|---|---|---|---|
| 0.1 | 0.1000 | 12/15/20 12:52 | PASSED |
| 5 | 5.0000 | 12/15/20 12:52 | PASSED |
| 100 | 100.0011 | 12/15/20 12:53 | PASSED |

**Ending Balance Check**

| Std. Wt (g) | Balance Rdg (g) | Date | Comments |
|---|---|---|---|
| 0.1 | 0.1001 | 12/15/20 15:12 | PASSED |
| 5 | 5.0001 | 12/15/20 15:13 | PASSED |
| 100 | 100.0014 | 12/15/20 15:13 | PASSED |

Balance ID: 402426 Weight ID: 31116

Acceptance Criteria: +/- 0.1% or +/- 0.5 mg whichever is greater

| StandardID | Desc. | Conc. (mg/L) | ExpDate |
|---|---|---|---|
| RW1-20-001 | MB | ND | NA |
| SW2B-21-06-02 | LCS | 1000 | 07/01/21 |
| HC904495 | pH strip | 0-14 | 11/20/30 |

**QC Check**

| LabSampleID | Result | Expected Value | QC Result |
|---|---|---|---|
| TDL004WB | 1 | ND | MB Passed |
| TDL004WL | 1080 | 1000 | %R=108 |
| #N/A | #N/A | #N/A | #N/A |
| L089-03D | 2431.5 | 2485.5 | %D=2 |
| L496-04D | 1275.5 | 1283 | %D=1 |

**Oven Drying** Thermometer ID: 3078

| | | | |
|---|---|---|---|
| Evaporating | | | |
| ☑ Start | 12/14/2020 15:57 | Temp | 94 °C |
| ☑ End | 12/15/2020 9:37 | Temp | 94 °C |
| 1st Drying | | | |
| ☑ Start | 12/15/20 11:04 | Temp | 181 °C |
| ☑ End | 12/15/20 12:05 | Temp | 180 °C |
| 2nd Drying | | | |
| ☑ Start | 12/15/20 13:19 | Temp | 180 °C |
| ☑ End | 12/15/20 14:19 | Temp | 180 °C |
| Final Drying | | | |
| ☐ Start | | Temp | °C |
| ☐ End | | Temp | °C |

**Notes:**

SOP

Analyzedby: YAquin

Checked by: MA

☑ EMAX-2540C Rev. 9 Date: 12/16/20

LOQ: 10 mg/L

0.45 micron Filter Lot#: J373825-20200103PDK8M-070

Micropipette ID: 642780221

Ozark UNDERGROUND LABORATORY 1572 Aley Lane • Protem, MO 65733 • (417) 785-4289 • fax (417) 785-4290 • contact@ozarkundergroundlab.com

# Certificate of Analysis

**Date of certificate:** November 2, 2020
**Client:** ARCADIS U.S., Inc.
**Project name/location:** PG&E Topock Compressor Station Needles, CA
**Project number:** 30035275.4QGW
**Contact person:** Laura.Madsen@arcadis-us.com

**Samples collected by:** Matt Trainetti, Jecte Boyd
**Date samples shipped:** October 7, 2020
**Date samples rec'd at OUL:** October 8, 2020 and archived
**Date of analysis request:** October 27, 2020
**Date analyzed by OUL:** October 29, 2020
**Included with certificate:** Table of results and copy of sample collection data sheet

**Results for water samples analyzed for the presence of fluorescein and rhodamine WT (RWT) dyes.**

Peak wavelengths are reported in nanometers (nm); dye concentrations are reported in parts per billion (ppb).

| OUL Number | Station Name | Date/Time Collected | Fluorescein Results | | Eosine Results | | RWT Results | |
|---|---|---|---|---|---|---|---|---|
| | | | Peak (nm) | Conc. (ppb) | Peak (nm) | Conc. (ppb) | Peak (nm) | Conc. (ppb) |
| E8375 | MW-24A-1020 | 10/5/20 1502 | 509.4 ** | 0.023 | ND | | 575.3 | 43.1 |
| E8376 | MW-24B-1020 | 10/5/20 1524 | 507.6 ** | 0.023 | ND | | ND | |
| E8377 | MW-38D-1020 | 10/5/20 1414 | ND | | ND | | ND | |
| E8378 | MW-67-185-1020 | 10/6/20 1416 | ND | | ND | | ND | |
| E8379 | PT7D-1020 | 10/6/20 0946 | 508.2 | 31.3 | ND | | ND | |
| E8380 | Laboratory control water blank | | | | | | | |
| E8381 | PT7M-1020 | 10/6/20 0841 | 507.8 | 414 | ND | | ND | |
| E8382 | PT7S-1020 | 10/6/20 1121 | ND | | ND | | ND | |
| E8383 | PT8D-1020 | 10/6/20 1059 | 508.2 | 0.173 | ND | | ND | |
| E8384 | PT8M-1020 | 10/6/20 0920 | 508.7 | 0.657 | ND | | ND | |
| E8385 | PT8S-1020 | 10/6/20 1132 | 508.6 | 0.037 | ND | | ND | |
| E8386 | PT9D-1020 | 10/6/20 1326 | ND | | ND | | ND | |
| E8387 | PT9M-1020 | 10/6/20 1231 | 507.9 | 1.08 | ND | | 539.4 (1) | 3.31 |
| E8388 | PT9S-1020 | 10/6/20 1240 | 509.4 | 0.223 | ND | | ND | |

**Note**: Dye concentrations are based upon standards used at the OUL. The standard concentrations are based upon the as sold weight of the dye that the OUL uses. If the client is not using OUL dyes, the client should provide the OUL with a sample of the dye to compare to the OUL dyes.

**Footnotes:** ND = No dye detected

(1) = The fluorescence peak in this sample is interpreted as degraded rhodamine WT dye. The concentrations are based upon non-degraded rhodamine WT dye. We have no standards for degraded rhodamine WT dye, so the concentration should be used only as a relative value.

** = A fluorescence peak is present that does not meet all the criteria for this dye. However, it has been calculated as a positive dye result.

**Thomas J. Aley, PHG and RG**

Thomas A-ley

# OZARK UNDERGROUND LABORATORY, INC.

1572 Aley Lane Protem, MO 65733 (417) 785-4289 fax (417) 785-4290 email: contact@ozarkundergroundlab.com

## SAMPLE COLLECTION DATA SHEET for FLUORESCENCE ANALYSIS

Project PGE Topock Week No: _____ Samples Collected By: Matt Trainotti, Jecte Boyd

Samples Shipped By: Matt Trainotti Samples Received By: C. Aley / OUL

Date Samples Shipped: 10/7/20 Date Samples Received: 10-8-20 Time Samples Received: 1332 Return Cooler? Yes ☒ No ☐

Bill to: Laura Madsen, Arcadis U.S. Send Results to: Laura Madsen, Laura.Madsen@arcadis.com

Analyze for: ☒ Fluorescein ☒ Eosine ☒ Rhodamine WT ☐ Other _____ Ship cooler to: _____

| OUL use only | | *Please indicate stations where dye was visible in the field* for field technician use - use black ink only | | | | | | OUL use only |
|---|---|---|---|---|---|---|---|---|
| # CHAR REC'D | LAB NUMBER Water | STATION NUMBER | STATION NAME | PLACED DATE | PLACED TIME | COLLECTED DATE | COLLECTED TIME | # WATER REC'D |
| 0 | E8375 | | MW-24A-1020 | | | 10/5/20 | 1502 | 1 |
| 0 | E8376 | | MW-24B-1020 | | | ↓ | 1524 | 1 |
| 0 | E8377 | | MW-38D-1020 | | | ↓ | 1414 | 1 |
| 0 | E8378 | | MW-67-185-1020 | | | 10/6/20 | 1416 | 1 |
| 0 | E8379 | | PT7D-1020 | | | ↓ | 0946 | 1 |
| 0 | E8381 | | PT7M-1020 | | | ↓ | 0841 | 1 |
| 0 | E8382 | | PT7S-1020 | | | ↓ | 1121 | 1 |
| 0 | E8383 | | PT8D-1020 | | | ↓ | 1059 | 1 |
| 0 | E8384 | | PT8M-1020 | | | ↓ | 0920 | 1 |
| 0 | E8385 | | PT8S-1020 | | | ↓ | 1132 | 1 |
| 0 | E8386 | | PT9D-1020 | | | ↓ | 1326 | 1 |
| 0 | E8387 | | PT9M-1020 | | | ↓ | 1231 | 1 |
| 0 | E8388 | | PT9S-1020 | | | ↓ | 1240 | 1 |
| | | | E8380-OUL water blank. | | | | | |

COMMENTS _____

This sheet filled out by OUL staff? Yes (No) Charts for samples on this page proofed by OUL: _____

OUL Project No. 711 Date Analyzed: 10/29/20 Analyzed By: Lisa Gilcrease

October 20, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N042429

RE: PG&E Topock - GMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on October 01, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of sample upon the addition of eluent.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium and Sodium in QC samples N042405-001D-MS1, N042405-001D-MSD1, N042405-002D-MS2 and N042405-002D-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) is outside recovery criteria for Chromium in QC sample N042429-001D-MS since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, RC000753.801D
**Lab Order:** N042429
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N042429-001A | MW-60-125-Q420 | Groundwater | 10/1/2020 1:01:00 PM | 10/1/2020 | 10/20/2020 |
| N042429-001B | MW-60-125-Q420 | Groundwater | 10/1/2020 1:01:00 PM | 10/1/2020 | 10/20/2020 |
| N042429-001C | MW-60-125-Q420 | Groundwater | 10/1/2020 1:01:00 PM | 10/1/2020 | 10/20/2020 |
| N042429-001D | MW-60-125-Q420 | Groundwater | 10/1/2020 1:01:00 PM | 10/1/2020 | 10/20/2020 |
| N042429-002A | EB-701-Q420 | Groundwater | 10/1/2020 1:10:00 PM | 10/1/2020 | 10/20/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60-125-Q420 |
| **Lab Order:** | N042429 | **Collection Date:** | 10/1/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042429-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201002A** | QC Batch: **R147728** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7800 | 0.10 | 0.10 | | umhos/cm | 1 | 10/2/2020 09:45 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sample ID **N042429-001BDUP** | SampType: **DUP** | TestCode: **120.1_WPGE** | Units: **umhos/cm** | Prep Date: | | | | RunNo: **147728** | | |
| Client ID: **ZZZZZZ** | Batch ID: **R147728** | TestNo: **EPA 120.1** | | Analysis Date: **10/2/2020** | | | | SeqNo: **3951905** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Specific Conductance | 7820.000 | 0.10 | | | | | | 7790 | 0.384 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60-125-Q420 |
| **Lab Order:** | N042429 | **Collection Date:** | 10/1/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042429-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201002G** | QC Batch: **82414** | | | PrepDate: | | **10/2/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6800 | 50 | 50 | | mg/L | 1 | 10/2/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID **LCS-82414** | SampType: **LCS** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **10/2/2020** | RunNo: **147750** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82414** | TestNo: **SM2540C** | | Analysis Date: **10/2/2020** | SeqNo: **3952595** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 973.000 | 10 | 1000 | 0 | 97.3 | 80 | 120 | | | | |

| Sample ID **MB-82414** | SampType: **MBLK** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **10/2/2020** | RunNo: **147750** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82414** | TestNo: **SM2540C** | | Analysis Date: **10/2/2020** | SeqNo: **3952596** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID **N042429-001BDUP** | SampType: **DUP** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **10/2/2020** | RunNo: **147750** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82414** | TestNo: **SM2540C** | | Analysis Date: **10/2/2020** | SeqNo: **3952603** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 6715.000 | 50 | | | | | | 6845 | 1.92 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60-125-Q420 |
| **Lab Order:** | N042429 | **Collection Date:** | 10/1/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042429-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201004A** | QC Batch: **R147772** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 580 | 3.3 | 20 | | µg/L | 100 | 10/4/2020 10:06 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201005C** | QC Batch: **82424** | | | PrepDate: | **10/5/2020** | | Analyst: **CEI** |
| Chromium | 570 | 0.65 | 5.0 | | µg/L | 5 | 10/6/2020 03:01 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-701-Q420 |
| **Lab Order:** | N042429 | **Collection Date:** | 10/1/2020 1:10:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042429-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201004A** | QC Batch: **R147772** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 10/4/2020 02:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | MB-R147772 | SampType: | MBLK | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954239 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID | LCS-R147772 | SampType: | LCS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954240 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.930 | 0.20 | 5.000 | 0 | 98.6 | 90 | 110 | | | | |

| Sample ID | N042404-006AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954251 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.328 | 0.20 | 5.000 | 4.457 | 97.4 | 90 | 110 | | | | |

| Sample ID | N042404-006AMSD | SampType: | MSD | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954252 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.528 | 0.20 | 5.000 | 4.457 | 101 | 90 | 110 | 9.328 | 2.12 | 20 | |

| Sample ID | N042434-001ADUP | SampType: | DUP | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954253 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.971 | 0.20 | | | | | | 0.9608 | 1.08 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N042434-001AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954254 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.945 | 0.20 | 1.000 | 0.9608 | 98.4 | 90 | 110 | | | | |

| Sample ID | N042429-001AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954255 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1080.060 | 20 | 500.0 | 580.4 | 99.9 | 90 | 110 | | | | |

| Sample ID | N042430-001AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954256 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.531 | 0.20 | 5.000 | 3.354 | 104 | 90 | 110 | | | | |

| Sample ID | N042404-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954257 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 42.856 | 1.0 | 25.00 | 17.54 | 101 | 90 | 110 | | | | |

| Sample ID | N042430-002AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147772 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147772 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/4/2020 | SeqNo: | 3954258 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.575 | 0.20 | 5.000 | 3.356 | 104 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **N042430-004AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147772** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147772** | TestNo: **EPA 218.6** | | Analysis Date: **10/4/2020** | SeqNo: **3954259** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.006 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID **N042430-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147772** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147772** | TestNo: **EPA 218.6** | | Analysis Date: **10/4/2020** | SeqNo: **3954263** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.894 | 1.0 | 5.000 | 5.082 | 96.2 | 90 | 110 | | | | |

| Sample ID **N042435-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147772** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147772** | TestNo: **EPA 218.6** | | Analysis Date: **10/4/2020** | SeqNo: **3954265** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.543 | 0.20 | 1.000 | 0.5348 | 101 | 90 | 110 | | | | |

| Sample ID **N042435-002AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147772** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147772** | TestNo: **EPA 218.6** | | Analysis Date: **10/4/2020** | SeqNo: **3954267** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.088 | 0.20 | 1.000 | 1.008 | 108 | 90 | 110 | | | | |

| Sample ID **N042403-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147772** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147772** | TestNo: **EPA 218.6** | | Analysis Date: **10/4/2020** | SeqNo: **3954269** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.490 | 1.0 | 5.000 | 0.5955 | 97.9 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N042404-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147772**
Client ID: **ZZZZZZ** Batch ID: **R147772** TestNo: **EPA 218.6** Analysis Date: **10/4/2020** SeqNo: **3954273**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.003 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID **N042429-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147772**
Client ID: **ZZZZZZ** Batch ID: **R147772** TestNo: **EPA 218.6** Analysis Date: **10/4/2020** SeqNo: **3954275**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.978 | 0.20 | 1.000 | 0 | 97.8 | 90 | 110 | | | | |

Sample ID **N042430-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147772**
Client ID: **ZZZZZZ** Batch ID: **R147772** TestNo: **EPA 218.6** Analysis Date: **10/4/2020** SeqNo: **3954277**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.999 | 0.20 | 1.000 | 0 | 99.9 | 90 | 110 | | | | |

Sample ID **N042434-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147772**
Client ID: **ZZZZZZ** Batch ID: **R147772** TestNo: **EPA 218.6** Analysis Date: **10/4/2020** SeqNo: **3954279**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.993 | 0.20 | 1.000 | 0 | 99.3 | 90 | 110 | | | | |

Sample ID **N042435-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147772**
Client ID: **ZZZZZZ** Batch ID: **R147772** TestNo: **EPA 218.6** Analysis Date: **10/4/2020** SeqNo: **3954281**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.997 | 0.20 | 1.000 | 0 | 99.7 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-82424 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147863 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/6/2020 | SeqNo: | 3959670 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-82424 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147863 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/6/2020 | SeqNo: | 3959671 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.623 | 1.0 | 10.00 | 0 | 96.2 | 85 | 115 | | | | |

| Sample ID | N042429-001D-MS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147863 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/6/2020 | SeqNo: | 3959684 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 584.124 | 5.0 | 10.00 | 569.5 | 146 | 75 | 125 | | | | S |

| Sample ID | N042429-001D-MSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147863 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/6/2020 | SeqNo: | 3959687 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 581.696 | 5.0 | 10.00 | 569.5 | 122 | 75 | 125 | 584.1 | 0.416 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | **N042429-001D-PS** | SampType: **PS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: | RunNo: **147863** |
|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: **82424** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **10/6/2020** | SeqNo: **3959681** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 576.607 | 5.0 | 10.00 | 569.5 | 71.3 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60-125-Q420 |
| **Lab Order:** | N042429 | **Collection Date:** | 10/1/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042429-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201002E** | QC Batch: **R147747** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 60 | 1.2 | 5.0 | | mg/L | 1 | 10/2/2020 02:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID **LCS-R147747** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147747** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R147747** | TestNo: **SM 2320 B** | | Analysis Date: **10/2/2020** | SeqNo: **3952548** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 98.326 | 5.0 | 100.0 | 0 | 98.3 | 85 | 115 | | | | |

| Sample ID **MB-R147747** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147747** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R147747** | TestNo: **SM 2320 B** | | Analysis Date: **10/2/2020** | SeqNo: **3952549** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID **N042429-001BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147747** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147747** | TestNo: **SM 2320 B** | | Analysis Date: **10/2/2020** | SeqNo: **3952558** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 58.577 | 5.0 | | | | | | 59.62 | 1.77 | 30 | |

| Sample ID **N042429-001BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147747** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147747** | TestNo: **SM 2320 B** | | Analysis Date: **10/2/2020** | SeqNo: **3952559** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 153.766 | 5.0 | 100.0 | 59.62 | 94.1 | 75 | 125 | | | | |

| Sample ID **N042429-001BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147747** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147747** | TestNo: **SM 2320 B** | | Analysis Date: **10/2/2020** | SeqNo: **3952560** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 152.720 | 5.0 | 100.0 | 59.62 | 93.1 | 75 | 125 | 153.8 | 0.683 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D
**Lab ID:** N042429-001

**Client Sample ID:** MW-60-125-Q420
**Collection Date:** 10/1/2020 1:01:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201002A** QC Batch: **R147735** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 10/2/2020 09:50 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201002A** QC Batch: **R147735** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2700 | 35 | 500 | | mg/L | 1000 | 10/2/2020 11:41 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201002A** QC Batch: **R147735** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 1.5 | 0.096 | 1.0 | | mg/L | 10 | 10/2/2020 09:50 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201002A** QC Batch: **R147735** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 460 | 4.0 | 50 | | mg/L | 100 | 10/2/2020 11:26 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID | MB-R147735_BR | SampType: | MBLK | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953330 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID | LCS-R147735_BR | SampType: | LCS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953331 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.248 | 0.50 | 1.250 | 0 | 99.8 | 90 | 110 | | | | |

| Sample ID | N042405-001AMS | SampType: | MS | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953333 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.300 | 5.0 | 12.50 | 0.3970 | 95.2 | 80 | 120 | | | | |

| Sample ID | N042405-001AMSD | SampType: | MSD | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953334 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.699 | 5.0 | 12.50 | 0.3970 | 98.4 | 80 | 120 | 12.30 | 3.19 | 20 | |

| Sample ID | N042405-004ADUP | SampType: | DUP | TestCode: | 300_W_BRP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953338 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.491 | 5.0 | | | | | | 0.3890 | 0 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | MB-R147735_CL | SampType: | MBLK | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953282 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

| Sample ID | LCS-R147735_CL | SampType: | LCS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953283 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.010 | 0.50 | 2.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID | N042381-001BDUP | SampType: | DUP | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953292 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2647.800 | 500 | | | | | | 2624 | 0.907 | 20 | |

| Sample ID | N042381-001BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953293 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4555.100 | 500 | 2000 | 2624 | 96.6 | 80 | 120 | | | | |

| Sample ID | N042388-001BDUP | SampType: | DUP | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953295 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 443.660 | 100 | | | | | | 444.9 | 0.275 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | N042388-001BMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953296 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 828.980 | 100 | 400.0 | 444.9 | 96.0 | 80 | 120 | | | | |

| Sample ID | N042388-001BMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953297 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 822.780 | 100 | 400.0 | 444.9 | 94.5 | 80 | 120 | 829.0 | 0.751 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_FPGE**

| Sample ID | MB-R147735_F | SampType: | MBLK | TestCode: | 300_W_FPGE | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953239 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | | |

| Sample ID | LCS-R147735_F | SampType: | LCS | TestCode: | 300_W_FPGE | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953240 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.319 | 0.10 | 1.250 | 0 | 106 | 90 | 110 | | | | |

| Sample ID | N042405-001AMS | SampType: | MS | TestCode: | 300_W_FPGE | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953243 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 16.903 | 1.0 | 12.50 | 4.272 | 101 | 80 | 120 | | | | |

| Sample ID | N042405-001AMSD | SampType: | MSD | TestCode: | 300_W_FPGE | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953244 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 16.920 | 1.0 | 12.50 | 4.272 | 101 | 80 | 120 | 16.90 | 0.101 | 20 | |

| Sample ID | N042405-004ADUP | SampType: | DUP | TestCode: | 300_W_FPGE | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953248 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 2.281 | 1.0 | | | | | | 2.047 | 10.8 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_FPGE**

| Sample ID | N042388-001BMS | SampType: | MS | TestCode: | 300_W_FPGE | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953267 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 8.179 | 0.50 | 6.250 | 2.106 | 97.2 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | MB-R147735_SO4 | SampType: | MBLK | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953361 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

| Sample ID | LCS-R147735_SO4 | SampType: | LCS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953362 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.956 | 0.50 | 4.000 | 0 | 98.9 | 90 | 110 | | | | |

| Sample ID | N042381-001BDUP | SampType: | DUP | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953372 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 460.085 | 25 | | | | | | 461.1 | 0.212 | 20 | |

| Sample ID | N042381-001BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953373 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 661.695 | 25 | 200.0 | 461.1 | 100 | 80 | 120 | | | | |

| Sample ID | N042388-001BDUP | SampType: | DUP | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953375 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1897.500 | 100 | | | | | | 1921 | 1.21 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | N042388-001BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953376 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2727.400 | 100 | 800.0 | 1921 | 101 | 80 | 120 | | | | |

| Sample ID | N042388-001BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 147735 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147735 | TestNo: | EPA 300.0 | | | Analysis Date: | 10/2/2020 | SeqNo: | 3953377 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2730.100 | 100 | 800.0 | 1921 | 101 | 80 | 120 | 2727 | 0.0989 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60-125-Q420 |
| **Lab Order:** | N042429 | **Collection Date:** | 10/1/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042429-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201012B** | QC Batch: **R147956** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 4.1 | 0.16 | 0.25 | | mg/L | 5 | 10/12/2020 06:13 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID | MB-R147956 | SampType: | MBLK | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 147956 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R147956 | TestNo: | SM4500-NO3 | | | Analysis Date: | 10/12/2020 | SeqNo: | 3965856 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID | LCS-R147956 | SampType: | LCS | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 147956 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R147956 | TestNo: | SM4500-NO3 | | | Analysis Date: | 10/12/2020 | SeqNo: | 3965857 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.485 | 0.050 | 0.5000 | 0 | 97.1 | 85 | 115 | | | | |

| Sample ID | N042405-003BDUP | SampType: | DUP | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 147956 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147956 | TestNo: | SM4500-NO3 | | | Analysis Date: | 10/12/2020 | SeqNo: | 3965859 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.688 | 0.050 | | | | | | 0.6388 | 7.42 | 20 | |

| Sample ID | N042405-003BMS | SampType: | MS | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 147956 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147956 | TestNo: | SM4500-NO3 | | | Analysis Date: | 10/12/2020 | SeqNo: | 3965860 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.154 | 0.050 | 0.5000 | 0.6388 | 103 | 75 | 125 | | | | |

| Sample ID | N042405-003BMSD | SampType: | MSD | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 147956 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147956 | TestNo: | SM4500-NO3 | | | Analysis Date: | 10/12/2020 | SeqNo: | 3965861 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.122 | 0.050 | 0.5000 | 0.6388 | 96.7 | 75 | 125 | 1.154 | 2.78 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-60-125-Q420 |
| **Lab Order:** | N042429 | **Collection Date:** | 10/1/2020 1:01:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042429-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201010B** | QC Batch: **82480** | | | | PrepDate: | **10/8/2020** | Analyst: **DJ** |
| Boron | 820 | 74 | 100 | | ug/L | 1 | 10/10/2020 10:07 AM |
| Calcium | 450000 | 85 | 500 | | ug/L | 1 | 10/10/2020 10:07 AM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 10/10/2020 10:07 AM |
| Sodium | 1300000 | 9600 | 50000 | | ug/L | 100 | 10/11/2020 12:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **LCS1-82480** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **10/8/2020** | RunNo: **147927** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82480** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **10/10/2020** | SeqNo: **3963236** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5301.925 | 100 | 5000 | 0 | 106 | 85 | 115 | | | | |
| Calcium | 10405.116 | 500 | 10000 | 0 | 104 | 85 | 115 | | | | |
| Iron | 87.708 | 20 | 100.0 | 0 | 87.7 | 85 | 115 | | | | |

| Sample ID **N042405-001D-MS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **10/8/2020** | RunNo: **147927** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82480** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **10/10/2020** | SeqNo: **3963240** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6636.985 | 100 | 5000 | 1494 | 103 | 75 | 125 | | | | |
| Calcium | 239149.512 | 500 | 10000 | 234200 | 49.5 | 75 | 125 | | | | S |
| Iron | 114.359 | 20 | 100.0 | 19.42 | 94.9 | 75 | 125 | | | | |

| Sample ID **N042405-001D-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **10/8/2020** | RunNo: **147927** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82480** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **10/10/2020** | SeqNo: **3963241** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6701.887 | 100 | 5000 | 1494 | 104 | 75 | 125 | 6637 | 0.973 | 20 | |
| Calcium | 238107.138 | 500 | 10000 | 234200 | 39.1 | 75 | 125 | 239100 | 0.437 | 20 | S |
| Iron | 118.450 | 20 | 100.0 | 19.42 | 99.0 | 75 | 125 | 114.4 | 3.51 | 20 | |

| Sample ID **MB-82480** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **10/8/2020** | RunNo: **147927** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82480** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **10/10/2020** | SeqNo: **3963247** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | MB-82480 | SampType: | MBLK | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 10/8/2020 | RunNo: | 147938 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82480 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 10/11/2020 | SeqNo: | 3964164 | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Sodium | ND | 500 | | | | | | | | | | |

| Sample ID | LCS2-82480 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 10/8/2020 | RunNo: | 147938 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82480 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 10/11/2020 | SeqNo: | 3964165 | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Sodium | 20115.540 | 500 | 20000 | 0 | 101 | 85 | 115 | | | | | |

| Sample ID | N042405-002D-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 10/8/2020 | RunNo: | 147938 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82480 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 10/11/2020 | SeqNo: | 3964178 | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Sodium | 1595849.566 | 50000 | 20000 | 1664000 | -343 | 75 | 125 | | | | S | |

| Sample ID | N042405-002D-MSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 10/8/2020 | RunNo: | 147938 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82480 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 10/11/2020 | SeqNo: | 3964180 | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual | |
| Sodium | 1572586.937 | 50000 | 20000 | 1664000 | -459 | 75 | 125 | 1596000 | 1.47 | 20 | S | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N042405-001D-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 147927 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82480 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 10/10/2020 | SeqNo: | 3963239 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6635.385 | 100 | 5000 | 1494 | 103 | 80 | 120 | | | | |
| Calcium | 232583.504 | 500 | 10000 | 234200 | -16.1 | 80 | 120 | | | | S |
| Iron | 175.471 | 20 | 100.0 | 19.42 | 156 | 80 | 120 | | | | S |

| Sample ID | N042405-002D-PS | SampType: | PS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | | RunNo: | 147938 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82480 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 10/11/2020 | SeqNo: | 3964184 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1590890.598 | 50000 | 20000 | 1664000 | -367 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D
**Lab ID:** N042429-001

**Client Sample ID:** MW-60-125-Q420
**Collection Date:** 10/1/2020 1:01:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201008A** | QC Batch: **82424** | | | PrepDate: | | **10/5/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 10/8/2020 04:47 PM |
| Manganese | 5.0 | 0.26 | 0.50 | | µg/L | 1 | 10/6/2020 02:57 AM |
| Molybdenum | 18 | 0.21 | 0.50 | | µg/L | 1 | 10/17/2020 06:02 PM |
| Selenium | 6.5 | 0.36 | 0.50 | | µg/L | 1 | 10/8/2020 04:47 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | MB-82424 | SampType: | MBLK | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147863 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/6/2020 | SeqNo: | 3959777 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | 0.50 | | | | | | | | | |

| Sample ID | LCS-82424 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147863 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/6/2020 | SeqNo: | 3959778 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 97.194 | 0.50 | 100.0 | 0 | 97.2 | 85 | 115 | | | | |

| Sample ID | N042429-001D-MS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147863 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/6/2020 | SeqNo: | 3959790 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 96.514 | 0.50 | 100.0 | 4.969 | 91.5 | 75 | 125 | | | | |

| Sample ID | N042429-001D-MSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147863 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/6/2020 | SeqNo: | 3959793 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 97.137 | 0.50 | 100.0 | 4.969 | 92.2 | 75 | 125 | 96.51 | 0.643 | 20 | |

| Sample ID | MB-82424 | SampType: | MBLK | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147959 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/8/2020 | SeqNo: | 3966022 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | LCS-82424 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147959 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/8/2020 | SeqNo: | 3966023 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.168 | 0.10 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Selenium | 9.868 | 0.50 | 10.00 | 0 | 98.7 | 85 | 115 | | | | |

| Sample ID | N042429-001D-MS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147959 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/8/2020 | SeqNo: | 3966029 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.220 | 0.10 | 10.00 | 0 | 102 | 75 | 125 | | | | |
| Selenium | 16.037 | 0.50 | 10.00 | 6.491 | 95.5 | 75 | 125 | | | | |

| Sample ID | N042429-001D-MSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 147959 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/8/2020 | SeqNo: | 3966030 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.758 | 0.10 | 10.00 | 0 | 108 | 75 | 125 | 10.22 | 5.13 | 20 | |
| Selenium | 16.408 | 0.50 | 10.00 | 6.491 | 99.2 | 75 | 125 | 16.04 | 2.29 | 20 | |

| Sample ID | MB-82424 | SampType: | MBLK | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 148091 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/17/2020 | SeqNo: | 3972534 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | ND | 0.50 | | | | | | | | | |

| Sample ID | LCS-82424 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 148091 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/17/2020 | SeqNo: | 3972535 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 9.586 | 0.50 | 10.00 | 0 | 95.9 | 85 | 115 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042429
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N042429-001D-MS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 148091 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/17/2020 | SeqNo: | 3972539 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 28.931 | 0.50 | 10.00 | 18.21 | 107 | 75 | 125 | | | | |

| Sample ID | N042429-001D-MSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 10/5/2020 | RunNo: | 148091 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82424 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/17/2020 | SeqNo: | 3972540 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Molybdenum | 29.093 | 0.50 | 10.00 | 18.21 | 109 | 75 | 125 | 28.93 | 0.558 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | | QA/QC | | Sample Receipt Condition | Y | N |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | | RTNE | | 1. Chilled | ✓ | |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | | RWQCB | ü | 2. Headspace | | |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | | CalTrans | | 3. Container Intact | | ✓ |
| Submitted By: Riggie Tep | | Phone: 949-727-1400, ext 200 | Others | ü | LEVEL III | | 4. Seal Present | | — |
| Title: Field Tech | Phone: 916-786-3302 Fax: | P.O.# SWA-ASSET-C9817-057 | Specify: RWQCB | | LEVEL IV | | 5. IR number | 2 | |
| Signature: RB Date: 10/01/20 | Sampled By: Riggie Tep | Fax: | Global ID: | | Regulatory | | 6. Method of Cooling: 1 ice | | |
| *I hereby authorize ASSET Labs to perform the tests indicated below.* | *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.* | | | | Specify State: | | Sample Temp: 1.6 C | | |
| Project Name: PG&E Topock - GMP | Signature: RB Date: 10/01/20 | | | | | | Courier: | | |
| Project Number: RC000753.801D | | | | | | | Tracking No.: | | |

Matrix: Ground x | Sediment; Potable | Soil; NPDES | Other Solid; Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CFIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 2x250 mL poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mn 500 mL poly | Dissolved Metals (SW 6020B); HNO3 As, Cr, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6020), HNO3 Boron, Ca, Fe, Na 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Chromium 500 mL poly | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Total metals, Chromium (non-dissolved) (EPA 200.8), HNO3 500 mL poly | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N042429-01 | MW-60-125-Q420 | 10/1/2020 | 13:01 | | X | | | X | X | X | X | X | X | | | X | X | | | | | | E | 4 | P | BNS | |
| 2 | -02 | EB-701-Q420 | 10/1/2020 | ~~9:00~~ | 1310 | X | | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| RB Riggie Tep | 10/01/20 1537 | | 10/1/20 1537 |
| | 10/1/20 1804 | Yoanda Rodriguez | 10/1/20 1804 |
| | | | |

**Turn Around Time (TAT)**

| | | |
|---|---|---|
| | A | < 24 Hrs or Same Day TAT |
| | B | = Next Workday |
| | C | = 2 Workdays |
| | D | = 3 Workdays |
| X | E | = Routine 5-7 Workdays |

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Preservatives:**

| | | | | |
|---|---|---|---|---|
| H=HCL | N=$HNO_{3N=HNO3}$ | S=$H_2SO_{4S=H2}SO_4$ | C=4"CC=4" | |
| Z=$Zn(AC)_{2Z=Zn(AC)2}$ | O=NaOH | T=$Na_2S_2O_{3T=Na2}S_2$ | | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

**Terms**
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed
9. For subcontract analysis, TAT and Surcharges will vary 5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed

White=Laboratory Copy

Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 10/1/2020 | Workorder: | N042429 |
| Rep sample Temp (Deg C): | 1.6 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☐ | No ☑ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☑ | No ☐ | NA ☐ |

Comments: See Correspondence.

For:

Checklist Completed By: YR BHdez 10/2/2020

Reviewed By: MBC 10/05./2020

**Subject:** RE: PG&E Topock - GMP, RC000753.801D (ASSET Labs No. N042429)
**From:** "Madsen, Laura" <Laura.Madsen@arcadis.com>
**Date:** 10/5/2020, 12:10 PM
**To:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**CC:** Tina Rice <Tina.Rice@critigen.com>, "maryann.balilu@assetlaboratoriesph.com" <maryann.balilu@assetlaboratoriesph.com>, "rustico.aquino@assetlaboratoriesph.com" <rustico.aquino@assetlaboratoriesph.com>

Hi Yoandra,
This a Q4 sample and should use "Q420" at the end of the ID.

Thanks,
Laura

-----Original Message-----
From: Yoandra Rodriguez <yoandra@assetlaboratories.com>
Sent: Monday, October 5, 2020 1:20 PM
To: Madsen, Laura <Laura.Madsen@arcadis.com>
Cc: Tina Rice <Tina.Rice@critigen.com>; maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com
Subject: PG&E Topock - GMP, RC000753.801D (ASSET Labs No. N042429)

Hi Laura,

Please kindly advise on the following discrepancy for the attached COC:

- Sample 1: ID is MW-60-125-Q420 on COC and MW-60-125-Q320 on labels.

Thanks,

--
This email has been checked for viruses by Avast antivirus software.
https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.avast.com%2Fantivirus&data=02%7C01%7C%7C58f3b52dd435420cd91308d8695b015c%7C7f90057d3ea046feb07ce0568627081b%7C0%7C0%7C637375187007139 5&sdata=T5INHQItX6gJYjEwv9Ctm45vZJpWyddFDhoxEaXmafw%3D&reserved=0
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# ASSET Laboratories

## WORK ORDER Summary

*06-Oct-20*

**WorkOrder:** N042429

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, RC000753.801D **QC Level:** Level IV **Date Received:** 10/1/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N042429-001A | MW-60-125-Q420 | 10/1/2020 1:01:00 PM | 10/15/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042429-001B | | | 10/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N042429-001C | | | 10/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N042429-001D | | | 10/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 10/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042429-002A | EB-701-Q420 | 10/1/2020 1:10:00 PM | 10/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042429-003A | FOLDER | 10/15/2020 | 10/15/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | LAB |
| | | | 10/15/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 10/15/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 10/15/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

October 19, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N042469

RE: PG&E Topock - GMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on October 05, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, RC000753.801D
**Lab Order:** N042469

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Please see attached correspondence on EB samples.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (57 ug/L) and hexavalent chromium (0 ug/L) for sample N042469-001 (MW-24B-1020) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (3.3 ug/L) and hexavalent chromium (0 ug/L) for sample N042469-003 (MW-24A-1020) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Dilution was necessary for sample N042469-001 due to matrix interference. Sample was analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Sample was reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (57 ug/L) and hexavalent chromium (0 ug/L) for sample N042469-001 (MW-24B-1020) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 62 and 9.1 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (3.3 ug/L) and hexavalent chromium (0 ug/L) for sample N042469-003 (MW-24A-1020) are discrepant, sample from both the total dissolved chromium

and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 3.6 and 1.9 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, RC000753.801D
**Lab Order:** N042469
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N042469-001A | MW-24B-1020 | Groundwater | 10/5/2020 3:24:00 PM | 10/5/2020 | 10/19/2020 |
| N042469-001B | MW-24B-1020 | Groundwater | 10/5/2020 3:24:00 PM | 10/5/2020 | 10/19/2020 |
| N042469-002A | MW-38D-1020 | Groundwater | 10/5/2020 2:14:00 PM | 10/5/2020 | 10/19/2020 |
| N042469-002B | MW-38D-1020 | Groundwater | 10/5/2020 2:14:00 PM | 10/5/2020 | 10/19/2020 |
| N042469-003A | MW-24A-1020 | Groundwater | 10/5/2020 3:02:00 PM | 10/5/2020 | 10/19/2020 |
| N042469-003B | MW-24A-1020 | Groundwater | 10/5/2020 3:02:00 PM | 10/5/2020 | 10/19/2020 |
| N042469-004A | EB-751-Q420 | Groundwater | 10/5/2020 3:30:00 PM | 10/5/2020 | 10/19/2020 |
| N042469-005A | EB-752-Q420 | Groundwater | 10/5/2020 3:30:00 PM | 10/5/2020 | 10/19/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24B-1020 |
| **Lab Order:** | N042469 | **Collection Date:** | 10/5/2020 3:24:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042469-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201006A** QC Batch: **R147834** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 10/6/2020 03:31 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201006A** QC Batch: **82446** | | | | PrepDate: | **10/6/2020** | | Analyst: **CEI** |
| Chromium | 57 | 0.13 | 1.0 | | µg/L | 1 | 10/6/2020 08:15 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38D-1020 |
| **Lab Order:** | N042469 | **Collection Date:** | 10/5/2020 2:14:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042469-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201006A** QC Batch: **R147834** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 20 | 0.17 | 1.0 | | µg/L | 5 | 10/6/2020 01:16 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201006A** QC Batch: **82446** | | | | PrepDate: | **10/6/2020** | | Analyst: **CEI** |
| Chromium | 21 | 0.13 | 1.0 | | µg/L | 1 | 10/6/2020 08:20 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24A-1020 |
| **Lab Order:** | N042469 | **Collection Date:** | 10/5/2020 3:02:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042469-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201006A** | QC Batch: **R147834** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 10/6/2020 01:25 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201006A** | QC Batch: **82446** | | | PrepDate: | **10/6/2020** | | Analyst: **CEI** |
| Chromium | 3.3 | 0.13 | 1.0 | | µg/L | 1 | 10/6/2020 08:25 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-751-Q420 |
| **Lab Order:** | N042469 | **Collection Date:** | 10/5/2020 3:30:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042469-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201006A** | QC Batch: **R147834** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 10/6/2020 02:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-752-Q420 |
| **Lab Order:** | N042469 | **Collection Date:** | 10/5/2020 3:30:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042469-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201006A** | QC Batch: **R147834** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 10/6/2020 03:12 PM |

| | | | | | |
|---|---|---|---|---|---|
| **Qualifiers:** | B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| | H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| | S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| | DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042469
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R147834** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147834** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R147834** | TestNo: **EPA 218.6** | | Analysis Date: **10/6/2020** | SeqNo: **3957713** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R147834** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147834** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R147834** | TestNo: **EPA 218.6** | | Analysis Date: **10/6/2020** | SeqNo: **3957714** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.807 | 0.20 | 5.000 | 0 | 96.1 | 90 | 110 | | | | |

| Sample ID: **N042466-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147834** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147834** | TestNo: **EPA 218.6** | | Analysis Date: **10/6/2020** | SeqNo: **3957722** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.677 | 0.20 | 1.000 | 0.6821 | 99.5 | 90 | 110 | | | | |

| Sample ID: **N042466-002AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147834** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147834** | TestNo: **EPA 218.6** | | Analysis Date: **10/6/2020** | SeqNo: **3957726** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.933 | 0.20 | 1.000 | 1.991 | 94.2 | 90 | 110 | | | | |

| Sample ID: **N042466-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147834** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147834** | TestNo: **EPA 218.6** | | Analysis Date: **10/6/2020** | SeqNo: **3957728** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.762 | 0.20 | 1.000 | 0.7223 | 104 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042469
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N042466-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957730**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.234 | 0.20 | 1.000 | 3.279 | 95.5 | 90 | 110 | | | | |

Sample ID: **N042466-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957732**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.952 | 0.20 | 1.000 | 0.9585 | 99.4 | 90 | 110 | | | | |

Sample ID: **N042466-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957734**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.014 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N042467-002ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957737**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.316 | 0.20 | | | | | | 3.250 | 2.01 | 20 | |

Sample ID: **N042466-001AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957738**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.677 | 0.20 | 1.000 | 0.6821 | 99.5 | 90 | 110 | 1.677 | 0.0119 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042469
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N042469-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957741**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 43.893 | 1.0 | 25.00 | 19.83 | 96.3 | 90 | 110 | | | | |

Sample ID: **N042469-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957742**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.034 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N042469-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957747**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.002 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N042469-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957749**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.984 | 0.20 | 1.000 | 0 | 98.4 | 90 | 110 | | | | |

Sample ID: **N042469-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147834**
Client ID: **ZZZZZZ** Batch ID: **R147834** TestNo: **EPA 218.6** Analysis Date: **10/6/2020** SeqNo: **3957751**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.091 | 1.0 | 5.000 | 0.4470 | 92.9 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042469
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE**

| Sample ID: **MB-82446** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **10/6/2020** | RunNo: **147869** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82446** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **10/6/2020** | SeqNo: **3959974** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-82446** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **10/6/2020** | RunNo: **147869** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82446** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **10/6/2020** | SeqNo: **3959975** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.501 | 1.0 | 10.00 | 0 | 95.0 | 85 | 115 | | | | |

| Sample ID: **N042467-001D-MS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **10/6/2020** | RunNo: **147869** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82446** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **10/6/2020** | SeqNo: **3959983** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 10.497 | 1.0 | 10.00 | 1.168 | 93.3 | 75 | 125 | | | | |

| Sample ID: **N042467-001D-MSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **10/6/2020** | RunNo: **147869** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82446** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **10/6/2020** | SeqNo: **3959984** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 10.483 | 1.0 | 10.00 | 1.168 | 93.2 | 75 | 125 | 10.50 | 0.130 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | |

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 10/5/2020 Workorder: N042469

Rep sample Temp (Deg C): IR Gun ID: 2

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

For:

Checklist Completed By: YR BHdez 10/6/2020 Reviewed By: MBC 10/6/2020

**Subject:** RE: PG&E Topock - GMP, RC000753.801D (ASSET Labs No. N042469)
**From:** "Madsen, Laura" <Laura.Madsen@arcadis.com>
**Date:** 10/6/2020, 9:53 AM
**To:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**CC:** "maryann.balilu@assetlaboratoriesph.com" <maryann.balilu@assetlaboratoriesph.com>, "rustico.aquino@assetlaboratoriesph.com" <rustico.aquino@assetlaboratoriesph.com>, Tina Rice <Tina.Rice@critigen.com>

To clarify, Cr6 for the EB samples only. The other samples should get both Cr6/CrT.

Thanks!

-----Original Message-----
From: Yoandra Rodriguez <yoandra@assetlaboratories.com>
Sent: Tuesday, October 6, 2020 11:53 AM
To: Madsen, Laura <Laura.Madsen@arcadis.com>
Cc: maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com; Tina Rice <Tina.Rice@critigen.com>
Subject: Re: PG&E Topock - GMP, RC000753.801D (ASSET Labs No. N042469)

Noted Laura.

Thanks!

On 10/6/2020 9:40 AM, Madsen, Laura wrote:

> Hi,
> It should be hex chrom only. The COC inadvertently was marked for CrT.
>
> Thanks!
>
> -----Original Message-----
> From: Yoandra Rodriguez <yoandra@assetlaboratories.com>
> Sent: Tuesday, October 6, 2020 11:29 AM
> To: Madsen, Laura <Laura.Madsen@arcadis.com>
> Cc: maryann.balilu@assetlaboratoriesph.com;
> rustico.aquino@assetlaboratoriesph.com; Tina Rice
> <Tina.Rice@critigen.com>
> Subject: PG&E Topock - GMP, RC000753.801D (ASSET Labs No. N042469)
>
> Hi Laura,
>
> Please kindly confirm if samples EB-751-Q420 and EB-752-Q420 should be analyzed only for Cr +6.
> We did not received the bottles for Diss Cr.
>
> Thanks,
>
>
>
> --
> This email has been checked for viruses by Avast antivirus software.
> https://nam02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.
> avast.com%2Fantivirus&data=02%7C01%7C%7C228687fc0ed4473a122308d86a
> 1814ba%7C7f90057d3ea046feb07ce0568627081b%7C0%7C0%7C637375998943322564
> &sdata=dTOP1W4ciinTMOLT2qKS3FOgHEaCZ8CjWksPz9Hgr4E%3D&reserved
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# ASSET Laboratories

## WORK ORDER Summary

*06-Oct-20*

**WorkOrder:** N042469

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, RC000753.801D **QC Level:** Level IV **Date Received:** 10/5/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N042469-001A | MW-24B-1020 | 10/5/2020 3:24:00 PM | 10/19/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042469-001B | | | 10/19/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/19/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042469-002A | MW-38D-1020 | 10/5/2020 2:14:00 PM | 10/19/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042469-002B | | | 10/19/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/19/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042469-003A | MW-24A-1020 | 10/5/2020 3:02:00 PM | 10/19/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042469-003B | | | 10/19/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/19/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042469-004A | EB-751-Q420 | 10/5/2020 3:30:00 PM | 10/19/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042469-005A | EB-752-Q420 | | 10/19/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042469-006A | FOLDER | 10/19/2020 | 10/19/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | LAB |
| | | | 10/19/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 10/19/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 10/19/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

October 20, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N042480

RE: PG&E Topock - GMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on October 06, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Analytical Comments for EPA 218.6:

Because the results for total dissolved chromium (2.8 ug/L) and hexavalent chromium (0 ug/L) for sample N042480-001 (PT7D-1020) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (1.3 ug/L) and hexavalent chromium (0 ug/L) for sample N042480-002 (PT7M-1020) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (24 ug/L) and hexavalent chromium (0 ug/L) for sample N042480-009 (PT8M-1020) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (58 ug/L) and hexavalent chromium (42 ug/L) for sample N042480-011 (PT9S-1020) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (2.8 ug/L) and hexavalent chromium (0 ug/L) for sample N042480-001 (PT7D-1020) are discrepant, sample from both the total dissolved chromium and

hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 2.8 and 2.5 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.3 ug/L) and hexavalent chromium (0 ug/L) for sample N042480-002 (PT7M-1020) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.1 and 0.68 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (24 ug/L) and hexavalent chromium (0 ug/L) for sample N042480-009 (PT8M-1020) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 26 and 31 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (58 ug/L) and hexavalent chromium (42 ug/L) for sample N042480-011 (PT9S-1020) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 59 and 46 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

## ASSET Laboratories

**Date:** *20-Oct-20*

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, RC000753.801D
**Lab Order:** N042480
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N042480-001A | PT7D-1020 | Groundwater | 10/6/2020 9:46:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-001B | PT7D-1020 | Groundwater | 10/6/2020 9:46:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-002A | PT7M-1020 | Groundwater | 10/6/2020 8:41:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-002B | PT7M-1020 | Groundwater | 10/6/2020 8:41:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-003A | PT7S-1020 | Groundwater | 10/6/2020 11:21:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-003B | PT7S-1020 | Groundwater | 10/6/2020 11:21:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-004A | PT9D-1020 | Groundwater | 10/6/2020 1:26:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-004B | PT9D-1020 | Groundwater | 10/6/2020 1:26:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-005A | PT9M-1020 | Groundwater | 10/6/2020 12:31:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-005B | PT9M-1020 | Groundwater | 10/6/2020 12:31:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-006A | EB-754-Q420 | Groundwater | 10/6/2020 2:00:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-007A | EB-753-Q420 | Groundwater | 10/6/2020 2:44:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-008A | PT8D-1020 | Groundwater | 10/6/2020 10:59:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-008B | PT8D-1020 | Groundwater | 10/6/2020 10:59:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-009A | PT8M-1020 | Groundwater | 10/6/2020 9:20:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-009B | PT8M-1020 | Groundwater | 10/6/2020 9:20:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-010A | PT8S-1020 | Groundwater | 10/6/2020 11:32:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-010B | PT8S-1020 | Groundwater | 10/6/2020 11:32:00 AM | 10/6/2020 | 10/20/2020 |
| N042480-011A | PT9S-1020 | Groundwater | 10/6/2020 12:40:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-011B | PT9S-1020 | Groundwater | 10/6/2020 12:40:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-012A | MW-67-185-1020 | Groundwater | 10/6/2020 2:16:00 PM | 10/6/2020 | 10/20/2020 |
| N042480-012B | MW-67-185-1020 | Groundwater | 10/6/2020 2:16:00 PM | 10/6/2020 | 10/20/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT7D-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 9:46:00 AM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 10/7/2020 09:54 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201007D** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 2.8 | 0.13 | 1.0 | | µg/L | 1 | 10/7/2020 08:58 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT7M-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 8:41:00 AM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 10/7/2020 04:27 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201007D** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 1.3 | 0.13 | 1.0 | | µg/L | 1 | 10/7/2020 09:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT7S-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 11:21:00 AM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 400 | 1.7 | 10 | | µg/L | 50 | 10/7/2020 05:24 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201008A** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 410 | 0.65 | 5.0 | | µg/L | 5 | 10/8/2020 05:29 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT9D-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 1:26:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 5200 | 33 | 200 | | µg/L | 1000 | 10/7/2020 06:30 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201008A** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 5200 | 6.5 | 50 | | µg/L | 50 | 10/8/2020 05:43 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT9M-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 12:31:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 690 | 3.3 | 20 | | µg/L | 100 | 10/7/2020 07:08 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201008A** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 660 | 0.65 | 5.0 | | µg/L | 5 | 10/8/2020 05:47 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-754-Q420 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 2:00:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 10/7/2020 07:32 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-753-Q420 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 2:44:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 10/7/2020 07:51 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT8D-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 10:59:00 AM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 390 | 3.3 | 20 | | µg/L | 100 | 10/7/2020 02:53 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201008A** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 370 | 0.65 | 5.0 | | µg/L | 5 | 10/8/2020 05:52 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT8M-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 9:20:00 AM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 10/7/2020 03:21 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201007D** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 24 | 0.13 | 1.0 | | µg/L | 1 | 10/7/2020 09:35 PM |

**Qualifiers:**

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|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT8S-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 11:32:00 AM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 10/7/2020 03:30 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201007D** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 10/7/2020 09:40 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PT9S-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 12:40:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201008B** QC Batch: **R147912** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 42 | 0.33 | 2.0 | | µg/L | 10 | 10/8/2020 08:45 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201007D** QC Batch: **82465** | | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 58 | 0.13 | 1.0 | | µg/L | 1 | 10/7/2020 09:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-185-1020 |
| **Lab Order:** | N042480 | **Collection Date:** | 10/6/2020 2:16:00 PM |
| **Project:** | PG&E Topock - GMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042480-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201007B** | QC Batch: **R147880** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2000 | 6.6 | 40 | | µg/L | 200 | 10/7/2020 04:08 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201008A** | QC Batch: **82465** | | | PrepDate: | **10/7/2020** | | Analyst: **CEI** |
| Chromium | 2000 | 3.2 | 25 | | µg/L | 25 | 10/8/2020 05:57 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042480
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | **LCS-R147880** | SampType: | **LCS** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **147880** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSW** | Batch ID: | **R147880** | TestNo: | **EPA 218.6** | | | Analysis Date: | **10/7/2020** | SeqNo: | **3960779** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.904 | 0.20 | 5.000 | 0 | 98.1 | 90 | 110 | | | | |

| Sample ID | **MB-R147880** | SampType: | **MBLK** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **147880** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBW** | Batch ID: | **R147880** | TestNo: | **EPA 218.6** | | | Analysis Date: | **10/7/2020** | SeqNo: | **3960780** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID | **N042480-002AMS** | SampType: | **MS** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **147880** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R147880** | TestNo: | **EPA 218.6** | | | Analysis Date: | **10/7/2020** | SeqNo: | **3960790** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.828 | 1.0 | 5.000 | 0 | 96.6 | 90 | 110 | | | | |

| Sample ID | **N042480-009AMS** | SampType: | **MS** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **147880** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R147880** | TestNo: | **EPA 218.6** | | | Analysis Date: | **10/7/2020** | SeqNo: | **3960791** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.008 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID | **N042480-010AMS** | SampType: | **MS** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **147880** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R147880** | TestNo: | **EPA 218.6** | | | Analysis Date: | **10/7/2020** | SeqNo: | **3960794** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.089 | 0.20 | 1.000 | 0 | 109 | 90 | 110 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042480
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N042480-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147880**
Client ID: **ZZZZZZ** Batch ID: **R147880** TestNo: **EPA 218.6** Analysis Date: **10/7/2020** SeqNo: **3960796**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 652.360 | 10 | 250.0 | 401.3 | 100 | 90 | 110 | | | | |

Sample ID **N042480-003AMSD** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147880**
Client ID: **ZZZZZZ** Batch ID: **R147880** TestNo: **EPA 218.6** Analysis Date: **10/7/2020** SeqNo: **3960797**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 653.030 | 10 | 250.0 | 401.3 | 101 | 90 | 110 | | | | |

Sample ID **N042480-008ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147880**
Client ID: **ZZZZZZ** Batch ID: **R147880** TestNo: **EPA 218.6** Analysis Date: **10/7/2020** SeqNo: **3960798**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 368.810 | 20 | | | | | | 386.6 | 4.72 | 20 | |

Sample ID **N042480-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147880**
Client ID: **ZZZZZZ** Batch ID: **R147880** TestNo: **EPA 218.6** Analysis Date: **10/7/2020** SeqNo: **3960799**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 859.950 | 20 | 500.0 | 386.6 | 94.7 | 90 | 110 | | | | |

Sample ID **N042480-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147880**
Client ID: **ZZZZZZ** Batch ID: **R147880** TestNo: **EPA 218.6** Analysis Date: **10/7/2020** SeqNo: **3960801**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3035.400 | 40 | 1000 | 1989 | 105 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042480
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N042480-004AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147880 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147880 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/7/2020 | SeqNo: | 3960803 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 10288.600 | 200 | 5000 | 5236 | 101 | 90 | 110 | | | | |

| Sample ID | N042480-005AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147880 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147880 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/7/2020 | SeqNo: | 3960807 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1191.010 | 20 | 500.0 | 692.7 | 99.7 | 90 | 110 | | | | |

| Sample ID | N042480-006AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147880 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147880 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/7/2020 | SeqNo: | 3960809 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.966 | 0.20 | 1.000 | 0 | 96.6 | 90 | 110 | | | | |

| Sample ID | N042480-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147880 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147880 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/7/2020 | SeqNo: | 3960811 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.973 | 0.20 | 1.000 | 0 | 97.3 | 90 | 110 | | | | |

| Sample ID | N042480-001AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147880 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147880 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/7/2020 | SeqNo: | 3960822 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.902 | 1.0 | 5.000 | 0 | 98.0 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042480
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | LCS-R147912 | SampType: | LCS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961907 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.026 | 0.20 | 5.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID | MB-R147912 | SampType: | MBLK | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961908 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID | N042513-001AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961920 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.003 | 0.20 | 1.000 | 1.013 | 99.0 | 90 | 110 | | | | |

| Sample ID | N042513-002AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961921 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.864 | 0.20 | 1.000 | 2.806 | 106 | 90 | 110 | | | | |

| Sample ID | N042513-003AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961922 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 7.840 | 0.20 | 5.000 | 2.757 | 102 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042480
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N042513-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147912**
Client ID: **ZZZZZZ** Batch ID: **R147912** TestNo: **EPA 218.6** Analysis Date: **10/8/2020** SeqNo: **3961925**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.680 | 0.20 | 1.000 | 2.628 | 105 | 90 | 110 | | | | |

Sample ID **N042513-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147912**
Client ID: **ZZZZZZ** Batch ID: **R147912** TestNo: **EPA 218.6** Analysis Date: **10/8/2020** SeqNo: **3961926**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.571 | 0.20 | 1.000 | 0.6048 | 96.6 | 90 | 110 | | | | |

Sample ID **N042513-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147912**
Client ID: **ZZZZZZ** Batch ID: **R147912** TestNo: **EPA 218.6** Analysis Date: **10/8/2020** SeqNo: **3961927**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.557 | 0.20 | 1.000 | 0.5885 | 96.8 | 90 | 110 | | | | |

Sample ID **N042513-009AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147912**
Client ID: **ZZZZZZ** Batch ID: **R147912** TestNo: **EPA 218.6** Analysis Date: **10/8/2020** SeqNo: **3961928**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.693 | 0.20 | 1.000 | 2.628 | 107 | 90 | 110 | 3.680 | 0.350 | 20 | |

Sample ID **N042513-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **147912**
Client ID: **ZZZZZZ** Batch ID: **R147912** TestNo: **EPA 218.6** Analysis Date: **10/8/2020** SeqNo: **3961929**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.439 | 0.20 | 1.000 | 0.4674 | 97.1 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042480
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N042513-010AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961937 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.001 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

| Sample ID | N042513-011AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961939 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.024 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID | N042513-005AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961940 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.101 | 0.20 | 1.000 | 1.122 | 97.9 | 90 | 110 | | | | |

| Sample ID | N042484-014ADUP | SampType: | DUP | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961942 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.803 | 0.20 | | | | | | 3.817 | 0.365 | 20 | |

| Sample ID | N042480-011AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961945 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 90.257 | 2.0 | 50.00 | 42.08 | 96.4 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042480
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N042513-008AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 147912 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R147912 | TestNo: | EPA 218.6 | | | Analysis Date: | 10/8/2020 | SeqNo: | 3961949 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.406 | 0.20 | 1.000 | 2.334 | 107 | 90 | 110 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042480
**Project:** PG&E Topock - GMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-82465 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 10/7/2020 | RunNo: | 147871 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82465 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/7/2020 | SeqNo: | 3960488 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-82465 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 10/7/2020 | RunNo: | 147871 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82465 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/7/2020 | SeqNo: | 3960489 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.732 | 1.0 | 10.00 | 0 | 97.3 | 85 | 115 | | | | |

| Sample ID | N042484-018B-MS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 10/7/2020 | RunNo: | 147871 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82465 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/7/2020 | SeqNo: | 3960493 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 12.551 | 1.0 | 10.00 | 2.839 | 97.1 | 75 | 125 | | | | |

| Sample ID | N042484-018B-MSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 10/7/2020 | RunNo: | 147871 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82465 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 10/7/2020 | SeqNo: | 3960494 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 12.608 | 1.0 | 10.00 | 2.839 | 97.7 | 75 | 125 | 12.55 | 0.459 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

# CHAIN OF CUSTODY RECORD

Page 1 of 1

ARCUS02 C: 10/20/202 12:00 AM
FOLDER R: 10/6/2020
**N042480-013A** 1 of 1

| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓ Specify: RWQCB |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State: |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 |
| Submitted By: Matt Trainotti | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 | Fax: |
| Title: | | | Global ID: |

Sample Receipt Condition

| | Y | N |
|---|---|---|
| 1. Chilled | | |
| 2. Headspace | | |
| 3. Container Intact | | |
| 4. Seal Present | | ✓ |
| 5. IR number | | 2 |

6. Method of Cooling: Ice 3.9°C
Sample Temp:

Signature: Date: 10-6-20
*I hereby authorize ASSET Labs to perform the tests indicated below.*

Sampled By: Matt Trainotti
*I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.*
Signature: Date: 10-6-20

Project Name: PG&E Topock - GMP
Project Number: RC000753.801D

Matrix: Ground x; Sediment; Potable; Soil; NPDES; Other Solid; Surface

Courier: ASSET
Tracking No.:

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Matrix | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Oxygen and Deuterium Isotopes (CFIRM), Ice (250 mL poly) | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (2x250 mL poly) | Alkalinity, Total as CaCO3 (SM2320B) (1 liter poly) | Bromide, Sulfate, Chloride (EPA 300.0) (1 liter poly) | Fluoride (EPA 300.0) (1 liter poly) | Specific Conductance (EPA 120.1) (1 liter poly) | Total Dissolved Solids (SM2540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 (125 mL poly) | Total Organic Carbon (SM5310C); H2SO4 (3x40 mL poly) | Dissolved metals (SW 6020), HNO3 As, Cr, Mn (500 mL poly) | Dissolved Metals (SW 6020B); HNO3 As, Cr, Mn, Mo, Se (500 mL poly) | Dissolved metals (SW 6020), HNO3 Boron, Ca, Fe (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Chromium (500 mL poly) | Metals Dissolved (EPA7470A FF) Hg; HNO3 (500 mL poly) | Dissolved Metals (SW 6010B); HNO3 Potassium (500 mL poly) | Total metals, Chromium (EPA 200.8), HNO3 (500 mL poly) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N042480-01 | PT7D-1020 | 10/6/2020 | 9:46 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 2 | -02 | PT7M-1020 | 10/6/2020 | 8:41 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 3 | -03 | PT7S-1020 | 10/6/2020 | 11:21 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 4 | -04 | PT9D-1020 | 10/6/2020 | 13:26 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 5 | -05 | PT9M-1020 | 10/6/2020 | 12:31 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 6 | -06 | EB-754-Q420 | 10/6/2020 | 14:00 | | X | X | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |
| 7 | -07 | EB-753-Q420 | 10/6/2020 | 14:44 | | X | X | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |
| 8 | -08 | PT8D-1020 | 10/6/2020 | 10:59 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 9 | -09 | PT8M-1020 | 10/6/2020 | 9:20 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 10 | -10 | PT8S-1020 | 10/6/2020 | 11:32 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 11 | -11 | PT9S-1020 | 10/6/2020 | 12:40 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |
| 12 | -12 | MW-67-185-1020 | 10/6/2020 | 14:16 | | X | X | | | | | | | | | | | | | X | | | | E | 2 | P | BNS | |

| Relinquished by (Signature and Printed Name) | Date/Time | Received by (Signature and Printed Name) | Date/Time |
|---|---|---|---|
| Matt Trainotti | 10-6-20 1500 | | 10/6/20 1500 |
| | 10/6/20 1705 | Joaquin Rodriguez | 10/6/20 1705 |
| | | | |

**Turn Around Time (TAT)**

- A = < 24 Hrs or Same Day TAT
- B = Next Workday
- C = 2 Workdays
- D = 3 Workdays
- X E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary 5 Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_{3N=HNO3}$ | S=$H_2SO_{4B=H2}SO_4$ | C=4°CC=4° |
| Z=$Zn(AC)_{2Z=Zn(AC)2}$ | O=NaOH | T=$Na_2S_2O_{3T=Na2}S_2$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 10/6/2020 | Workorder: | N042480 |
| Rep sample Temp (Deg C): | 3.9 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

For:

Checklist Completed By: YR BHdez 10/7/2020

Reviewed By: MBC 10/07/2020

# ASSET Laboratories

## WORK ORDER Summary

*07-Oct-20*

**WorkOrder:** N042480

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, RC000753. 801D **QC Level:** Level IV **Date Received:** 10/6/2020

**Comments:** Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N042480-001A | PT7D-1020 | 10/6/2020 9:46:00 AM | 10/20/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-001B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-002A | PT7M-1020 | 10/6/2020 8:41:00 AM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-002B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-003A | PT7S-1020 | 10/6/2020 11:21:00 AM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-003B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-004A | PT9D-1020 | 10/6/2020 1:26:00 PM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-004B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-005A | PT9M-1020 | 10/6/2020 12:31:00 PM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-005B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-006A | EB-754-Q420 | 10/6/2020 2:00:00 PM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-007A | EB-753-Q420 | 10/6/2020 2:44:00 PM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-008A | PT8D-1020 | 10/6/2020 10:59:00 AM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-008B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-009A | PT8M-1020 | 10/6/2020 9:20:00 AM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-009B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*07-Oct-20*

**WorkOrder:** N042480

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, RC000753. 801D **QC Level:** Level IV **Date Received:** 10/6/2020

**Comments:** Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N042480-009B | PT8M-1020 | 10/6/2020 9:20:00 AM | 10/20/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-010A | PT8S-1020 | 10/6/2020 11:32:00 AM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-010B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-011A | PT9S-1020 | 10/6/2020 12:40:00 PM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-011B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-012A | MW-67-185-1020 | 10/6/2020 2:16:00 PM | 10/20/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042480-012B | | | 10/20/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/20/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042480-013A | FOLDER | 10/20/2020 | 10/20/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | LAB |
| | | | 10/20/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 10/20/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 10/20/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

October 21, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N042508

RE: PG&E Topock - PMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on October 07, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time except for pH. pH testing is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

Analytical Comments for EPA 200.7_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium and Sodium in QC samples N042507-001E-MS1, N042507-001E-MSD1, N042513-008B-MS1, N042508-001B-MS2, N042508-001B-MSD2 and N042513-009B-MS2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042507-001E-MS1 and N042513-008B-MS1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - PMP, RC000753.801D
**Lab Order:** N042508
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N042508-001A | TW-03D-1020 | Groundwater | 10/7/2020 9:50:00 AM | 10/7/2020 | 10/21/2020 |
| N042508-001B | TW-03D-1020 | Groundwater | 10/7/2020 9:50:00 AM | 10/7/2020 | 10/21/2020 |
| N042508-001C | TW-03D-1020 | Groundwater | 10/7/2020 9:50:00 AM | 10/7/2020 | 10/21/2020 |
| N042508-001D | TW-03D-1020 | Groundwater | 10/7/2020 9:50:00 AM | 10/7/2020 | 10/21/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1020 |
| **Lab Order:** | N042508 | **Collection Date:** | 10/7/2020 9:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042508-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201008B** | QC Batch: **R147873** | | | PrepDate: | | | Analyst: **QBM** |
| Specific Conductance | 7000 | 0.10 | 0.10 | | umhos/cm | 1 | 10/8/2020 11:15 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N042513-009CDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **147873**
Client ID: **ZZZZZZ** Batch ID: **R147873** TestNo: **EPA 120.1** Analysis Date: **10/8/2020** SeqNo: **3960532**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 6850.000 | 0.10 | | | | | | 6810 | 0.586 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1020 |
| **Lab Order:** | N042508 | **Collection Date:** | 10/7/2020 9:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042508-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201008A** | QC Batch: **R147872** | | | PrepDate: | | | Analyst: **QBM** |
| pH | 7.2 | 0.10 | 0.10 | H | pH Units | 1 | 10/8/2020 12:25 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 10/8/2020 12:25 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 150.1_4500H+B_W**

Sample ID: **N042508-001CDUP** SampType: **DUP** TestCode: **150.1_4500H** Units: **pH Units** Prep Date: RunNo: **147872**
Client ID: **ZZZZZZ** Batch ID: **R147872** TestNo: **SM4500-H+B** Analysis Date: **10/8/2020** SeqNo: **3960521**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 7.290 | 0.10 | | | | | | 7.250 | 0.550 | 10 | H |
| Temp. at time of pH Analysis | 25.000 | 0.10 | | | | | | 25.00 | 0 | 10 | H |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1020 |
| **Lab Order:** | N042508 | **Collection Date:** | 10/7/2020 9:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042508-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201008G** | QC Batch: **82488** | | | PrepDate: | **10/8/2020** | | Analyst: **QBM** |
| Total Dissolved Solids (Residue, Filterable) | 4400 | 50 | 50 | | mg/L | 1 | 10/8/2020 08:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-82488** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **10/8/2020** | RunNo: **147904** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82488** | TestNo: **SM2540C** | | Analysis Date: **10/8/2020** | SeqNo: **3961556** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 974.000 | 10 | 1000 | 0 | 97.4 | 80 | 120 | | | | |

| Sample ID: **MB-82488** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **10/8/2020** | RunNo: **147904** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82488** | TestNo: **SM2540C** | | Analysis Date: **10/8/2020** | SeqNo: **3961557** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | ND | 10 | | | | | | | | | |

| Sample ID: **N042508-001C-DUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **10/8/2020** | RunNo: **147904** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82488** | TestNo: **SM2540C** | | Analysis Date: **10/8/2020** | SeqNo: **3961559** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 4385.000 | 50 | | | | | | 4390 | 0.114 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D
**Lab ID:** N042508-001

**Client Sample ID:** TW-03D-1020
**Collection Date:** 10/7/2020 9:50:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | | | **EPA 200.7** | | | | |
| RunID: **NV00922-ICP2_201014A** | QC Batch: **82532** | | | PrepDate: | **10/12/2020** | Analyst: **DJ** | |
| Calcium | 190000 | 85 | 500 | | µg/L | 1 | 10/14/2020 09:17 AM |
| Iron | 93 | 18 | 20 | | µg/L | 1 | 10/14/2020 09:17 AM |
| Magnesium | 37000 | 48 | 100 | | µg/L | 1 | 10/14/2020 09:17 AM |
| Sodium | 1500000 | 9600 | 50000 | | µg/L | 100 | 10/14/2020 03:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

Sample ID: **LCS1-82532** SampType: **LCS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **10/12/2020** RunNo: **148004**
Client ID: **LCSW** Batch ID: **82532** TestNo: **EPA 200.7** Analysis Date: **10/14/2020** SeqNo: **3967908**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 9941.518 | 500 | 10000 | 0 | 99.4 | 85 | 115 | | | | |
| Iron | 93.531 | 20 | 100.0 | 0 | 93.5 | 85 | 115 | | | | |
| Magnesium | 11023.631 | 100 | 10000 | 0 | 110 | 85 | 115 | | | | |

Sample ID: **N042507-001E-MS1** SampType: **MS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **10/12/2020** RunNo: **148004**
Client ID: **ZZZZZZ** Batch ID: **82532** TestNo: **EPA 200.7** Analysis Date: **10/14/2020** SeqNo: **3967911**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 175729.722 | 2500 | 10000 | 208000 | -323 | 75 | 125 | | | | S |
| Iron | 98.859 | 100 | 100.0 | 0 | 98.9 | 75 | 125 | | | | |
| Magnesium | 38137.458 | 500 | 10000 | 33160 | 49.7 | 75 | 125 | | | | S |

Sample ID: **N042507-001E-MSD** SampType: **MSD** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **10/12/2020** RunNo: **148004**
Client ID: **ZZZZZZ** Batch ID: **82532** TestNo: **EPA 200.7** Analysis Date: **10/14/2020** SeqNo: **3967912**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 182574.852 | 2500 | 10000 | 208000 | -254 | 75 | 125 | 175700 | 3.82 | 20 | S |
| Iron | 114.393 | 100 | 100.0 | 0 | 114 | 75 | 125 | 98.86 | 14.6 | 20 | |
| Magnesium | 40845.286 | 500 | 10000 | 33160 | 76.8 | 75 | 125 | 38140 | 6.86 | 20 | |

Sample ID: **N042513-008B-MS1** SampType: **MS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **10/12/2020** RunNo: **148004**
Client ID: **ZZZZZZ** Batch ID: **82532** TestNo: **EPA 200.7** Analysis Date: **10/14/2020** SeqNo: **3967922**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 167972.876 | 2500 | 10000 | 151500 | 165 | 75 | 125 | | | | S |
| Iron | 174.652 | 100 | 100.0 | 0 | 175 | 75 | 125 | | | | S |
| Magnesium | 47102.553 | 500 | 10000 | 33090 | 140 | 75 | 125 | | | | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

| Sample ID: **MB-82532** | SampType: **MBLK** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **10/12/2020** | RunNo: **148030** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82532** | TestNo: **EPA 200.7** | | Analysis Date: **10/14/2020** | SeqNo: **3968713** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

| Sample ID: **LCS2-82532** | SampType: **LCS** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **10/12/2020** | RunNo: **148030** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82532** | TestNo: **EPA 200.7** | | Analysis Date: **10/14/2020** | SeqNo: **3968714** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 20140.079 | 500 | 20000 | 0 | 101 | 85 | 115 | | | | |

| Sample ID: **N042508-001B-MS2** | SampType: **MS** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **10/12/2020** | RunNo: **148030** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82532** | TestNo: **EPA 200.7** | | Analysis Date: **10/14/2020** | SeqNo: **3968733** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1229339.876 | 50000 | 20000 | 1468000 | -1190 | 75 | 125 | | | | S |

| Sample ID: **N042508-001B-MSD** | SampType: **MSD** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **10/12/2020** | RunNo: **148030** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82532** | TestNo: **EPA 200.7** | | Analysis Date: **10/14/2020** | SeqNo: **3968737** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1306854.834 | 50000 | 20000 | 1468000 | -807 | 75 | 125 | 1229000 | 6.11 | 20 | S |

| Sample ID: **N042513-009B-MS2** | SampType: **MS** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **10/12/2020** | RunNo: **148030** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82532** | TestNo: **EPA 200.7** | | Analysis Date: **10/14/2020** | SeqNo: **3968768** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 654818.624 | 25000 | 20000 | 1398000 | -3720 | 75 | 125 | | | | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

| Sample ID: **MB-82532** | SampType: **MBLK** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **10/12/2020** | RunNo: **148037** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82532** | TestNo: **EPA 200.7** | | Analysis Date: **10/15/2020** | SeqNo: **3969007** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

Sample ID: **N042507-001E-PS** SampType: **PS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: RunNo: **148004**
Client ID: **ZZZZZZ** Batch ID: **82532** TestNo: **EPA 200.7** Analysis Date: **10/14/2020** SeqNo: **3967910**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 191541.918 | 2500 | 10000 | 208000 | -165 | 80 | 120 | | | | S |
| Iron | 130.259 | 100 | 100.0 | 0 | 130 | 80 | 120 | | | | S |
| Magnesium | 41749.624 | 500 | 10000 | 33160 | 85.9 | 80 | 120 | | | | |

Sample ID: **N042508-001B-PS** SampType: **PS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: RunNo: **148030**
Client ID: **ZZZZZZ** Batch ID: **82532** TestNo: **EPA 200.7** Analysis Date: **10/14/2020** SeqNo: **3968731**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1357528.426 | 50000 | 20000 | 1468000 | -554 | 80 | 120 | | | | S |

Sample ID: **N042513-009B-PS** SampType: **PS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: RunNo: **148030**
Client ID: **ZZZZZZ** Batch ID: **82532** TestNo: **EPA 200.7** Analysis Date: **10/14/2020** SeqNo: **3968767**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 908723.877 | 25000 | 20000 | 1398000 | -2450 | 80 | 120 | | | | S |

Sample ID: **N042513-008B-PS** SampType: **PS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: RunNo: **148037**
Client ID: **ZZZZZZ** Batch ID: **82532** TestNo: **EPA 200.7** Analysis Date: **10/15/2020** SeqNo: **3969009**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 132177.660 | 2500 | 10000 | 151500 | -193 | 80 | 120 | | | | S |
| Iron | 210.094 | 100 | 100.0 | 0 | 210 | 80 | 120 | | | | S |
| Magnesium | 36528.181 | 500 | 10000 | 33090 | 34.4 | 80 | 120 | | | | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1020 |
| **Lab Order:** | N042508 | **Collection Date:** | 10/7/2020 9:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042508-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICPMS** | | | | | | | |
| **EPA 200.8** | | | | | | | |
| RunID: **NV00922-ICP8_201012B** QC Batch: **82504** PrepDate: **10/10/2020** Analyst: **CEI** | | | | | | | |
| Manganese | 19 | 0.26 | 0.50 | | µg/L | 1 | 10/12/2020 01:42 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8_WDISS_TPK**

| Sample ID: **MB-82504** | SampType: **MBLK** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970679** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-82504** | SampType: **LCS** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970680** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 98.675 | 0.50 | 100.0 | 0 | 98.7 | 85 | 115 | | | | |

| Sample ID: **N042508-001B-MS** | SampType: **MS** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970688** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 112.526 | 0.50 | 100.0 | 18.93 | 93.6 | 75 | 125 | | | | |

| Sample ID: **N042508-001B-MSD** | SampType: **MSD** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970693** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 113.613 | 0.50 | 100.0 | 18.93 | 94.7 | 75 | 125 | 112.5 | 0.961 | 20 | |

| Sample ID: **N042522-001C-MS** | SampType: **MS** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970738** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 105.110 | 0.50 | 100.0 | 7.543 | 97.6 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1020 |
| **Lab Order:** | N042508 | **Collection Date:** | 10/7/2020 9:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042508-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201008A** | QC Batch: **R147882** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 420 | 1.7 | 10 | | µg/L | 50 | 10/8/2020 10:46 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 200.8** | | | | |
| RunID: **NV00922-ICP8_201012B** | QC Batch: **82504** | | | PrepDate: | **10/10/2020** | | Analyst: **CEI** |
| Chromium | 400 | 0.65 | 5.0 | | µg/L | 5 | 10/12/2020 01:47 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8Dis_CrPGE_TPK**

| Sample ID: **MB-82504** | SampType: **MBLK** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970486** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-82504** | SampType: **LCS** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970487** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.636 | 1.0 | 10.00 | 0 | 96.4 | 85 | 115 | | | | |

| Sample ID: **N042508-001B-MS** | SampType: **MS** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970498** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 408.147 | 5.0 | 10.00 | 397.3 | 109 | 75 | 125 | | | | |

| Sample ID: **N042508-001B-MSD** | SampType: **MSD** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970501** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 408.037 | 5.0 | 10.00 | 397.3 | 107 | 75 | 125 | 408.1 | 0.0270 | 20 | |

| Sample ID: **N042522-001C-MS** | SampType: **MS** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **10/10/2020** | RunNo: **148068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82504** | TestNo: **EPA 200.8** | | Analysis Date: **10/12/2020** | SeqNo: **3970545** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 11.606 | 1.0 | 10.00 | 1.985 | 96.2 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R147882** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960865** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R147882** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960866** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.044 | 0.20 | 5.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N042511-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960867** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.241 | 0.20 | 1.000 | 1.237 | 100 | 90 | 110 | | | | |

| Sample ID: **N042511-002AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960869** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.056 | 0.20 | 1.000 | 0.08220 | 97.3 | 90 | 110 | | | | |

| Sample ID: **N042511-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960871** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.087 | 0.20 | 1.000 | 0.07780 | 101 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N042511-004AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960873** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.721 | 0.20 | 1.000 | 0.7064 | 101 | 90 | 110 | | | | |

| Sample ID: **N042511-004AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960880** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.687 | 0.20 | 1.000 | 0.7064 | 98.1 | 90 | 110 | 1.721 | 2.00 | 20 | |

| Sample ID: **N042512-001ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960881** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.907 | 0.20 | | | | | | 3.888 | 0.480 | 20 | |

| Sample ID: **N042508-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **147882** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147882** | TestNo: **EPA 218.6** | | Analysis Date: **10/8/2020** | SeqNo: **3960883** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 660.500 | 10 | 250.0 | 424.6 | 94.4 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1020 |
| **Lab Order:** | N042508 | **Collection Date:** | 10/7/2020 9:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042508-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201009C** | QC Batch: **R147905** | | | PrepDate: | | | Analyst: **QBM** |
| Alkalinity, Total (As CaCO3) | 150 | 1.2 | 5.0 | | mg/L | 1 | 10/9/2020 09:20 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R147905** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147905** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R147905** | TestNo: **SM 2320 B** | | Analysis Date: **10/9/2020** | SeqNo: **3961569** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 100.423 | 5.0 | 100.0 | 0 | 100 | 85 | 115 | | | | |

| Sample ID: **MB-R147905** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147905** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R147905** | TestNo: **SM 2320 B** | | Analysis Date: **10/9/2020** | SeqNo: **3961570** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N042508-001CDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147905** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147905** | TestNo: **SM 2320 B** | | Analysis Date: **10/9/2020** | SeqNo: **3961572** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 146.934 | 5.0 | | | | | | 146.9 | 0 | 30 | |

| Sample ID: **N042508-001CMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147905** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147905** | TestNo: **SM 2320 B** | | Analysis Date: **10/9/2020** | SeqNo: **3961573** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 244.186 | 5.0 | 100.0 | 146.9 | 97.3 | 75 | 125 | | | | |

| Sample ID: **N042508-001CMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **147905** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147905** | TestNo: **SM 2320 B** | | Analysis Date: **10/9/2020** | SeqNo: **3961574** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 245.243 | 5.0 | 100.0 | 146.9 | 98.3 | 75 | 125 | 244.2 | 0.432 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1020 |
| **Lab Order:** | N042508 | **Collection Date:** | 10/7/2020 9:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042508-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201008A** QC Batch: **R147894** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2100 | 17 | 250 | | mg/L | 500 | 10/8/2020 11:18 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201008A** QC Batch: **R147894** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 480 | 2.0 | 25 | | mg/L | 50 | 10/8/2020 07:00 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R147894_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **147894**
Client ID: **PBW** Batch ID: **R147894** TestNo: **EPA 300.0** Analysis Date: **10/8/2020** SeqNo: **3961313**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.160 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R147894_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **147894**
Client ID: **LCSW** Batch ID: **R147894** TestNo: **EPA 300.0** Analysis Date: **10/8/2020** SeqNo: **3961314**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.003 | 0.50 | 2.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N042513-001DMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **147894**
Client ID: **ZZZZZZ** Batch ID: **R147894** TestNo: **EPA 300.0** Analysis Date: **10/8/2020** SeqNo: **3961324**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3210.100 | 250 | 1000 | 2166 | 104 | 80 | 120 | | | | |

Sample ID: **N042513-001DMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **147894**
Client ID: **ZZZZZZ** Batch ID: **R147894** TestNo: **EPA 300.0** Analysis Date: **10/8/2020** SeqNo: **3961325**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3219.650 | 250 | 1000 | 2166 | 105 | 80 | 120 | 3210 | 0.297 | 20 | |

Sample ID: **N042513-005CMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **147894**
Client ID: **ZZZZZZ** Batch ID: **R147894** TestNo: **EPA 300.0** Analysis Date: **10/8/2020** SeqNo: **3961327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3231.750 | 250 | 1000 | 2198 | 103 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **N042513-009CDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **147894**
Client ID: **ZZZZZZ** Batch ID: **R147894** TestNo: **EPA 300.0** Analysis Date: **10/8/2020** SeqNo: **3961329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2140.900 | 250 | | | | | | 2142 | 0.0630 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **MB-R147894_SO4** | SampType: **MBLK** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **147894** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R147894** | TestNo: **EPA 300.0** | | Analysis Date: **10/8/2020** | SeqNo: **3961369** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R147894_SO4** | SampType: **LCS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **147894** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R147894** | TestNo: **EPA 300.0** | | Analysis Date: **10/8/2020** | SeqNo: **3961370** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.094 | 0.50 | 4.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID: **N042513-003DMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **147894** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147894** | TestNo: **EPA 300.0** | | Analysis Date: **10/8/2020** | SeqNo: **3961376** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 716.700 | 25 | 200.0 | 506.1 | 105 | 80 | 120 | | | | |

| Sample ID: **N042513-003DMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **147894** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147894** | TestNo: **EPA 300.0** | | Analysis Date: **10/8/2020** | SeqNo: **3961377** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 708.930 | 25 | 200.0 | 506.1 | 101 | 80 | 120 | 716.7 | 1.09 | 20 | |

| Sample ID: **N042507-001BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **147894** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147894** | TestNo: **EPA 300.0** | | Analysis Date: **10/8/2020** | SeqNo: **3961379** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 695.125 | 25 | 200.0 | 488.2 | 103 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N042513-009CDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **147894**
Client ID: **ZZZZZZ** Batch ID: **R147894** TestNo: **EPA 300.0** Analysis Date: **10/8/2020** SeqNo: **3961383**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 467.170 | 25 | | | | | | 470.9 | 0.792 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1020 |
| **Lab Order:** | N042508 | **Collection Date:** | 10/7/2020 9:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042508-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201013A** | QC Batch: **R147971** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.8 | 0.16 | 0.25 | | mg/L | 5 | 10/13/2020 01:09 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042508
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R147971** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **147971** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R147971** | TestNo: **SM4500-NO3** | | Analysis Date: **10/13/2020** | SeqNo: **3966671** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R147971** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **147971** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R147971** | TestNo: **SM4500-NO3** | | Analysis Date: **10/13/2020** | SeqNo: **3966672** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.487 | 0.050 | 0.5000 | 0 | 97.3 | 85 | 115 | | | | |

| Sample ID: **N042507-001DDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **147971** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147971** | TestNo: **SM4500-NO3** | | Analysis Date: **10/13/2020** | SeqNo: **3966674** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 2.720 | 0.25 | | | | | | 2.645 | 2.80 | 20 | |

| Sample ID: **N042507-001DMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **147971** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147971** | TestNo: **SM4500-NO3** | | Analysis Date: **10/13/2020** | SeqNo: **3966675** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.369 | 0.25 | 2.500 | 2.645 | 109 | 75 | 125 | | | | |

| Sample ID: **N042507-001DMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **147971** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R147971** | TestNo: **SM4500-NO3** | | Analysis Date: **10/13/2020** | SeqNo: **3966676** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.266 | 0.25 | 2.500 | 2.645 | 105 | 75 | 125 | 5.369 | 1.94 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Others ✓; Specify: RWQCB |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RWQCB ✓ |
| Address: Roseville, CA 95661 | Email: | Address: | Sample Receipt Condition: 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivotx.com | P.O.# SWA-ASSET-C9817-051 |
| Submitted By: Spencer Doolittle | | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Project Manager | Phone: 916-786-3302 Fax: | | Global ID: |
| Signature: Date: 10/7/2020 | Sampled By: Spencer Doolittle | | Specify State: |
| Project Name: PG&E Topock - PMP | Signature: Date: 10/7/2020 | | |
| Project Number: RC000753.801D | | | |

*I hereby authorize ASSET Labs to perform the tests indicated below.*

*I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.*

Matrix: Ground x; Potable; NPDES; Surface; Sediment; Soil; Other Solid

Sample Receipt Condition: 2. Headspace; 3. Container Intact ✓; 4. Seal Present; 5. IR number 2; 6. Method of Cooling: ICE; Sample Temp: 4.9°C

Courier:

Tracking No.:

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly (1 L poly) Cr, Mn | Dissolved metals (EPA200.7) FF; HNO3 Ca, Mg, Fe, Na, (1 L poly) | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 As, Mn, Fe, Se, Mo, Ba (1 L poly) | Total metals (SW6010B); HNO3 Fe (500 mL poly) | Anions (E300.0); Cl, SO4 (1 liter poly) | Specific Conductance (E120.1) (1 liter poly) | pH (SM4500HB) (1 liter poly) | TDS (SM2540C) (1 liter poly) | Alkalinity (Total, reported as CaCO3) (SM2320B) (1 liter poly) | TSS (SM2540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrate, H2SO4 (125 mL poly) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N042508-01 | TW-03D-1020 | 10/7/20 | 0950 | | X | X | X | | | X | X | X | X | X | | X | E | 4 | P | BN | |
| 2 | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name) | Date/Time | Received by (Signature and Printed Name) | Date/Time |
|---|---|---|---|
| Spencer Doolittle | 10/7/2020 1450 | FEDEX | 10/7/20 1450 |
| FEDEX | 10/7/20 1917 | FEDEX | 10/7/20 1917 |
| | | | |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT in 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | | |
|---|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C | |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Plnt |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

1pr #2

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 10/7/2020 | Workorder: | N042508 |
| Rep sample Temp (Deg C): | 4.9 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☐ | No ☑ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments: Sample for pH received past holding time.

For:

Checklist Completed By: FR BHdez 10/8/2020

Reviewed By: MBC 10/08/2020

# ASSET Laboratories

## WORK ORDER Summary

*08-Oct-20*

**WorkOrder:** N042508

**Client ID:** ARCUS02

**Project:** PG&E Topock - PMP, RC000753.801D **QC Level:** Level IV **Date Received:** 10/7/2020

**Comments:** Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N042508-001A | TW-03D-1020 | 10/7/2020 9:50:00 AM | 10/21/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042508-001B | | | 10/21/2020 | | | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | EPA 200.7 | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | EPA 200.8 | DISSOLVED METALS BY ICPMS | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | EPA 200.8 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042508-001C | | | 10/21/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 10/21/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| N042508-001D | | | 10/21/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N042508-002A | FOLDER | 10/21/2020 | 10/21/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | LAB |
| | | | 10/21/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 10/21/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 10/21/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

November 20, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N042866

RE: PG&E Topock - PMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on November 03, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time except for pH. pH testing is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

Analytical Comments for EPA 200.7_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Iron in QC samples N042865-001C-MS and N042865-001C-MSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N042866-001B-MS2 and N042866-001B-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N042865-001C-MS and N042865-001C-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 300.0:

Method Blank (MB) has detect greater than 1/2 the reporting limit for Sulfate. However, sample result was greater than 5x the Method Blank detection therefore reanalysis of the sample was not necessary.

## ASSET Laboratories

**Date:** *20-Nov-20*

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - PMP, RC000753.801D
**Lab Order:** N042866
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N042866-001A | TW-03D-1120 | Groundwater | 11/3/2020 10:50:00 AM | 11/3/2020 | 11/20/2020 |
| N042866-001B | TW-03D-1120 | Groundwater | 11/3/2020 10:50:00 AM | 11/3/2020 | 11/20/2020 |
| N042866-001C | TW-03D-1120 | Groundwater | 11/3/2020 10:50:00 AM | 11/3/2020 | 11/20/2020 |
| N042866-001D | TW-03D-1120 | Groundwater | 11/3/2020 10:50:00 AM | 11/3/2020 | 11/20/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1120 |
| **Lab Order:** | N042866 | **Collection Date:** | 11/3/2020 10:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042866-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201104D** | QC Batch: **R148490** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7200 | 0.10 | 0.10 | | umhos/cm | 1 | 11/4/2020 10:35 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID **N042866-001CDUP** | SampType: **DUP** | TestCode: **120.1_WPGE** | Units: **umhos/cm** | Prep Date: | | | RunNo: **148490** | | |
| Client ID: **ZZZZZZ** | Batch ID: **R148490** | TestNo: **EPA 120.1** | | Analysis Date: **11/4/2020** | | | SeqNo: **3993296** | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 7250.000 | 0.10 | | | | | | 7230 | 0.276 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1120 |
| **Lab Order:** | N042866 | **Collection Date:** | 11/3/2020 10:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042866-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201104C** | QC Batch: **R148489** | | | PrepDate: | | | Analyst: **LR** |
| pH | 7.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/4/2020 09:30 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/4/2020 09:30 AM |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 150.1_4500H+B_W**

Sample ID **N042866-001CDUP** SampType: **DUP** TestCode: **150.1_4500H** Units: **pH Units** Prep Date: RunNo: **148489**
Client ID: **ZZZZZZ** Batch ID: **R148489** TestNo: **SM4500-H+B** Analysis Date: **11/4/2020** SeqNo: **3993292**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 7.370 | 0.10 | | | | | | 7.380 | 0.136 | 10 | H |
| Temp. at time of pH Analysis | 25.000 | 0.10 | | | | | | 25.00 | 0 | 10 | H |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1120 |
| **Lab Order:** | N042866 | **Collection Date:** | 11/3/2020 10:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042866-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201104I** | QC Batch: **82897** | | | PrepDate: | **11/4/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4300 | 50 | 50 | | mg/L | 1 | 11/4/2020 01:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID **LCS-82897** | SampType: **LCS** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **11/4/2020** | RunNo: **148525** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82897** | TestNo: **SM2540C** | | Analysis Date: **11/4/2020** | SeqNo: **3995516** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 959.000 | 10 | 1000 | 0 | 95.9 | 80 | 120 | | | | |

| Sample ID **MB-82897** | SampType: **MBLK** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **11/4/2020** | RunNo: **148525** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82897** | TestNo: **SM2540C** | | Analysis Date: **11/4/2020** | SeqNo: **3995517** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID **N042866-001CDUP** | SampType: **DUP** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **11/4/2020** | RunNo: **148525** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82897** | TestNo: **SM2540C** | | Analysis Date: **11/4/2020** | SeqNo: **3995527** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 4385.000 | 50 | | | | | | 4275 | 2.54 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1120 |
| **Lab Order:** | N042866 | **Collection Date:** | 11/3/2020 10:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042866-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | | | **EPA 200.7** | | | | |
| RunID: **NV00922-ICP2_201119A** | QC Batch: **82997** | | | PrepDate: | **11/12/2020** | | Analyst: **DJ** |
| Calcium | 160000 | 85 | 500 | | µg/L | 1 | 11/19/2020 11:18 AM |
| Iron | 79 | 18 | 20 | | µg/L | 1 | 11/19/2020 11:18 AM |
| Magnesium | 30000 | 48 | 100 | | µg/L | 1 | 11/19/2020 11:18 AM |
| Sodium | 1500000 | 9600 | 50000 | | µg/L | 100 | 11/19/2020 04:39 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

Sample ID **MB-82997** SampType: **MBLK** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **11/12/2020** RunNo: **148834**
Client ID: **PBW** Batch ID: **82997** TestNo: **EPA 200.7** Analysis Date: **11/19/2020** SeqNo: **4009387**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID **LCS1-82997** SampType: **LCS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **11/12/2020** RunNo: **148834**
Client ID: **LCSW** Batch ID: **82997** TestNo: **EPA 200.7** Analysis Date: **11/19/2020** SeqNo: **4009388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 10432.262 | 500 | 10000 | 0 | 104 | 85 | 115 | | | | |
| Iron | 92.479 | 20 | 100.0 | 0 | 92.5 | 85 | 115 | | | | |
| Magnesium | 11002.487 | 100 | 10000 | 0 | 110 | 85 | 115 | | | | |

Sample ID **N042865-001C-MS** SampType: **MS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **11/12/2020** RunNo: **148834**
Client ID: **ZZZZZZ** Batch ID: **82997** TestNo: **EPA 200.7** Analysis Date: **11/19/2020** SeqNo: **4009392**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 162360.811 | 500 | 10000 | 150200 | 122 | 75 | 125 | | | | |
| Iron | 117.295 | 20 | 100.0 | 100.7 | 16.6 | 75 | 125 | | | | S |
| Magnesium | 40637.937 | 100 | 10000 | 28270 | 124 | 75 | 125 | | | | |

Sample ID **N042865-001C-MSD** SampType: **MSD** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **11/12/2020** RunNo: **148834**
Client ID: **ZZZZZZ** Batch ID: **82997** TestNo: **EPA 200.7** Analysis Date: **11/19/2020** SeqNo: **4009393**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 158690.094 | 500 | 10000 | 150200 | 85.1 | 75 | 125 | 162400 | 2.29 | 20 | |
| Iron | 119.410 | 20 | 100.0 | 100.7 | 18.7 | 75 | 125 | 117.3 | 1.79 | 20 | S |
| Magnesium | 39369.919 | 100 | 10000 | 28270 | 111 | 75 | 125 | 40640 | 3.17 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

| Sample ID | MB-82997 | SampType: | MBLK | TestCode: | 200.7_WDPG | Units: | µg/L | Prep Date: | 11/12/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82997 | TestNo: | EPA 200.7 | | | Analysis Date: | 11/19/2020 | SeqNo: | 4010208 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

| Sample ID | LCS2-82997 | SampType: | LCS | TestCode: | 200.7_WDPG | Units: | µg/L | Prep Date: | 11/12/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82997 | TestNo: | EPA 200.7 | | | Analysis Date: | 11/19/2020 | SeqNo: | 4010209 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 20308.182 | 500 | 20000 | 0 | 102 | 85 | 115 | | | | |

| Sample ID | N042866-001B-MS2 | SampType: | MS | TestCode: | 200.7_WDPG | Units: | µg/L | Prep Date: | 11/12/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82997 | TestNo: | EPA 200.7 | | | Analysis Date: | 11/19/2020 | SeqNo: | 4010217 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1443132.828 | 50000 | 20000 | 1458000 | -75.2 | 75 | 125 | | | | S |

| Sample ID | N042866-001B-MSD | SampType: | MSD | TestCode: | 200.7_WDPG | Units: | µg/L | Prep Date: | 11/12/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82997 | TestNo: | EPA 200.7 | | | Analysis Date: | 11/19/2020 | SeqNo: | 4010220 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1425811.389 | 50000 | 20000 | 1458000 | -162 | 75 | 125 | 1443000 | 1.21 | 20 | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

| Sample ID | N042865-001C-PS | SampType: | PS | TestCode: | 200.7_WDPG | Units: | µg/L | Prep Date: | | RunNo: | 148834 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82997 | TestNo: | EPA 200.7 | | | Analysis Date: | 11/19/2020 | SeqNo: | 4009391 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 160571.095 | 500 | 10000 | 150200 | 104 | 80 | 120 | | | | |
| Iron | 118.811 | 20 | 100.0 | 100.7 | 18.1 | 80 | 120 | | | | S |
| Magnesium | 39628.954 | 100 | 10000 | 28270 | 114 | 80 | 120 | | | | |

| Sample ID | N042866-001B-PS | SampType: | PS | TestCode: | 200.7_WDPG | Units: | µg/L | Prep Date: | | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82997 | TestNo: | EPA 200.7 | | | Analysis Date: | 11/19/2020 | SeqNo: | 4010216 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1438460.326 | 50000 | 20000 | 1458000 | -98.5 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1120 |
| **Lab Order:** | N042866 | **Collection Date:** | 11/3/2020 10:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042866-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICPMS** | | | | | | | |
| | | | **EPA 200.8** | | | | |
| RunID: **NV00922-ICP7_201104C** | QC Batch: **82878** | | | PrepDate: | | **11/4/2020** | Analyst: **CEI** |
| Manganese | 19 | 0.26 | 0.50 | | µg/L | 1 | 11/4/2020 05:57 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8_WDISS_TPK**

| Sample ID **MB-82878** | SampType: **MBLK** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **11/4/2020** | RunNo: **148557** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82878** | TestNo: **EPA 200.8** | | Analysis Date: **11/4/2020** | SeqNo: **3996904** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | 0.50 | | | | | | | | | |

| Sample ID **LCS-82878** | SampType: **LCS** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **11/4/2020** | RunNo: **148557** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82878** | TestNo: **EPA 200.8** | | Analysis Date: **11/4/2020** | SeqNo: **3996905** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 103.022 | 0.50 | 100.0 | 0 | 103 | 85 | 115 | | | | |

| Sample ID **N042865-001C-MS** | SampType: **MS** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **11/4/2020** | RunNo: **148557** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82878** | TestNo: **EPA 200.8** | | Analysis Date: **11/4/2020** | SeqNo: **3996911** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 104.277 | 0.50 | 100.0 | 8.423 | 95.9 | 75 | 125 | | | | |

| Sample ID **N042865-001C-MSD** | SampType: **MSD** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **11/4/2020** | RunNo: **148557** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82878** | TestNo: **EPA 200.8** | | Analysis Date: **11/4/2020** | SeqNo: **3996913** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 103.461 | 0.50 | 100.0 | 8.423 | 95.0 | 75 | 125 | 104.3 | 0.786 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D
**Lab ID:** N042866-001

**Client Sample ID:** TW-03D-1120
**Collection Date:** 11/3/2020 10:50:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201104A** | QC Batch: **R148534** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 440 | 1.7 | 10 | | µg/L | 50 | 11/4/2020 02:22 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 200.8** | | | | |
| RunID: **NV00922-ICP7_201104C** | QC Batch: **82878** | | | PrepDate: | **11/4/2020** | | Analyst: **CEI** |
| Chromium | 420 | 0.65 | 5.0 | | µg/L | 5 | 11/4/2020 06:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8Dis_CrPGE_TPK**

| Sample ID **MB-82878** | SampType: **MBLK** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **11/4/2020** | RunNo: **148557** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82878** | TestNo: **EPA 200.8** | | Analysis Date: **11/4/2020** | SeqNo: **3996838** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID **LCS-82878** | SampType: **LCS** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **11/4/2020** | RunNo: **148557** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82878** | TestNo: **EPA 200.8** | | Analysis Date: **11/4/2020** | SeqNo: **3996839** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 10.213 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |

| Sample ID **N042865-001C-MS** | SampType: **MS** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **11/4/2020** | RunNo: **148557** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82878** | TestNo: **EPA 200.8** | | Analysis Date: **11/4/2020** | SeqNo: **3996846** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 425.155 | 5.0 | 10.00 | 421.7 | 34.1 | 75 | 125 | | | | S |

| Sample ID **N042865-001C-MSD** | SampType: **MSD** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **11/4/2020** | RunNo: **148557** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82878** | TestNo: **EPA 200.8** | | Analysis Date: **11/4/2020** | SeqNo: **3996850** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 422.780 | 5.0 | 10.00 | 421.7 | 10.4 | 75 | 125 | 425.2 | 0.560 | 20 | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **MB-R148534** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148534** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148534** | TestNo: **EPA 218.6** | | Analysis Date: **11/4/2020** | SeqNo: **3995681** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID **LCS-R148534** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148534** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148534** | TestNo: **EPA 218.6** | | Analysis Date: **11/4/2020** | SeqNo: **3995682** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.119 | 0.20 | 5.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID **N042665-009AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148534** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148534** | TestNo: **EPA 218.6** | | Analysis Date: **11/4/2020** | SeqNo: **3995684** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.022 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID **N042665-009AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148534** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148534** | TestNo: **EPA 218.6** | | Analysis Date: **11/4/2020** | SeqNo: **3995685** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.032 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | 1.022 | 0.993 | 20 | |

| Sample ID **N042870-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148534** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148534** | TestNo: **EPA 218.6** | | Analysis Date: **11/4/2020** | SeqNo: **3995687** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.600 | 0.20 | 1.000 | 0.5645 | 104 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID **N042866-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148534**
Client ID: **ZZZZZZ** Batch ID: **R148534** TestNo: **EPA 218.6** Analysis Date: **11/4/2020** SeqNo: **3995692**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 689.905 | 10 | 250.0 | 441.4 | 99.4 | 90 | 110 | | | | |

Sample ID **N042870-001ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148534**
Client ID: **ZZZZZZ** Batch ID: **R148534** TestNo: **EPA 218.6** Analysis Date: **11/4/2020** SeqNo: **3995697**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.534 | 0.20 | | | | | | 0.5645 | 5.63 | 20 | |

Sample ID **N042870-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148534**
Client ID: **ZZZZZZ** Batch ID: **R148534** TestNo: **EPA 218.6** Analysis Date: **11/4/2020** SeqNo: **3995711**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.641 | 0.20 | 1.000 | 0.6280 | 101 | 90 | 110 | | | | |

Sample ID **N042872-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148534**
Client ID: **ZZZZZZ** Batch ID: **R148534** TestNo: **EPA 218.6** Analysis Date: **11/4/2020** SeqNo: **3995712**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 429.390 | 10 | 250.0 | 170.8 | 103 | 90 | 110 | | | | |

Sample ID **N042872-008AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148534**
Client ID: **ZZZZZZ** Batch ID: **R148534** TestNo: **EPA 218.6** Analysis Date: **11/4/2020** SeqNo: **3995713**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 426.300 | 10 | 250.0 | 170.8 | 102 | 90 | 110 | 429.4 | 0.722 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N042720-002AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148534 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148534 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/4/2020 | SeqNo: | 4006577 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.239 | 0.20 | 1.000 | 0.2201 | 102 | 90 | 110 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8Dis_CrPGE_TPK**

| Sample ID | N042865-001C-PS | SampType: | PS | TestCode: | 200.8Dis_CrP | Units: | µg/L | Prep Date: | | RunNo: | 148557 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82878 | TestNo: | EPA 200.8 | | | Analysis Date: | 11/4/2020 | SeqNo: | 3996844 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 432.684 | 5.0 | 10.00 | 421.7 | 109 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1120 |
| **Lab Order:** | N042866 | **Collection Date:** | 11/3/2020 10:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042866-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201106A** | QC Batch: **R148562** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 150 | 1.2 | 5.0 | | mg/L | 1 | 11/6/2020 09:20 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID **LCS-R148562** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **148562** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148562** | TestNo: **SM 2320 B** | | Analysis Date: **11/6/2020** | | | | SeqNo: **3997647** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | 101.480 | 5.0 | 100.0 | 0 | 101 | 85 | 115 | | | | |

| Sample ID **MB-R148562** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **148562** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148562** | TestNo: **SM 2320 B** | | Analysis Date: **11/6/2020** | | | | SeqNo: **3997648** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID **N042866-001CDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **148562** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148562** | TestNo: **SM 2320 B** | | Analysis Date: **11/6/2020** | | | | SeqNo: **3997650** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | 150.106 | 5.0 | | | | | | 146.9 | 2.14 | 30 | |

| Sample ID **N042866-001CMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **148562** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148562** | TestNo: **SM 2320 B** | | Analysis Date: **11/6/2020** | | | | SeqNo: **3997651** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | 246.300 | 5.0 | 100.0 | 146.9 | 99.4 | 75 | 125 | | | | |

| Sample ID **N042866-001CMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | | | | RunNo: **148562** | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148562** | TestNo: **SM 2320 B** | | Analysis Date: **11/6/2020** | | | | SeqNo: **3997652** | | |
| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
| Alkalinity, Total (As CaCO3) | 247.357 | 5.0 | 100.0 | 146.9 | 100 | 75 | 125 | 246.3 | 0.428 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1120 |
| **Lab Order:** | N042866 | **Collection Date:** | 11/3/2020 10:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042866-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201105A** | QC Batch: **R148574** | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2000 | 17 | 250 | | mg/L | 500 | 11/5/2020 04:30 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201105A** | QC Batch: **R148574** | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 470 | 2.0 | 25 | | mg/L | 50 | 11/5/2020 04:44 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID | MB-R148574_CL | SampType: | MBLK | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998019 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

| Sample ID | LCS-R148574_CL | SampType: | LCS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998020 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.984 | 0.50 | 2.000 | 0 | 99.2 | 90 | 110 | | | | |

| Sample ID | N042866-001CDUP | SampType: | DUP | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998028 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2048.800 | 250 | | | | | | 2019 | 1.47 | 20 | |

| Sample ID | N042866-001CMS | SampType: | MS | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998029 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3027.950 | 250 | 1000 | 2019 | 101 | 80 | 120 | | | | |

| Sample ID | N042866-001CMSD | SampType: | MSD | TestCode: | 300_W_CLP | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998030 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3017.000 | 250 | 1000 | 2019 | 99.8 | 80 | 120 | 3028 | 0.362 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | MB-R148574_SO4 | SampType: | MBLK | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998082 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.368 | 0.50 | | | | | | | | | |

| Sample ID | LCS-R148574_SO4 | SampType: | LCS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998083 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.911 | 0.50 | 4.000 | 0 | 97.8 | 90 | 110 | | | | |

| Sample ID | N042865-002BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998090 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 667.405 | 25 | 200.0 | 460.8 | 103 | 80 | 120 | | | | |

| Sample ID | N042865-002BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998091 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 669.915 | 25 | 200.0 | 460.8 | 105 | 80 | 120 | 667.4 | 0.375 | 20 | |

| Sample ID | N042866-001CDUP | SampType: | DUP | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998092 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 473.755 | 25 | | | | | | 468.5 | 1.13 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1120 |
| **Lab Order:** | N042866 | **Collection Date:** | 11/3/2020 10:50:00 AM |
| **Project:** | PG&E Topock - PMP, RC000753.801D | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042866-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201109B** | QC Batch: **R148607** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 2.5 | 0.16 | 0.25 | | mg/L | 5 | 11/9/2020 03:22 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042866
**Project:** PG&E Topock - PMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID | MB-R148607 | SampType: | MBLK | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999607 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID | LCS-R148607 | SampType: | LCS | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999608 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.483 | 0.050 | 0.5000 | 0 | 96.6 | 85 | 115 | | | | |

| Sample ID | N042866-001DDUP | SampType: | DUP | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999610 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 2.785 | 0.25 | | | | | | 2.546 | 8.97 | 20 | |

| Sample ID | N042866-001DMS | SampType: | MS | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999611 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.308 | 0.25 | 2.500 | 2.546 | 110 | 75 | 125 | | | | |

| Sample ID | N042866-001DMSD | SampType: | MSD | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999612 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.310 | 0.25 | 2.500 | 2.546 | 111 | 75 | 125 | 5.308 | 0.0377 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | | | | | |
|---|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | | QA/QC | | Sample Receipt Condition | Y | N |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | | RTNE | | | | |
| | | | Geotracker | | RWQCB | ✓ | 1. Chilled | ✓ | |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com daniel.moore@arcadis.com | Address: | Labspec | | CalTrans | | 2. Headspace | | |
| | | | Others | ✓ | LEVEL III | | 3. Container Intact | ✓ | |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | Specify: RWQCB | | LEVEL IV | | 4. Seal Present | | ✓ |
| Submitted By: Nara Tay | | P.O.# SWA-ASSET-C9817-051 | | | Regulatory | | 5. IR number | 2 | |
| Title: sample technician | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Global ID: | | Specify State: | | 6. Method of Cooling: ICE | | |
| Signature: Date: 11/3/20 | Sampled By: Nara Tay | | | | | | Sample Temp: 1.6 C (12 #2 | | |
| I hereby authorize ASSET Labs to perform the tests indicated below | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for | | | | | | | | |
| Project Name: PG&E Topock - PMP | Signature: | Date: 11/3/20 | | | | | Courier: | | |
| Project Number: RC000753.801D | | | | | | | Tracking No.: | | |

Matrix: Ground x | Sediment | Potable | Soil | NPDES | Other Solid | Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 mL poly) | Dissolved metals (EPA 200.8) FF; HNO3; 500 mL poly Cr, Mn (1 L poly) | Dissolved metals (EPA200.7) FF; HNO3 Ca, Mg, Fe, Na (1 L poly) | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 As, Mn, Fe, Se, Mo, Ba (1 L poly) | Total metals (SW6010B); HNO3 Fe (500 mL poly) | Anions (E300.0); Cl, SO4 (1 liter poly) | Specific Conductance (E120.1) (1 liter poly) | pH (SM4500HB) (1 liter poly) | TDS (SM2540C) (1 liter poly) | Alkalinity (Total, reported as CaCO3) (SM2320B) (1 liter poly) | TSS (SM2540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 (125 mL poly) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N042866-01 | TW-03D-1120 | 11/3/20 | 1050 | | X | | X | X | | X | X | X | X | X | | X | E | 4 | P | BN | |
| 2 | ~~PE-01-1120~~ | | | | | X | | X | X | | X | X | X | X | X | | X | E | 4 | P | BN | (M) |
| 3 | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Relinquished by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nara Tay | 11/3/20 1250 | J/GC | 11/3/20 1250 |
| J/GC | 11/3/20 1915 | J/GC | 11/3/20 ~~1950~~ 1915 |
| | | | |

**Turn Around Time (TAT)**

| | | |
|---|---|---|
| | A | < 24 Hrs or Same Day TAT |
| | B | = Next Workday |
| | C | = 2 Workdays |
| | D | = 3 Workdays |
| X | E | = Routine 5-7 Workdays |

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 11/3/2020 | Workorder: | N042866 |
| Rep sample Temp (Deg C): | 1.6 | IR Gun ID: | 2 |

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA  Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☐ | No ☑ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments: Sample for pH received past holding time.

Checklist Completed By: YR YRJ 11/4/2020

Reviewed By: MBC 11/04/2020

# ASSET Laboratories

## WORK ORDER Summary

*04-Nov-20*

**WorkOrder:** N042866

**Client ID:** ARCUS02

**Project:** PG&E Topock - PMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/3/2020

**Comments:** Title 22 Metals: Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N042866-001A | TW-03D-1120 | 11/3/2020 10:50:00 AM | 11/17/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042866-001B | | | 11/17/2020 | | | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 11/17/2020 | | EPA 200.7 | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 11/17/2020 | | | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 11/17/2020 | | EPA 200.8 | DISSOLVED METALS BY ICPMS | ☐ | ☐ | ☐ | WW |
| | | | 11/17/2020 | | EPA 200.8 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N042866-001C | | | 11/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 11/17/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | LSR |
| | | | 11/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 11/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 11/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 11/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 11/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| N042866-001D | | | 11/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N042866-002A | FOLDER | 11/17/2020 | 11/17/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | |
| | | | 11/17/2020 | | Folder | Folder | ☐ | ☐ | ☐ | |
| | | | 11/17/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | |
| | | | 11/17/2020 | | Folder | Folder | ☐ | ☐ | ☐ | |

November 20, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N042895

RE: PG&E Topock - Construction, RC000753.0050

Attention: Dan Bush

Enclosed are the results for sample(s) received on November 04, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time except for pH. pH testing is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

Subcontracted Analyses:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 300.0:

Method Blank (MB) has detect greater than 1/2 the reporting limit for Sulfate. However, sample result was greater than 5x the Method Blank detection therefore reanalysis of the sample was not necessary.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042895-001B-MS1, N042895-001B-MS2 and N042895-001B-MSD2 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N042895-001B-MS2 and N042895-001B-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6010B_Total:

Matrix Spike (MS) is outside recovery criteria for Iron in QC sample N042895-001H-MS possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Calcium in QC samples N042895-001H-MS and N042895-001H-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042912-008DMS and N042912-008DMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Total:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042895-001H-MS and N042895-001H-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8015B_DRO/ORO:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) were not performed for TPH-Oil due to limited sample. LCS/LCSD was used instead to measure precision.

RPD for Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD) is outside criteria for TPH-Oil. Analyte recovery on both met acceptance criteria.

## ASSET Laboratories

**Date:** *20-Nov-20*

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - Construction, RC000753.0050
**Lab Order:** N042895
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N042895-001A | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-001B | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-001C | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-001D | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-001E | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-001F | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-001G | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-001H | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-001I | TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 11/4/2020 | 11/20/2020 |
| N042895-002A | TW-01-268-110320-EB | Groundwater | 11/3/2020 1:00:00 PM | 11/4/2020 | 11/20/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201105C** | QC Batch: **R148521** | | | PrepDate: | | | Analyst: **LR** |
| pH | 7.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/5/2020 12:20 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/5/2020 12:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 150.1_4500H+B_W**

Sample ID **N042895-001IDUP** SampType: **DUP** TestCode: **150.1_4500H** Units: **pH Units** Prep Date: RunNo: **148521**
Client ID: **ZZZZZZ** Batch ID: **R148521** TestNo: **SM4500-H+B** Analysis Date: **11/5/2020** SeqNo: **3995257**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 7.440 | 0.10 | | | | | | 7.410 | 0.404 | 10 | H |
| Temp. at time of pH Analysis | 25.000 | 0.10 | | | | | | 25.00 | 0 | 10 | H |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201109H** | QC Batch: **82954** | | | PrepDate: | **11/9/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3500 | 50 | 50 | | mg/L | 1 | 11/9/2020 12:59 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID **LCS-82954** | SampType: **LCS** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **11/9/2020** | RunNo: **148640** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82954** | TestNo: **SM2540C** | | Analysis Date: **11/9/2020** | SeqNo: **4000643** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 957.000 | 10 | 1000 | 0 | 95.7 | 80 | 120 | | | | |

| Sample ID **MB-82954** | SampType: **MBLK** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **11/9/2020** | RunNo: **148640** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82954** | TestNo: **SM2540C** | | Analysis Date: **11/9/2020** | SeqNo: **4000644** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID **N042895-001GDUP** | SampType: **DUP** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **11/9/2020** | RunNo: **148640** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82954** | TestNo: **SM2540C** | | Analysis Date: **11/9/2020** | SeqNo: **4000647** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 3600.000 | 50 | | | | | | 3500 | 2.82 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201109D** | QC Batch: **82952** | | | PrepDate: | **11/9/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/9/2020 10:24 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.2_2540D_W**

| Sample ID | LCS-82952 | SampType: | LCS | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/9/2020 | RunNo: | 148609 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82952 | TestNo: | SM2540D | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999470 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | 945.000 | 10 | 1000 | 0 | 94.5 | 80 | 120 | | | | |

| Sample ID | MB-82952 | SampType: | MBLK | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/9/2020 | RunNo: | 148609 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82952 | TestNo: | SM2540D | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999471 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 10 | | | | | | | | | |

| Sample ID | N042895-001GDUP | SampType: | DUP | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/9/2020 | RunNo: | 148609 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82952 | TestNo: | SM2540D | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999473 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 5.0 | | | | | | 0 | 0 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201106A** | QC Batch: **R148601** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 1400 | 6.6 | 40 | | µg/L | 200 | 11/6/2020 11:44 AM |
| **TOTAL METALS BY ICPMS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201111B** | QC Batch: **82942** | | | PrepDate: | **11/9/2020** | | Analyst: **CEI** |
| Chromium | 1400 | 3.2 | 25 | | µg/L | 25 | 11/11/2020 01:11 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201111A** | QC Batch: **82940** | | | PrepDate: | **11/9/2020** | | Analyst: **CEI** |
| Chromium | 1400 | 3.2 | 25 | | µg/L | 25 | 11/11/2020 10:27 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110320-EB |
| **Lab Order:** | N042895 | **Collection Date:** | 11/3/2020 1:00:00 PM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201106A** | QC Batch: **R148601** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/6/2020 12:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | **MB-R148601** | SampType: | **MBLK** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **148601** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **PBW** | Batch ID: | **R148601** | TestNo: | **EPA 218.6** | | | Analysis Date: | **11/6/2020** | SeqNo: | **3999144** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID | **LCS-R148601** | SampType: | **LCS** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **148601** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **LCSW** | Batch ID: | **R148601** | TestNo: | **EPA 218.6** | | | Analysis Date: | **11/6/2020** | SeqNo: | **3999145** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.981 | 0.20 | 5.000 | 0 | 99.6 | 90 | 110 | | | | |

| Sample ID | **N042893-004AMS** | SampType: | **MS** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **148601** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R148601** | TestNo: | **EPA 218.6** | | | Analysis Date: | **11/6/2020** | SeqNo: | **3999151** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.674 | 0.20 | 1.000 | 2.648 | 103 | 90 | 110 | | | | |

| Sample ID | **N042893-004AMSD** | SampType: | **MSD** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **148601** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R148601** | TestNo: | **EPA 218.6** | | | Analysis Date: | **11/6/2020** | SeqNo: | **3999152** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3.687 | 0.20 | 1.000 | 2.648 | 104 | 90 | 110 | 3.674 | 0.356 | 20 | |

| Sample ID | **N042893-003ADUP** | SampType: | **DUP** | TestCode: | **218.6_WPGE** | Units: | **µg/L** | Prep Date: | | RunNo: | **148601** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R148601** | TestNo: | **EPA 218.6** | | | Analysis Date: | **11/6/2020** | SeqNo: | **3999153** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.948 | 0.20 | | | | | | 2.912 | 1.23 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N042895-001AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148601 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148601 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/6/2020 | SeqNo: | 3999163 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2469.800 | 40 | 1000 | 1448 | 102 | 90 | 110 | | | | |

| Sample ID | N042895-002AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148601 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148601 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/6/2020 | SeqNo: | 3999165 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.040 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_W_CRPGE_TPK**

| Sample ID | MB-82942 | SampType: | MBLK | TestCode: | 6020_W_CRP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003660 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-82942 | SampType: | LCS | TestCode: | 6020_W_CRP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003661 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.752 | 1.0 | 10.00 | 0 | 97.5 | 85 | 115 | | | | |

| Sample ID | N042895-001H-MS | SampType: | MS | TestCode: | 6020_W_CRP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003677 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 1527.555 | 25 | 10.00 | 1440 | 875 | 75 | 125 | | | | S |

| Sample ID | N042895-001H-MSD | SampType: | MSD | TestCode: | 6020_W_CRP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003678 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 1535.586 | 25 | 10.00 | 1440 | 955 | 75 | 125 | 1528 | 0.524 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-82940 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003392 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-82940 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003393 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.791 | 1.0 | 10.00 | 0 | 97.9 | 85 | 115 | | | | |

| Sample ID | N042912-008DMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003400 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 12.337 | 1.0 | 10.00 | 3.024 | 93.1 | 75 | 125 | | | | |

| Sample ID | N042912-008DMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003401 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 12.285 | 1.0 | 10.00 | 3.024 | 92.6 | 75 | 125 | 12.34 | 0.425 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_W_CRPGE_TPK**

| Sample ID | **N042895-001H-PS** | SampType: **PS** | TestCode: **6020_W_CRP** | Units: **µg/L** | Prep Date: | RunNo: **148700** |
|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: **82942** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/11/2020** | SeqNo: **4003674** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 1337.804 | 25 | 10.00 | 1440 | -1020 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | N042912-008D-PS | SampType: | PS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | | RunNo: | 148699 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003399 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 12.325 | 1.0 | 10.00 | 3.024 | 93.0 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201105A** QC Batch: **R148574** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 2.9 | 0.048 | 0.50 | | mg/L | 5 | 11/5/2020 03:47 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201105A** QC Batch: **R148574** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 520 | 2.0 | 25 | | mg/L | 50 | 11/5/2020 06:53 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_FPGE**

| Sample ID | MB-R148574_F | SampType: | MBLK | TestCode: | 300_W_FPG | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3997998 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | | |

| Sample ID | LCS-R148574_F | SampType: | LCS | TestCode: | 300_W_FPG | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3997999 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.300 | 0.10 | 1.250 | 0 | 104 | 90 | 110 | | | | |

| Sample ID | N042865-002BMS | SampType: | MS | TestCode: | 300_W_FPG | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998007 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 8.985 | 0.50 | 6.250 | 2.464 | 104 | 80 | 120 | | | | |

| Sample ID | N042865-002BMSD | SampType: | MSD | TestCode: | 300_W_FPG | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998008 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 9.230 | 0.50 | 6.250 | 2.464 | 108 | 80 | 120 | 8.985 | 2.69 | 20 | |

| Sample ID | N042895-001IDUP | SampType: | DUP | TestCode: | 300_W_FPG | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998012 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 2.779 | 0.50 | | | | | | 2.944 | 5.75 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID | MB-R148574_SO4 | SampType: | MBLK | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998082 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.368 | 0.50 | | | | | | | | | |

| Sample ID | LCS-R148574_SO4 | SampType: | LCS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998083 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.911 | 0.50 | 4.000 | 0 | 97.8 | 90 | 110 | | | | |

| Sample ID | N042865-002BMS | SampType: | MS | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998090 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 667.405 | 25 | 200.0 | 460.8 | 103 | 80 | 120 | | | | |

| Sample ID | N042865-002BMSD | SampType: | MSD | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998091 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 669.915 | 25 | 200.0 | 460.8 | 105 | 80 | 120 | 667.4 | 0.375 | 20 | |

| Sample ID | N042866-001CDUP | SampType: | DUP | TestCode: | 300_W_SO4P | Units: | mg/L | Prep Date: | | RunNo: | 148574 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148574 | TestNo: | EPA 300.0 | | | Analysis Date: | 11/5/2020 | SeqNo: | 3998092 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 473.755 | 25 | | | | | | 468.5 | 1.13 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201109B** QC Batch: **R148607** | | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 13 | 0.32 | 0.50 | | mg/L | 10 | 11/9/2020 03:31 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID | MB-R148607 | SampType: | MBLK | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999607 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID | LCS-R148607 | SampType: | LCS | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999608 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.483 | 0.050 | 0.5000 | 0 | 96.6 | 85 | 115 | | | | |

| Sample ID | N042866-001DDUP | SampType: | DUP | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999610 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 2.785 | 0.25 | | | | | | 2.546 | 8.97 | 20 | |

| Sample ID | N042866-001DMS | SampType: | MS | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999611 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.308 | 0.25 | 2.500 | 2.546 | 110 | 75 | 125 | | | | |

| Sample ID | N042866-001DMSD | SampType: | MSD | TestCode: | 4500N03F_W | Units: | mg/L | Prep Date: | | RunNo: | 148607 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148607 | TestNo: | SM4500-NO3 | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999612 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 5.310 | 0.25 | 2.500 | 2.546 | 111 | 75 | 125 | 5.308 | 0.0377 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL ORGANIC CARBON** | | | | | | | |
| | | | **SM 5310C** | | | | |
| RunID: **TOC2_201105A** | QC Batch: **R148530** | | | PrepDate: | | | Analyst: **JBB** |
| Organic Carbon, Total | ND | 0.078 | 1.0 | | mg/L | 1 | 11/5/2020 02:29 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 5310C_W_T_TPK**

| Sample ID **MB-R148530** | SampType: **MBLK** | TestCode: **5310C_W_T_** | Units: **mg/L** | Prep Date: | RunNo: **148530** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148530** | TestNo: **SM 5310C** | | Analysis Date: **11/5/2020** | SeqNo: **3995825** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | ND | 1.0 | | | | | | | | | |

| Sample ID **LCS-R148530** | SampType: **LCS** | TestCode: **5310C_W_T_** | Units: **mg/L** | Prep Date: | RunNo: **148530** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148530** | TestNo: **SM 5310C** | | Analysis Date: **11/5/2020** | SeqNo: **3995826** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 5.034 | 1.0 | 5.000 | 0 | 101 | 85 | 115 | | | | |

| Sample ID **N042872-008CMS** | SampType: **MS** | TestCode: **5310C_W_T_** | Units: **mg/L** | Prep Date: | RunNo: **148530** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148530** | TestNo: **SM 5310C** | | Analysis Date: **11/5/2020** | SeqNo: **3995828** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 4.974 | 1.0 | 5.000 | 0.5409 | 88.7 | 75 | 125 | | | | |

| Sample ID **N042872-008CMSD** | SampType: **MSD** | TestCode: **5310C_W_T_** | Units: **mg/L** | Prep Date: | RunNo: **148530** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148530** | TestNo: **SM 5310C** | | Analysis Date: **11/5/2020** | SeqNo: **3995829** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Organic Carbon, Total | 4.938 | 1.0 | 5.000 | 0.5409 | 87.9 | 75 | 125 | 4.974 | 0.714 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050
**Lab ID:** N042895-001

**Client Sample ID:** TW-01-268-110420
**Collection Date:** 11/4/2020 11:45:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201119A** | QC Batch: **83031** | | | PrepDate: | **11/16/2020** | | Analyst: **DJ** |
| Aluminum | ND | 40 | 50 | | ug/L | 1 | 11/19/2020 11:44 AM |
| Boron | 1600 | 74 | 100 | | ug/L | 1 | 11/19/2020 11:44 AM |
| Calcium | 170000 | 85 | 500 | | ug/L | 1 | 11/19/2020 11:44 AM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/19/2020 11:44 AM |
| Magnesium | 21000 | 48 | 100 | | ug/L | 1 | 11/19/2020 11:44 AM |
| Potassium | 17000 | 430 | 2500 | | ug/L | 5 | 11/19/2020 04:33 PM |
| Sodium | 1000000 | 12000 | 62000 | | ug/L | 125 | 11/19/2020 05:06 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201119A** | QC Batch: **83030** | | | PrepDate: | **11/16/2020** | | Analyst: **DJ** |
| Aluminum | ND | 40 | 50 | | ug/L | 1 | 11/19/2020 12:34 PM |
| Boron | 1500 | 74 | 100 | | ug/L | 1 | 11/19/2020 12:34 PM |
| Calcium | 170000 | 85 | 500 | | ug/L | 1 | 11/19/2020 12:34 PM |
| Iron | 65 | 18 | 20 | | ug/L | 1 | 11/19/2020 12:34 PM |
| Magnesium | 21000 | 48 | 100 | | ug/L | 1 | 11/19/2020 12:34 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **MB-83031** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/16/2020** | RunNo: **148834** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83031** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4009510** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ND | 50 | | | | | | | | | |
| Boron | ND | 100 | | | | | | | | | |
| Calcium | 90.627 | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

| Sample ID **LCS1-83031** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/16/2020** | RunNo: **148834** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83031** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4009511** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10600.789 | 50 | 10000 | 0 | 106 | 85 | 115 | | | | |
| Boron | 5042.298 | 100 | 5000 | 0 | 101 | 85 | 115 | | | | |
| Calcium | 10456.502 | 500 | 10000 | 0 | 105 | 85 | 115 | | | | |
| Iron | 92.571 | 20 | 100.0 | 0 | 92.6 | 85 | 115 | | | | |
| Magnesium | 11026.468 | 100 | 10000 | 0 | 110 | 85 | 115 | | | | |

| Sample ID **N042895-001B-MS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/16/2020** | RunNo: **148834** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83031** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4009515** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10120.272 | 50 | 10000 | 0 | 101 | 75 | 125 | | | | |
| Boron | 6800.402 | 100 | 5000 | 1558 | 105 | 75 | 125 | | | | |
| Calcium | 177718.126 | 500 | 10000 | 169900 | 78.1 | 75 | 125 | | | | |
| Iron | 151.295 | 20 | 100.0 | 0 | 151 | 75 | 125 | | | | S |
| Magnesium | 32180.248 | 100 | 10000 | 20590 | 116 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N042895-001B-MSD | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148834 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83031 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4009516 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10168.016 | 50 | 10000 | 0 | 102 | 75 | 125 | 10120 | 0.471 | 0 | |
| Boron | 6844.166 | 100 | 5000 | 1558 | 106 | 75 | 125 | 6800 | 0.641 | 0 | |
| Calcium | 180066.857 | 500 | 10000 | 169900 | 102 | 75 | 125 | 177700 | 1.31 | 0 | |
| Iron | 115.319 | 20 | 100.0 | 0 | 115 | 75 | 125 | 151.3 | 27.0 | 0 | |
| Magnesium | 32272.191 | 100 | 10000 | 20590 | 117 | 75 | 125 | 32180 | 0.285 | 0 | |

| Sample ID | MB-83031 | SampType: | MBLK | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83031 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4010147 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | ND | 500 | | | | | | | | | |
| Sodium | ND | 500 | | | | | | | | | |

| Sample ID | LCS2-83031 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83031 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4010148 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 19886.180 | 500 | 20000 | 0 | 99.4 | 85 | 115 | | | | |
| Sodium | 20755.972 | 500 | 20000 | 0 | 104 | 85 | 115 | | | | |

| Sample ID | N042895-001B-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83031 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4010162 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 43093.102 | 2500 | 20000 | 17060 | 130 | 75 | 125 | | | | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | N042895-001B-MS2 | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83031 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4010163 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1509781.319 | 62000 | 20000 | 1000000 | 2550 | 75 | 125 | | | | S |

| Sample ID | N042895-001B-MSD | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83031 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4010164 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 44832.800 | 2500 | 20000 | 17060 | 139 | 75 | 125 | 43090 | 3.96 | 0 | S |

| Sample ID | N042895-001B-MSD | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148842 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83031 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4010165 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1658761.428 | 62000 | 20000 | 1000000 | 3290 | 75 | 125 | 1510000 | 9.40 | 0 | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WPGEPPB**

| Sample ID | MB-83030 | SampType: | MBLK | TestCode: | 6010_WPGE | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148834 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83030 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4009574 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | ND | 50 | | | | | | | | | |
| Boron | ND | 100 | | | | | | | | | |
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

| Sample ID | LCS-83030 | SampType: | LCS | TestCode: | 6010_WPGE | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148834 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83030 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4009575 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10617.934 | 50 | 10000 | 0 | 106 | 85 | 115 | | | | |
| Boron | 5060.274 | 100 | 5000 | 0 | 101 | 85 | 115 | | | | |
| Calcium | 10497.644 | 500 | 10000 | 0 | 105 | 85 | 115 | | | | |
| Iron | 91.918 | 20 | 100.0 | 0 | 91.9 | 85 | 115 | | | | |
| Magnesium | 11075.484 | 100 | 10000 | 0 | 111 | 85 | 115 | | | | |

| Sample ID | N042895-001H-MS | SampType: | MS | TestCode: | 6010_WPGE | Units: | ug/L | Prep Date: | 11/16/2020 | RunNo: | 148834 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83030 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4009581 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10064.077 | 50 | 10000 | 0 | 101 | 75 | 125 | | | | |
| Boron | 6727.780 | 100 | 5000 | 1502 | 105 | 75 | 125 | | | | |
| Calcium | 184970.326 | 500 | 10000 | 170000 | 150 | 75 | 125 | | | | S |
| Iron | 490.405 | 20 | 100.0 | 64.87 | 426 | 75 | 125 | | | | S |
| Magnesium | 32295.922 | 100 | 10000 | 20610 | 117 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WPGEPPB**

Sample ID **N042895-001H-MSD** SampType: **MS** TestCode: **6010_WPGE** Units: **ug/L** Prep Date: **11/16/2020** RunNo: **148834**
Client ID: **ZZZZZZ** Batch ID: **83030** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **11/19/2020** SeqNo: **4009582**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10008.636 | 50 | 10000 | 0 | 100 | 75 | 125 | 10060 | 0.552 | 0 | |
| Boron | 6725.141 | 100 | 5000 | 1502 | 104 | 75 | 125 | 6728 | 0.0392 | 0 | |
| Calcium | 185104.195 | 500 | 10000 | 170000 | 151 | 75 | 125 | 185000 | 0.0723 | 0 | S |
| Iron | 142.019 | 20 | 100.0 | 64.87 | 77.1 | 75 | 125 | 490.4 | 110 | 0 | |
| Magnesium | 32177.760 | 100 | 10000 | 20610 | 116 | 75 | 125 | 32300 | 0.367 | 0 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID **N042895-001B-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **148834** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83031** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4009514** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10078.084 | 50 | 10000 | 0 | 101 | 80 | 120 | | | | |
| Boron | 6778.190 | 100 | 5000 | 1558 | 104 | 80 | 120 | | | | |
| Calcium | 178014.251 | 500 | 10000 | 169900 | 81.0 | 80 | 120 | | | | |
| Iron | 131.432 | 20 | 100.0 | 0 | 131 | 80 | 120 | | | | S |
| Magnesium | 32147.626 | 100 | 10000 | 20590 | 116 | 80 | 120 | | | | |

| Sample ID **N042895-001B-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **148842** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83031** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4010160** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 50889.517 | 2500 | 20000 | 17060 | 169 | 80 | 120 | | | | S |

| Sample ID **N042895-001B-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **148842** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83031** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4010161** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1545934.234 | 62000 | 20000 | 1000000 | 2730 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WPGEPPB**

| Sample ID | N042895-01H-PS | SampType: | PS | TestCode: | 6010_WPGE | Units: | ug/L | Prep Date: | | RunNo: | 148834 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83030 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/19/2020 | SeqNo: | 4009580 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 10088.678 | 50 | 10000 | 0 | 101 | 80 | 120 | | | | |
| Boron | 6723.493 | 100 | 5000 | 1502 | 104 | 80 | 120 | | | | |
| Calcium | 185815.622 | 500 | 10000 | 170000 | 158 | 80 | 120 | | | | S |
| Iron | 321.513 | 20 | 100.0 | 64.87 | 257 | 80 | 120 | | | | S |
| Magnesium | 32385.921 | 100 | 10000 | 20610 | 118 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050
**Lab ID:** N042895-001

**Client Sample ID:** TW-01-268-110420
**Collection Date:** 11/4/2020 11:45:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201111A** | QC Batch: **82940** | | | PrepDate: | **11/9/2020** | | Analyst: **CEI** |
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 11/11/2020 10:15 AM |
| Arsenic | 0.71 | 0.081 | 0.10 | | µg/L | 1 | 11/11/2020 10:15 AM |
| Barium | 26 | 0.15 | 1.0 | | µg/L | 1 | 11/12/2020 12:09 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 11/12/2020 12:09 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Molybdenum | 26 | 0.21 | 0.50 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 11/11/2020 10:15 AM |
| Selenium | 10 | 0.36 | 0.50 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 11/10/2020 01:50 PM |
| Vanadium | 9.4 | 0.28 | 1.0 | | µg/L | 1 | 11/11/2020 10:15 AM |
| Zinc | 16 | 2.3 | 10 | | µg/L | 1 | 11/10/2020 01:50 PM |
| **TOTAL METALS BY ICPMS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201111B** | QC Batch: **82942** | | | PrepDate: | **11/9/2020** | | Analyst: **CEI** |
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 11/11/2020 12:30 PM |
| Arsenic | 0.41 | 0.081 | 0.10 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Barium | 29 | 0.15 | 1.0 | | µg/L | 1 | 11/12/2020 01:30 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Copper | 22 | 0.55 | 1.0 | | µg/L | 1 | 11/12/2020 01:30 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Manganese | 0.96 | 0.26 | 0.50 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Molybdenum | 26 | 0.21 | 0.50 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 11/11/2020 12:30 PM |
| Selenium | 11 | 0.36 | 0.50 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 11/10/2020 04:20 PM |
| Vanadium | 9.7 | 0.28 | 1.0 | | µg/L | 1 | 11/11/2020 12:30 PM |
| Zinc | 35 | 2.3 | 10 | | µg/L | 1 | 11/10/2020 04:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **MB-82940** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/9/2020** RunNo: **148672**
Client ID: **PBW** Batch ID: **82940** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/10/2020** SeqNo: **4002025**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

Sample ID **LCS-82940** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/9/2020** RunNo: **148672**
Client ID: **LCSW** Batch ID: **82940** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/10/2020** SeqNo: **4002026**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.328 | 0.10 | 10.00 | 0 | 103 | 85 | 115 | | | | |
| Beryllium | 9.570 | 0.50 | 10.00 | 0 | 95.7 | 85 | 115 | | | | |
| Cadmium | 10.094 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Cobalt | 9.817 | 0.50 | 10.00 | 0 | 98.2 | 85 | 115 | | | | |
| Lead | 9.900 | 1.0 | 10.00 | 0 | 99.0 | 85 | 115 | | | | |
| Manganese | 101.125 | 0.50 | 100.0 | 0 | 101 | 85 | 115 | | | | |
| Molybdenum | 9.672 | 0.50 | 10.00 | 0 | 96.7 | 85 | 115 | | | | |
| Selenium | 10.337 | 0.50 | 10.00 | 0 | 103 | 85 | 115 | | | | |
| Silver | 10.601 | 0.50 | 10.00 | 0 | 106 | 85 | 115 | | | | |
| Thallium | 9.871 | 0.50 | 10.00 | 0 | 98.7 | 85 | 115 | | | | |
| Zinc | 10.168 | 10 | 10.00 | 0 | 102 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID **N042912-008DMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/9/2020** RunNo: **148672**
Client ID: **ZZZZZZ** Batch ID: **82940** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/10/2020** SeqNo: **4002032**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.214 | 0.10 | 10.00 | 0.8930 | 103 | 75 | 125 | | | | |
| Beryllium | 10.049 | 0.50 | 10.00 | 0 | 100 | 75 | 125 | | | | |
| Cadmium | 10.649 | 0.50 | 10.00 | 0 | 106 | 75 | 125 | | | | |
| Cobalt | 9.605 | 0.50 | 10.00 | 0.3780 | 92.3 | 75 | 125 | | | | |
| Lead | 9.999 | 1.0 | 10.00 | 0 | 100 | 75 | 125 | | | | |
| Molybdenum | 12.073 | 0.50 | 10.00 | 1.280 | 108 | 75 | 125 | | | | |
| Selenium | 10.519 | 0.50 | 10.00 | 0 | 105 | 75 | 125 | | | | |
| Silver | 8.209 | 0.50 | 10.00 | 0 | 82.1 | 75 | 125 | | | | |
| Thallium | 9.598 | 0.50 | 10.00 | 0 | 96.0 | 75 | 125 | | | | |
| Zinc | 31.374 | 10 | 10.00 | 22.73 | 86.4 | 75 | 125 | | | | |

Sample ID **N042912-008DMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/9/2020** RunNo: **148672**
Client ID: **ZZZZZZ** Batch ID: **82940** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/10/2020** SeqNo: **4002033**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.006 | 0.10 | 10.00 | 0.8930 | 101 | 75 | 125 | 11.21 | 1.88 | 20 | |
| Beryllium | 9.987 | 0.50 | 10.00 | 0 | 99.9 | 75 | 125 | 10.05 | 0.622 | 20 | |
| Cadmium | 10.433 | 0.50 | 10.00 | 0 | 104 | 75 | 125 | 10.65 | 2.05 | 20 | |
| Cobalt | 9.596 | 0.50 | 10.00 | 0.3780 | 92.2 | 75 | 125 | 9.605 | 0.0972 | 20 | |
| Lead | 10.145 | 1.0 | 10.00 | 0 | 101 | 75 | 125 | 9.999 | 1.45 | 20 | |
| Molybdenum | 12.191 | 0.50 | 10.00 | 1.280 | 109 | 75 | 125 | 12.07 | 0.975 | 20 | |
| Selenium | 9.857 | 0.50 | 10.00 | 0 | 98.6 | 75 | 125 | 10.52 | 6.50 | 20 | |
| Silver | 8.063 | 0.50 | 10.00 | 0 | 80.6 | 75 | 125 | 8.209 | 1.80 | 20 | |
| Thallium | 9.789 | 0.50 | 10.00 | 0 | 97.9 | 75 | 125 | 9.598 | 1.97 | 20 | |
| Zinc | 30.811 | 10 | 10.00 | 22.73 | 80.8 | 75 | 125 | 31.37 | 1.81 | 20 | |

Sample ID **N042912-008DMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/9/2020** RunNo: **148672**
Client ID: **ZZZZZZ** Batch ID: **82940** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/10/2020** SeqNo: **4002043**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N042912-008DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148672 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/10/2020 | SeqNo: | 4002043 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2177.951 | 12 | 100.0 | 2120 | 57.5 | 75 | 125 | | | | S |

| Sample ID | N042912-008DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148672 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/10/2020 | SeqNo: | 4002044 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2190.435 | 12 | 100.0 | 2120 | 70.0 | 75 | 125 | 2178 | 0.572 | 20 | S |

| Sample ID | MB-82940 | SampType: | MBLK | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003475 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 0.185 | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-82940 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003476 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.344 | 0.50 | 10.00 | 0 | 103 | 85 | 115 | | | | |
| Nickel | 10.451 | 1.0 | 10.00 | 0 | 105 | 85 | 115 | | | | |
| Vanadium | 10.082 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |

| Sample ID | N042912-008DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003483 | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.307 | 0.50 | 10.00 | 0.4551 | 109 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N042912-008DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003483 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nickel | 8.887 | 1.0 | 10.00 | 0 | 88.9 | 75 | 125 | | | | |
| Vanadium | 10.625 | 1.0 | 10.00 | 0.3928 | 102 | 75 | 125 | | | | |

| Sample ID | N042912-008DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148699 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003484 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.203 | 0.50 | 10.00 | 0.4551 | 107 | 75 | 125 | 11.31 | 0.924 | 20 | |
| Nickel | 8.754 | 1.0 | 10.00 | 0 | 87.5 | 75 | 125 | 8.887 | 1.51 | 20 | |
| Vanadium | 10.589 | 1.0 | 10.00 | 0.3928 | 102 | 75 | 125 | 10.63 | 0.342 | 20 | |

| Sample ID | MB-82940 | SampType: | MBLK | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003807 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | ND | 1.0 | | | | | | | | | |
| Copper | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-82940 | SampType: | LCS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003808 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 9.791 | 1.0 | 10.00 | 0 | 97.9 | 85 | 115 | | | | |
| Copper | 10.136 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |

| Sample ID | N042912-008DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003812 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N042912-008DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003812 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 8.726 | 1.0 | 10.00 | 0 | 87.3 | 75 | 125 | | | | |

| Sample ID | N042912-008DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003813 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 8.671 | 1.0 | 10.00 | 0 | 86.7 | 75 | 125 | 8.726 | 0.638 | 20 | |

| Sample ID | N042912-008DMS | SampType: | MS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003819 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 213.234 | 5.0 | 10.00 | 197.4 | 158 | 75 | 125 | | | | S |

| Sample ID | N042912-008DMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003820 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 216.739 | 5.0 | 10.00 | 197.4 | 193 | 75 | 125 | 213.2 | 1.63 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_W_TPK**

Sample ID **MB-82942** SampType: **MBLK** TestCode: **6020_W_TPK** Units: **µg/L** Prep Date: **11/9/2020** RunNo: **148673**
Client ID: **PBW** Batch ID: **82942** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/10/2020** SeqNo: **4002231**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

Sample ID **LCS-82942** SampType: **LCS** TestCode: **6020_W_TPK** Units: **µg/L** Prep Date: **11/9/2020** RunNo: **148673**
Client ID: **LCSW** Batch ID: **82942** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/10/2020** SeqNo: **4002232**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.099 | 0.10 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Beryllium | 10.186 | 0.50 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Cadmium | 10.431 | 0.50 | 10.00 | 0 | 104 | 85 | 115 | | | | |
| Cobalt | 9.672 | 0.50 | 10.00 | 0 | 96.7 | 85 | 115 | | | | |
| Lead | 9.771 | 1.0 | 10.00 | 0 | 97.7 | 85 | 115 | | | | |
| Manganese | 101.383 | 0.50 | 100.0 | 0 | 101 | 85 | 115 | | | | |
| Molybdenum | 10.091 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Selenium | 10.194 | 0.50 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Silver | 10.904 | 0.50 | 10.00 | 0 | 109 | 85 | 115 | | | | |
| Thallium | 9.688 | 0.50 | 10.00 | 0 | 96.9 | 85 | 115 | | | | |
| Zinc | 9.906 | 10 | 10.00 | 0 | 99.1 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_W_TPK**

| Sample ID | N042895-001H-MS | SampType: | MS | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148673 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/10/2020 | SeqNo: | 4002238 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.720 | 0.10 | 10.00 | 0.4095 | 103 | 75 | 125 | | | | |
| Beryllium | 7.153 | 0.50 | 10.00 | 0 | 71.5 | 75 | 125 | | | | S |
| Cadmium | 9.958 | 0.50 | 10.00 | 0 | 99.6 | 75 | 125 | | | | |
| Cobalt | 8.831 | 0.50 | 10.00 | 0 | 88.3 | 75 | 125 | | | | |
| Lead | 11.011 | 1.0 | 10.00 | 0.7259 | 103 | 75 | 125 | | | | |
| Manganese | 95.436 | 0.50 | 100.0 | 0.9632 | 94.5 | 75 | 125 | | | | |
| Molybdenum | 37.870 | 0.50 | 10.00 | 25.99 | 119 | 75 | 125 | | | | |
| Selenium | 21.293 | 0.50 | 10.00 | 11.11 | 102 | 75 | 125 | | | | |
| Silver | 8.170 | 0.50 | 10.00 | 0 | 81.7 | 75 | 125 | | | | |
| Thallium | 8.518 | 0.50 | 10.00 | 0.2258 | 82.9 | 75 | 125 | | | | |
| Zinc | 41.500 | 10 | 10.00 | 34.68 | 68.2 | 75 | 125 | | | | S |

| Sample ID | N042895-001H-MSD | SampType: | MSD | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148673 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/10/2020 | SeqNo: | 4002239 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.146 | 0.10 | 10.00 | 0.4095 | 107 | 75 | 125 | 10.72 | 3.89 | 20 | |
| Beryllium | 7.082 | 0.50 | 10.00 | 0 | 70.8 | 75 | 125 | 7.153 | 1.00 | 20 | S |
| Cadmium | 10.122 | 0.50 | 10.00 | 0 | 101 | 75 | 125 | 9.958 | 1.63 | 20 | |
| Cobalt | 8.815 | 0.50 | 10.00 | 0 | 88.1 | 75 | 125 | 8.831 | 0.182 | 20 | |
| Lead | 11.115 | 1.0 | 10.00 | 0.7259 | 104 | 75 | 125 | 11.01 | 0.944 | 20 | |
| Manganese | 94.927 | 0.50 | 100.0 | 0.9632 | 94.0 | 75 | 125 | 95.44 | 0.536 | 20 | |
| Molybdenum | 37.940 | 0.50 | 10.00 | 25.99 | 120 | 75 | 125 | 37.87 | 0.185 | 20 | |
| Selenium | 21.536 | 0.50 | 10.00 | 11.11 | 104 | 75 | 125 | 21.29 | 1.14 | 20 | |
| Silver | 8.453 | 0.50 | 10.00 | 0 | 84.5 | 75 | 125 | 8.170 | 3.40 | 20 | |
| Thallium | 8.299 | 0.50 | 10.00 | 0.2258 | 80.7 | 75 | 125 | 8.518 | 2.60 | 20 | |
| Zinc | 41.998 | 10 | 10.00 | 34.68 | 73.2 | 75 | 125 | 41.50 | 1.19 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_W_TPK**

| Sample ID | MB-82942 | SampType: | MBLK | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003743 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-82942 | SampType: | LCS | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003744 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.743 | 0.50 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Nickel | 9.771 | 1.0 | 10.00 | 0 | 97.7 | 85 | 115 | | | | |
| Vanadium | 10.181 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |

| Sample ID | N042895-001H-MS | SampType: | MS | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003750 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.816 | 0.50 | 10.00 | 0 | 108 | 75 | 125 | | | | |
| Nickel | ND | 1.0 | 10.00 | 0 | 0 | 75 | 125 | | | | S |
| Vanadium | 19.877 | 1.0 | 10.00 | 9.736 | 101 | 75 | 125 | | | | |

| Sample ID | N042895-001H-MSD | SampType: | MSD | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003751 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.859 | 0.50 | 10.00 | 0 | 109 | 75 | 125 | 10.82 | 0.397 | 20 | |
| Nickel | ND | 1.0 | 10.00 | 0 | 0 | 75 | 125 | 0 | 0 | 20 | S |
| Vanadium | 19.959 | 1.0 | 10.00 | 9.736 | 102 | 75 | 125 | 19.88 | 0.414 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_W_TPK**

| Sample ID | MB-82942 | SampType: | MBLK | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003854 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | ND | 1.0 | | | | | | | | | |
| Copper | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-82942 | SampType: | LCS | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003855 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 10.135 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Copper | 9.808 | 1.0 | 10.00 | 0 | 98.1 | 85 | 115 | | | | |

| Sample ID | N042895-001H-MS | SampType: | MS | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003859 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 39.955 | 1.0 | 10.00 | 28.79 | 112 | 75 | 125 | | | | |
| Copper | 30.782 | 1.0 | 10.00 | 22.24 | 85.4 | 75 | 125 | | | | |

| Sample ID | N042895-001H-MSD | SampType: | MSD | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003860 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 39.353 | 1.0 | 10.00 | 28.79 | 106 | 75 | 125 | 39.95 | 1.52 | 20 | |
| Copper | 30.986 | 1.0 | 10.00 | 22.24 | 87.5 | 75 | 125 | 30.78 | 0.660 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID **N042912-008D-PS** | SampType: **PS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: | RunNo: **148672** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82940** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/10/2020** | SeqNo: **4002031** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.345 | 0.10 | 10.00 | 0.8930 | 105 | 80 | 120 | | | | |
| Beryllium | 9.918 | 0.50 | 10.00 | 0 | 99.2 | 80 | 120 | | | | |
| Cadmium | 10.255 | 0.50 | 10.00 | 0 | 103 | 80 | 120 | | | | |
| Cobalt | 9.553 | 0.50 | 10.00 | 0.3780 | 91.8 | 80 | 120 | | | | |
| Lead | 10.112 | 1.0 | 10.00 | 0 | 101 | 80 | 120 | | | | |
| Molybdenum | 12.273 | 0.50 | 10.00 | 1.280 | 110 | 80 | 120 | | | | |
| Selenium | 10.048 | 0.50 | 10.00 | 0 | 100 | 80 | 120 | | | | |
| Silver | 8.314 | 0.50 | 10.00 | 0 | 83.1 | 80 | 120 | | | | |
| Thallium | 9.909 | 0.50 | 10.00 | 0 | 99.1 | 80 | 120 | | | | |
| Zinc | 30.677 | 10 | 10.00 | 22.73 | 79.5 | 80 | 120 | | | | S |

| Sample ID **N042912-008D-PS** | SampType: **PS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: | RunNo: **148672** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82940** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/10/2020** | SeqNo: **4002042** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 2127.765 | 12 | 100.0 | 2120 | 7.29 | 80 | 120 | | | | S |

| Sample ID **N042912-008D-PS** | SampType: **PS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: | RunNo: **148699** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82940** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/11/2020** | SeqNo: **4003482** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.168 | 0.50 | 10.00 | 0.4551 | 107 | 80 | 120 | | | | |
| Nickel | 8.959 | 1.0 | 10.00 | 0 | 89.6 | 80 | 120 | | | | |
| Vanadium | 10.664 | 1.0 | 10.00 | 0.3928 | 103 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N042912-008D-PS | SampType: | PS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003811 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Copper | 8.741 | 1.0 | 10.00 | 0 | 87.4 | 80 | 120 | | | | |

| Sample ID | N042912-008D-PS | SampType: | PS | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82940 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003816 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 203.854 | 5.0 | 10.00 | 197.4 | 64.4 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_W_TPK**

| Sample ID | N042895-001H-PS | SampType: | PS | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | | RunNo: | 148673 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/10/2020 | SeqNo: | 4002237 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.935 | 0.10 | 10.00 | 0.4095 | 105 | 80 | 120 | | | | |
| Beryllium | 7.033 | 0.50 | 10.00 | 0 | 70.3 | 80 | 120 | | | | S |
| Cadmium | 10.036 | 0.50 | 10.00 | 0 | 100 | 80 | 120 | | | | |
| Cobalt | 8.879 | 0.50 | 10.00 | 0 | 88.8 | 80 | 120 | | | | |
| Lead | 11.035 | 1.0 | 10.00 | 0.7259 | 103 | 80 | 120 | | | | |
| Manganese | 96.399 | 0.50 | 100.0 | 0.9632 | 95.4 | 80 | 120 | | | | |
| Molybdenum | 37.526 | 0.50 | 10.00 | 25.99 | 115 | 80 | 120 | | | | |
| Selenium | 21.755 | 0.50 | 10.00 | 11.11 | 106 | 80 | 120 | | | | |
| Silver | 8.331 | 0.50 | 10.00 | 0 | 83.3 | 80 | 120 | | | | |
| Thallium | 8.692 | 0.50 | 10.00 | 0.2258 | 84.7 | 80 | 120 | | | | |
| Zinc | 41.688 | 10 | 10.00 | 34.68 | 70.1 | 80 | 120 | | | | S |

| Sample ID | N042895-001H-PS | SampType: | PS | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | | RunNo: | 148700 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/11/2020 | SeqNo: | 4003749 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 11.139 | 0.50 | 10.00 | 0 | 111 | 80 | 120 | | | | |
| Nickel | ND | 1.0 | 10.00 | 0 | 0 | 80 | 120 | | | | S |
| Vanadium | 19.858 | 1.0 | 10.00 | 9.736 | 101 | 80 | 120 | | | | |

| Sample ID | N042895-001H-PS | SampType: | PS | TestCode: | 6020_W_TPK | Units: | µg/L | Prep Date: | | RunNo: | 148701 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82942 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/12/2020 | SeqNo: | 4003858 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Barium | 38.713 | 1.0 | 10.00 | 28.79 | 99.3 | 80 | 120 | | | | |
| Copper | 30.997 | 1.0 | 10.00 | 22.24 | 87.6 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201109B** QC Batch: **82949** | | | | PrepDate: | | **11/9/2020** | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 11/9/2020 01:04 PM |
| **TOTAL MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201105B** QC Batch: **82906** | | | | PrepDate: | | **11/5/2020** | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 11/5/2020 02:43 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID | MB-82949 | SampType: | MBLK | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148615 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82949 | TestNo: | EPA 7470A | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999627 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID | LCS-82949 | SampType: | LCS | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148615 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82949 | TestNo: | EPA 7470A | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999629 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.740 | 0.20 | 5.000 | 0 | 94.8 | 85 | 115 | | | | |

| Sample ID | N042895-001B-MS | SampType: | MS | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148615 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82949 | TestNo: | EPA 7470A | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999633 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.760 | 0.20 | 5.000 | 0.1590 | 92.0 | 75 | 125 | | | | |

| Sample ID | N042895-001B-MSD | SampType: | MSD | TestCode: | 7470_W_DIS | Units: | µg/L | Prep Date: | 11/9/2020 | RunNo: | 148615 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82949 | TestNo: | EPA 7470A | | | Analysis Date: | 11/9/2020 | SeqNo: | 3999634 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.820 | 0.20 | 5.000 | 0.1590 | 93.2 | 75 | 125 | 4.760 | 1.25 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_PGE**

| Sample ID | MB-82906 | SampType: | MBLK | TestCode: | 7470_W_PGE | Units: | µg/L | Prep Date: | 11/5/2020 | RunNo: | 148524 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 82906 | TestNo: | EPA 7470A | | | Analysis Date: | 11/5/2020 | SeqNo: | 3995342 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID | LCS-82906 | SampType: | LCS | TestCode: | 7470_W_PGE | Units: | µg/L | Prep Date: | 11/5/2020 | RunNo: | 148524 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 82906 | TestNo: | EPA 7470A | | | Analysis Date: | 11/5/2020 | SeqNo: | 3995344 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.790 | 0.20 | 5.000 | 0 | 95.8 | 85 | 115 | | | | |

| Sample ID | N042882-027A-MS | SampType: | MS | TestCode: | 7470_W_PGE | Units: | µg/L | Prep Date: | 11/5/2020 | RunNo: | 148524 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82906 | TestNo: | EPA 7470A | | | Analysis Date: | 11/5/2020 | SeqNo: | 3995348 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.600 | 0.20 | 5.000 | 0 | 92.0 | 75 | 125 | | | | |

| Sample ID | N042882-027A-MSD | SampType: | MSD | TestCode: | 7470_W_PGE | Units: | µg/L | Prep Date: | 11/5/2020 | RunNo: | 148524 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 82906 | TestNo: | EPA 7470A | | | Analysis Date: | 11/5/2020 | SeqNo: | 3995349 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.840 | 0.20 | 5.000 | 0 | 96.8 | 75 | 125 | 4.600 | 5.08 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-01-268-110420 |
| **Lab Order:** | N042895 | **Collection Date:** | 11/4/2020 11:45:00 AM |
| **Project:** | PG&E Topock - Construction, RC000753.0050 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N042895-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID** | | | | | | | |
| **EPA 3510C** | | | **EPA 8015B** | | | | |
| RunID: **NV00922-GC1_201111C** QC Batch: **82980** | | | | PrepDate: | **11/11/2020** | | Analyst: **PL** |
| TPH-Diesel (C9-C25) | ND | 29 | 50 | | ug/L | 1 | 11/11/2020 04:16 PM |
| TPH-Oil (C24-C40) | ND | 36 | 50 | | ug/L | 1 | 11/11/2020 04:16 PM |
| Surr: Octacosane | 94.7 | 0 | 26-152 | | %REC | 1 | 11/11/2020 04:16 PM |
| Surr: p-Terphenyl | 90.0 | 0 | 57-132 | | %REC | 1 | 11/11/2020 04:16 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015DM_WPGE**

| Sample ID **LCS-82980_DRO** | SampType: **LCS** | TestCode: **8015DM_WP** | Units: **ug/L** | Prep Date: **11/11/2020** | RunNo: **148728** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82980** | TestNo: **EPA 8015B** | **EPA 3510C** | Analysis Date: **11/11/2020** | SeqNo: **4004805** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Diesel (C9-C25) | 774.288 | 50 | 1000 | 0 | 77.4 | 61 | 143 | | | | |
| Surr: Octacosane | 58.817 | | 80.00 | | 73.5 | 26 | 152 | | | | |
| Surr: p-Terphenyl | 55.224 | | 80.00 | | 69.0 | 57 | 132 | | | | |

| Sample ID **LCS-82980_ORO** | SampType: **LCS** | TestCode: **8015DM_WP** | Units: **ug/L** | Prep Date: **11/11/2020** | RunNo: **148728** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **82980** | TestNo: **EPA 8015B** | **EPA 3510C** | Analysis Date: **11/11/2020** | SeqNo: **4004806** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Oil (C24-C40) | 846.629 | 50 | 1000 | 0 | 84.7 | 50 | 150 | | | | |
| Surr: Octacosane | 69.045 | | 80.00 | | 86.3 | 26 | 152 | | | | |
| Surr: p-Terphenyl | 64.305 | | 80.00 | | 80.4 | 57 | 132 | | | | |

| Sample ID **LCSD-82980_ORO** | SampType: **LCSD** | TestCode: **8015DM_WP** | Units: **ug/L** | Prep Date: **11/11/2020** | RunNo: **148728** |
|---|---|---|---|---|---|
| Client ID: **LCSS02** | Batch ID: **82980** | TestNo: **EPA 8015B** | **EPA 3510C** | Analysis Date: **11/11/2020** | SeqNo: **4004807** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Oil (C24-C40) | 604.603 | 50 | 1000 | 0 | 60.5 | 50 | 150 | 846.6 | 33.4 | 30 | R |
| Surr: Octacosane | 60.112 | | 80.00 | | 75.1 | 26 | 152 | | 0 | | |
| Surr: p-Terphenyl | 53.056 | | 80.00 | | 66.3 | 57 | 132 | | 0 | | |

| Sample ID **MB-82980** | SampType: **MBLK** | TestCode: **8015DM_WP** | Units: **ug/L** | Prep Date: **11/11/2020** | RunNo: **148728** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **82980** | TestNo: **EPA 8015B** | **EPA 3510C** | Analysis Date: **11/11/2020** | SeqNo: **4004808** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Diesel (C9-C25) | ND | 50 | | | | | | | | | |
| TPH-Oil (C24-C40) | ND | 50 | | | | | | | | | |
| Surr: Octacosane | 78.573 | | 80.00 | | 98.2 | 26 | 152 | | | | |
| Surr: p-Terphenyl | 74.803 | | 80.00 | | 93.5 | 57 | 132 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N042895
**Project:** PG&E Topock - Construction, RC000753.0050

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8015DM_WPGE**

| Sample ID **N042895-001E-MS** | SampType: **MS** | TestCode: **8015DM_WP** | Units: **ug/L** | Prep Date: **11/11/2020** | RunNo: **148728** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82980** | TestNo: **EPA 8015B** | **EPA 3510C** | Analysis Date: **11/11/2020** | SeqNo: **4004810** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Diesel (C9-C25) | 825.464 | 50 | 1000 | 0 | 82.5 | 61 | 143 | | | | |
| Surr: Octacosane | 73.113 | | 80.00 | | 91.4 | 26 | 152 | | | | |
| Surr: p-Terphenyl | 70.699 | | 80.00 | | 88.4 | 57 | 132 | | | | |

| Sample ID **N042895-001E-MSD** | SampType: **MSD** | TestCode: **8015DM_WP** | Units: **ug/L** | Prep Date: **11/11/2020** | RunNo: **148728** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **82980** | TestNo: **EPA 8015B** | **EPA 3510C** | Analysis Date: **11/11/2020** | SeqNo: **4004811** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| TPH-Diesel (C9-C25) | 779.805 | 50 | 1000 | 0 | 78.0 | 61 | 143 | 825.5 | 5.69 | 30 | |
| Surr: Octacosane | 69.325 | | 80.00 | | 86.7 | 26 | 152 | | 0 | | |
| Surr: p-Terphenyl | 66.760 | | 80.00 | | 83.4 | 57 | 132 | | 0 | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

N042895

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD

Page 1 of 1


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Others ✓; Specify: RWQCB |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RWQCB ✓ |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; jon.karnath@arcadis.com | Address: | |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# | |
| Submitted By: | | Phone: 949-727-1400, ext 200 Fax: | Global ID: Specify State: |
| Title: | Phone: 916-786-3302 Fax: | | |

Signature: Date: 11/3/2020
I hereby authorize ASSET Labs to perform the tests indicated below.

Sampled By: Ellen Redner
I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for

Signature: Date: 11/3/2020

Project Name: PG&E Topock - Construction
Project Number: RC000753.0050

Matrix: Ground Water x; Sediment; Potable; Soil; NPDES; Other Solid; Surface

Sample Receipt Condition:
1. Chilled Y
2. Headspace
3. Container Intact Y
4. Seal Present Y
5. IR number 2
6. Method of Cooling: Ice
Sample Temp: 3.00°C

Courier: ASSET
Tracking No.:

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2 SO4, NH4OH (250 mL poly) | Metals Dissolved (6020A FF) (Cr, HNO3) (500 mL poly) | Ammonia (SM4500-NH3D); H2SO4 (250 mL poly) | Nitrate/Nitrite (SM4500); H2SO4 (250 mL poly) | Sulfate (EPA 300.0) (1 L poly) | TPH (SW8015B) (1 L Amber) | TOC (SM5310C), H2SO4 (40 mL VOA) | Total dissolved solids (SM 2540C) (1 L poly) | Fluoride (EPA 300.0) (1 L poly) | TSS (SM 2540D) (1 L poly) | Total Metals Dissolved (SW6010B/SW7471A) HNO3 (500 mL poly) | Cr(VI) FF unpreserved (250 mL Poly) | pH unpreserved (1 L poly) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N042895-01 | TW-01-268-110420 | 11/4/20 | 1145 | | 1 | 1 | 1 | 1 | 1 | 3 | 3 | 1 | 1 | 1 | 1 | | 1 | E | 16 | P | N/S | 16 containers |
| 2 | -02 | TW-01-268-110320-EB | 11/3/20 | 1300 | | 1 | | | | | | | | | | | | | E | 1 | P | B | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | |

Ellen R 11/4/2020

Relinquished by (Signature and Printed Name): Ellen Redner/EQR Date/Time: 11/4/2020 1550
Relinquished by (Signature and Printed Name): Jonathan Arce Date/Time: 11/4/20 1550
Relinquished by (Signature and Printed Name): Jonathan Arce Date/Time: 11/4/20 935pm
Relinquished by (Signature and Printed Name): Jonathan Arce Date/Time: 11/4/20 9:35pm

Turn Around Time (TAT)
- A = < 24 Hrs or Same Day TAT
- B = Next Workday
- C = 2 Workdays
- D = 3 Workdays
- E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

Special Instruction:

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

| Preservatives: | | | | Container Type: | | |
|---|---|---|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C | T=Tube | V=VOA | P=Pint |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | | J=Jar | B=Tedlar | G=Glass |
| Others/Specify: | B | (NH4)2SO4/NH4OH | | M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

= Filtered

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 11/4/2020 | Workorder: | N042895 |
| Rep sample Temp (Deg C): | 3.0 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☐ | No ☑ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments: Sample for pH received past holding time.

For:

Checklist Completed By: YR BHdez 11/5/2020

Reviewed By: MBC 11/09/2020

## Mary Ann Balilu (maryann.balilu@assetlaboratoriesph.com)

**From:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Sent:** Friday, November 06, 2020 1:10 PM
**To:** Yoandra Rodriguez
**Cc:** maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com
**Subject:** RE: PG&E Topock - Construction, RC000753.0050 (ASSET Labs No. N042895)

Hi Yoandra,
We do not need TPH gas. We do need TPH oil and grease though. Noted on the extra containers.

Thanks,
Laura

---

**From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**Sent:** Friday, November 6, 2020 12:49 PM
**To:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Cc:** maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com
**Subject:** Re: PG&E Topock - Construction, RC000753.0050 (ASSET Labs No. N042895)

Hi Laura,

Noted on Metals.

Please I have another concern. Do you need TPH gas or only DM? The VOAs preserved with HCl were not received, only the 1L ambers.

I also noticed that several 32 oz poly containers were collected for Gen Min/Anions and we just need two. I'm getting your attention in case you have to revise the list of containers on your COC for future sampling events of this project.

Please advise.

Thanks!

On 11/5/2020 5:56 PM, Madsen, Laura wrote:

> They want dissolved Title 22 metals and dissolved Cr. I believe CrT is already part of the Title 22 list but they just wanted to make sure it would be reported.
>
> Sent from my iPhone
>
> > On Nov 5, 2020, at 7:37 PM, Yoandra Rodriguez <yoandra@assetlaboratories.com> wrote:
> >
> > Can you please check why there is a request for Diss Cr apart?

On 11/5/2020 5:34 PM, Madsen, Laura wrote:

> Hi
> It should be the same list of metals as we use with the TMP samples. I think it it both total title 22 metals and dissolved title 22 metals.
>
> Thanks
> Laura
>
> Sent from my iPhone
>
> > On Nov 5, 2020, at 7:06 PM, Yoandra Rodriguez <yoandra@assetlaboratories.com> wrote:
> >
> > Hi Laura,
> >
> > Please kindly clarify the request for metals. Do you need Total and Diss Title 22 or Total Title 22 and Diss Cr.
> >
> > Please check both requests on the attached COC and advise.
> >
> > --
> > **Thanks,**
> >
> > **Yoandra Rodriguez**
> > Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
> > California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436
> >
> > ASSET LABORATORIES - Serving Clients with Passion and Professionalism
> >
> > This message is intended for the use of the individual or entity to which it is addressed. This may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and delete the original message. Thank you.
> > <N042895_COC.pdf>

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# ASSET Laboratories

## WORK ORDER Summary

*05-Nov-20*

**WorkOrder:** N042895

**Client ID:** ARCUS02

**Project:** PG&E Topock - Construction, RC000753.0050 **QC Level:** Level IV **Date Received:** 11/4/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N042895-001A | TW-01-268-110420 | 11/4/2020 11:45:00 AM | 11/18/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042895-001B | | | 11/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N042895-001C | | | 11/18/2020 | | SM4500-NH3D | AMMONIA-N BY ION SELECTIVE ELECTRODE | ☐ | ☐ | ☑ | SUB |
| N042895-001D | | | 11/18/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N042895-001E | | | 11/18/2020 | | EPA 3510C | SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 8015B | DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID | ☐ | ☐ | ☐ | WW |
| N042895-001F | | | 11/18/2020 | | SM 5310C | TOTAL ORGANIC CARBON | ☐ | ☐ | ☐ | VW |
| N042895-001G | | | 11/18/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N042895-001H | | | 11/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*05-Nov-20*

**WorkOrder:** N042895

**Client ID:** ARCUS02

**Project:** PG&E Topock - Construction, RC000753.0050 **QC Level:** Level IV **Date Received:** 11/4/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N042895-001H | TW-01-268-110420 | 11/4/2020 11:45:00 AM | 11/18/2020 | Groundwater | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 6020 | TOTAL METALS BY ICPMS | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 6020 | TOTAL METALS BY ICPMS | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | | MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 11/18/2020 | | EPA 7470A | TOTAL MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N042895-001I | | | 11/18/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 11/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | lsr |
| | | | 11/18/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | lsr |
| N042895-002A | TW-01-268-110320-EB | 11/3/2020 1:00:00 PM | 11/18/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N042895-003A | FOLDER | 11/18/2020 | 11/18/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 11/18/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 11/18/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 11/18/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Ellen Redner

**05-Nov-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **SM4500-NH3D** | | |
| N042895-001C / TW-01-268-110420 | Groundwater | 11/4/2020 11:45:00 AM | 16OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N42895A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Ammonia by SM4500NH3D. EDD Requirement Labspec7 edata.

GSO #: 551073247

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | YRJ | 11/5/2020 1630 | **Received by:** | | |
| **Relinquished by:** | | | **Received by:** | | |

December 07, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043097

RE: PG&E Topock - RMP, RC000753.0801

Attention: Dan Bush

Enclosed are the results for sample(s) received on November 18, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time except for pH. pH testing is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

Ambient Blank samples (N043097-007 and -009) were not analyzed as per COC.

Subcontracted Analyses:

Oxygen/Deuterium was subcontracted to Zymax- Pittsburg, PA.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043097-005BMS, N043097-005BMSD and N043097-015B-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Barium in QC samples N043097-005BMS and N043097-005BMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for SM 4500-NO3F:

Matrix Spike Duplicate (MSD) is outside recovery criteria in QC sample N043097-014EMSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab Order:** N043097
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043097-001A | MW-921-Q420 | Groundwater | 11/18/2020 9:48:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-001B | MW-921-Q420 | Groundwater | 11/18/2020 9:48:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-001C | MW-921-Q420 | Groundwater | 11/18/2020 9:48:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-001D | MW-921-Q420 | Groundwater | 11/18/2020 9:48:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-001E | MW-921-Q420 | Groundwater | 11/18/2020 9:48:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-002A | C-R22A-D-Q420 | Groundwater | 11/18/2020 9:10:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-002B | C-R22A-D-Q420 | Groundwater | 11/18/2020 9:10:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-002C | C-R22A-D-Q420 | Groundwater | 11/18/2020 9:10:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-002D | C-R22A-D-Q420 | Groundwater | 11/18/2020 9:10:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-002E | C-R22A-D-Q420 | Groundwater | 11/18/2020 9:10:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-003A | C-R22A-S-Q420 | Groundwater | 11/18/2020 9:21:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-003B | C-R22A-S-Q420 | Groundwater | 11/18/2020 9:21:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-003C | C-R22A-S-Q420 | Groundwater | 11/18/2020 9:21:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-003D | C-R22A-S-Q420 | Groundwater | 11/18/2020 9:21:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-003E | C-R22A-S-Q420 | Groundwater | 11/18/2020 9:21:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-004A | C-R27-D-Q420 | Groundwater | 11/18/2020 10:15:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-004B | C-R27-D-Q420 | Groundwater | 11/18/2020 10:15:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-004C | C-R27-D-Q420 | Groundwater | 11/18/2020 10:15:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-004D | C-R27-D-Q420 | Groundwater | 11/18/2020 10:15:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-004E | C-R27-D-Q420 | Groundwater | 11/18/2020 10:15:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-005A | C-R27-S-Q420 | Groundwater | 11/18/2020 10:27:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-005B | C-R27-S-Q420 | Groundwater | 11/18/2020 10:27:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-005C | C-R27-S-Q420 | Groundwater | 11/18/2020 10:27:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-005D | C-R27-S-Q420 | Groundwater | 11/18/2020 10:27:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-005E | C-R27-S-Q420 | Groundwater | 11/18/2020 10:27:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-006A | C-TAZ-D-Q420 | Groundwater | 11/18/2020 7:41:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-006B | C-TAZ-D-Q420 | Groundwater | 11/18/2020 7:41:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-006C | C-TAZ-D-Q420 | Groundwater | 11/18/2020 7:41:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-006D | C-TAZ-D-Q420 | Groundwater | 11/18/2020 7:41:00 AM | 11/18/2020 | 12/7/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab Order:** N043097
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043097-006E | C-TAZ-D-Q420 | Groundwater | 11/18/2020 7:41:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-007A | AmbientBlank-1-Q420 | Groundwater | 11/18/2020 8:00:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-008A | C-TAZ-S-Q420 | Groundwater | 11/18/2020 7:58:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-008B | C-TAZ-S-Q420 | Groundwater | 11/18/2020 7:58:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-008C | C-TAZ-S-Q420 | Groundwater | 11/18/2020 7:58:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-008D | C-TAZ-S-Q420 | Groundwater | 11/18/2020 7:58:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-008E | C-TAZ-S-Q420 | Groundwater | 11/18/2020 7:58:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-009A | AmbientBlank-2-420 | Groundwater | 11/18/2020 11:00:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-010A | R-28-Q420 | Groundwater | 11/18/2020 10:45:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-010B | R-28-Q420 | Groundwater | 11/18/2020 10:45:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-010C | R-28-Q420 | Groundwater | 11/18/2020 10:45:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-010D | R-28-Q420 | Groundwater | 11/18/2020 10:45:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-010E | R-28-Q420 | Groundwater | 11/18/2020 10:45:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-010F | R-28-Q420 | Groundwater | 11/18/2020 10:45:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-011A | R63-Q420 | Groundwater | 11/18/2020 8:51:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-011B | R63-Q420 | Groundwater | 11/18/2020 8:51:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-011C | R63-Q420 | Groundwater | 11/18/2020 8:51:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-011D | R63-Q420 | Groundwater | 11/18/2020 8:51:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-011E | R63-Q420 | Groundwater | 11/18/2020 8:51:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-012A | C-BNS-Q420 | Groundwater | 11/18/2020 9:38:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-012B | C-BNS-Q420 | Groundwater | 11/18/2020 9:38:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-012C | C-BNS-Q420 | Groundwater | 11/18/2020 9:38:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-012D | C-BNS-Q420 | Groundwater | 11/18/2020 9:38:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-012E | C-BNS-Q420 | Groundwater | 11/18/2020 9:38:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-013A | C-I-3-D-Q420 | Groundwater | 11/18/2020 8:19:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-013B | C-I-3-D-Q420 | Groundwater | 11/18/2020 8:19:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-013C | C-I-3-D-Q420 | Groundwater | 11/18/2020 8:19:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-013D | C-I-3-D-Q420 | Groundwater | 11/18/2020 8:19:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-013E | C-I-3-D-Q420 | Groundwater | 11/18/2020 8:19:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-014A | C-I-3-S-Q420 | Groundwater | 11/18/2020 8:30:00 AM | 11/18/2020 | 12/7/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab Order:** N043097
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043097-014B | C-I-3-S-Q420 | Groundwater | 11/18/2020 8:30:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-014C | C-I-3-S-Q420 | Groundwater | 11/18/2020 8:30:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-014D | C-I-3-S-Q420 | Groundwater | 11/18/2020 8:30:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-014E | C-I-3-S-Q420 | Groundwater | 11/18/2020 8:30:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-015A | MW-923-Q420 | Groundwater | 11/18/2020 10:55:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-015B | MW-923-Q420 | Groundwater | 11/18/2020 10:55:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-015C | MW-923-Q420 | Groundwater | 11/18/2020 10:55:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-015D | MW-923-Q420 | Groundwater | 11/18/2020 10:55:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-015E | MW-923-Q420 | Groundwater | 11/18/2020 10:55:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-015F | MW-923-Q420 | Groundwater | 11/18/2020 10:55:00 AM | 11/18/2020 | 12/7/2020 |
| N043097-016A | SW1-Q420 | Groundwater | 11/18/2020 12:30:00 PM | 11/18/2020 | 12/7/2020 |
| N043097-016B | SW1-Q420 | Groundwater | 11/18/2020 12:30:00 PM | 11/18/2020 | 12/7/2020 |
| N043097-016C | SW1-Q420 | Groundwater | 11/18/2020 12:30:00 PM | 11/18/2020 | 12/7/2020 |
| N043097-017A | SW2-Q420 | Groundwater | 11/18/2020 1:30:00 PM | 11/18/2020 | 12/7/2020 |
| N043097-017B | SW2-Q420 | Groundwater | 11/18/2020 1:30:00 PM | 11/18/2020 | 12/7/2020 |
| N043097-017C | SW2-Q420 | Groundwater | 11/18/2020 1:30:00 PM | 11/18/2020 | 12/7/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-001

**Client Sample ID:** MW-921-Q420
**Collection Date:** 11/18/2020 9:48:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 890 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:10:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 870 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:21:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 860 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:15:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 880 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:27:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 860 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:41:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 850 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:58:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 840 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-28-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:45:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 890 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R63-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 870 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-BNS-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:38:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 850 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:19:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 860 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:30:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 850 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-923-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:55:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 890 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | SW1-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 12:30:00 PM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 930 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | SW2-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 1:30:00 PM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119F** | QC Batch: **R148846** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 910 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043097-001DDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **148846**
Client ID: **ZZZZZZ** Batch ID: **R148846** TestNo: **EPA 120.1** Analysis Date: **11/19/2020** SeqNo: **4010271**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 889.000 | 0.10 | | | | | | 888.0 | 0.113 | 2 | |

Sample ID: **N043097-013DDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **148846**
Client ID: **ZZZZZZ** Batch ID: **R148846** TestNo: **EPA 120.1** Analysis Date: **11/19/2020** SeqNo: **4010282**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 868.000 | 0.10 | | | | | | 865.0 | 0.346 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-921-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:48:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:10:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:21:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:15:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:27:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-006

**Client Sample ID:** C-TAZ-D-Q420
**Collection Date:** 11/18/2020 7:41:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:58:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-28-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:45:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R63-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-BNS-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:38:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:19:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:30:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-923-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:55:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | SW1-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 12:30:00 PM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 7.9 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | SW2-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 1:30:00 PM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119G** | QC Batch: **R148847** | | | PrepDate: | | | Analyst: **LR** |
| pH | 7.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 11:00 AM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 11:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 150.1_4500H+B_W**

Sample ID: **N043097-001DDUP** SampType: **DUP** TestCode: **150.1_4500H** Units: **pH Units** Prep Date: RunNo: **148847**
Client ID: **ZZZZZZ** Batch ID: **R148847** TestNo: **SM4500-H+B** Analysis Date: **11/19/2020** SeqNo: **4010288**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 8.360 | 0.10 | | | | | | 8.350 | 0.120 | 10 | H |
| Temp. at time of pH Analysis | 25.000 | 0.10 | | | | | | 25.00 | 0 | 10 | H |

Sample ID: **N043097-013DDUP** SampType: **DUP** TestCode: **150.1_4500H** Units: **pH Units** Prep Date: RunNo: **148847**
Client ID: **ZZZZZZ** Batch ID: **R148847** TestNo: **SM4500-H+B** Analysis Date: **11/19/2020** SeqNo: **4010299**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 8.370 | 0.10 | | | | | | 8.360 | 0.120 | 10 | H |
| Temp. at time of pH Analysis | 25.000 | 0.10 | | | | | | 25.00 | 0 | 10 | H |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-28-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:45:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201119N** | QC Batch: **83100** | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 580 | 10 | 10 | | mg/L | 1 | 11/19/2020 01:17 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-923-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:55:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201119N** | QC Batch: **83100** | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 580 | 10 | 10 | | mg/L | 1 | 11/19/2020 01:17 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83100** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **11/19/2020** | RunNo: **148872** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83100** | TestNo: **SM2540C** | | Analysis Date: **11/19/2020** | SeqNo: **4012225** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 987.000 | 10 | 1000 | 0 | 98.7 | 80 | 120 | | | | |

| Sample ID: **MB-83100** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **11/19/2020** | RunNo: **148872** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83100** | TestNo: **SM2540C** | | Analysis Date: **11/19/2020** | SeqNo: **4012226** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043081-002ADUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **11/19/2020** | RunNo: **148872** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83100** | TestNo: **SM2540C** | | Analysis Date: **11/19/2020** | SeqNo: **4012229** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 11510.000 | 100 | | | | | | 11830 | 2.74 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-921-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:48:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:10:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:21:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:15:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:27:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:41:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | 5.5 | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:58:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-28-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:45:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-011

**Client Sample ID:** R63-Q420
**Collection Date:** 11/18/2020 8:51:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-BNS-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:38:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201119E** QC Batch: **83101** | | | | PrepDate: | **11/19/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/19/2020 01:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:19:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120D** QC Batch: **83111** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:30:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120D** QC Batch: **83111** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-923-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:55:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120D** QC Batch: **83111** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.2_2540D_W**

| Sample ID: **LCS-83101** | SampType: **LCS** | TestCode: **160.2_2540D_** | Units: **mg/L** | Prep Date: **11/19/2020** | RunNo: **148845** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83101** | TestNo: **SM2540D** | | Analysis Date: **11/19/2020** | SeqNo: **4010257** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | 931.000 | 10 | 1000 | 0 | 93.1 | 80 | 120 | | | | |

| Sample ID: **MB-83101** | SampType: **MBLK** | TestCode: **160.2_2540D_** | Units: **mg/L** | Prep Date: **11/19/2020** | RunNo: **148845** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83101** | TestNo: **SM2540D** | | Analysis Date: **11/19/2020** | SeqNo: **4010258** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 10 | | | | | | | | | |

| Sample ID: **N043097-005DDUP** | SampType: **DUP** | TestCode: **160.2_2540D_** | Units: **mg/L** | Prep Date: **11/19/2020** | RunNo: **148845** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83101** | TestNo: **SM2540D** | | Analysis Date: **11/19/2020** | SeqNo: **4010264** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 5.0 | | | | | | 0 | 0 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.2_2540D_W**

| Sample ID: **LCS-83111** | SampType: **LCS** | TestCode: **160.2_2540D_** | Units: **mg/L** | Prep Date: **11/20/2020** | RunNo: **148877** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83111** | TestNo: **SM2540D** | | Analysis Date: **11/20/2020** | SeqNo: **4012430** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | 952.000 | 10 | 1000 | 0 | 95.2 | 80 | 120 | | | | |

| Sample ID: **MB-83111** | SampType: **MBLK** | TestCode: **160.2_2540D_** | Units: **mg/L** | Prep Date: **11/20/2020** | RunNo: **148877** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83111** | TestNo: **SM2540D** | | Analysis Date: **11/20/2020** | SeqNo: **4012431** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 10 | | | | | | | | | |

| Sample ID: **N043097-015DDUP** | SampType: **DUP** | TestCode: **160.2_2540D_** | Units: **mg/L** | Prep Date: **11/20/2020** | RunNo: **148877** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83111** | TestNo: **SM2540D** | | Analysis Date: **11/20/2020** | SeqNo: **4012435** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 5.0 | | | | | | 0 | 0 | 5 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-921-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:48:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 01:11 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 05:40 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:10:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | **EPA 218.6** | | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 01:30 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 05:46 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:21:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 02:08 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: **11/19/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 05:51 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:15:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | **EPA 218.6** | | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 02:27 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: **11/19/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 05:57 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:27:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 02:45 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 06:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:41:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | **EPA 218.6** | | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 03:04 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 06:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:58:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 03:23 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 06:55 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-28-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:45:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 04:01 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: **11/19/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 07:01 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R63-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 07:06 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 07:07 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-012

**Client Sample ID:** C-BNS-Q420
**Collection Date:** 11/18/2020 9:38:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 07:25 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 07:13 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:19:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | **EPA 218.6** | | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 07:44 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: **11/19/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 07:18 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:30:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | **EPA 218.6** | | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 08:03 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 07:36 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-923-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:55:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201119A** QC Batch: **R148883** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/19/2020 08:22 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: **11/19/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 07:42 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | SW1-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 12:30:00 PM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 10:57 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 07:47 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | SW2-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 1:30:00 PM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 11:17 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201119A** QC Batch: **83081** | | | | PrepDate: **11/19/2020** | | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/19/2020 07:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R148883** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013019** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R148883** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013020** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.024 | 0.20 | 5.000 | 0 | 100 | 90 | 110 | | | | |

| Sample ID: **N043098-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013028** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.085 | 0.20 | 1.000 | 0.07830 | 101 | 90 | 110 | | | | |

| Sample ID: **N043098-004AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013029** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.098 | 0.20 | 1.000 | 0 | 110 | 90 | 110 | | | | |

| Sample ID: **N043098-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013031** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.028 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043097-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013033**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.025 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043097-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013035**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.044 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043097-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013039**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.055 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

Sample ID: **N043097-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013041**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.052 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

Sample ID: **N043097-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013043**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.084 | 0.20 | 1.000 | 0 | 108 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043097-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013045**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.053 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

Sample ID: **N043097-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013047**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.074 | 0.20 | 1.000 | 0 | 107 | 90 | 110 | | | | |

Sample ID: **N043098-002ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013053**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.579 | 0.20 | | | | | | 1.562 | 1.08 | 20 | |

Sample ID: **N043098-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013054**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.571 | 0.20 | 1.000 | 1.562 | 101 | 90 | 110 | | | | |

Sample ID: **N043097-005AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013055**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.003 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | 1.084 | 7.76 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043098-005AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013056** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 513.245 | 10 | 250.0 | 267.4 | 98.3 | 90 | 110 | | | | |

| Sample ID: **N043098-006AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013057** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 519.915 | 10 | 250.0 | 268.6 | 101 | 90 | 110 | | | | |

| Sample ID: **N043098-007AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013058** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 488.150 | 10 | 250.0 | 239.2 | 99.6 | 90 | 110 | | | | |

| Sample ID: **N043097-010AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013059** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

| Sample ID: **N043097-011AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148883** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148883** | TestNo: **EPA 218.6** | | Analysis Date: **11/19/2020** | SeqNo: **4013063** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.010 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043097-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013065**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.021 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043097-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013067**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.039 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043097-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013069**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.032 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043097-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148883**
Client ID: **ZZZZZZ** Batch ID: **R148883** TestNo: **EPA 218.6** Analysis Date: **11/19/2020** SeqNo: **4013071**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.025 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **MB-R1488884** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **PBW** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013080**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

Sample ID: **LCS-R148884** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **LCSW** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013081**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.896 | 0.20 | 5.000 | 0 | 97.9 | 90 | 110 | | | | |

Sample ID: **N043097-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013083**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.008 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043097-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013085**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.023 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043107-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013087**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.048 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043107-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013089**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.044 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043107-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013093**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.001 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N043107-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013095**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.046 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

Sample ID: **N043107-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013097**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.035 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043107-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013099**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.056 | 0.20 | 1.000 | 0 | 106 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043097-016ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013101**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | 0 | 0 | 20 | |

Sample ID: **N043107-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013105**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.056 | 0.20 | 1.000 | 0 | 106 | 90 | 110 | | | | |

Sample ID: **N043107-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013106**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.021 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043107-008AMSD** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013107**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | 1.021 | 1.16 | 0 | |

Sample ID: **N043107-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013109**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.028 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043107-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013111**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.056 | 0.20 | 1.000 | 0 | 106 | 90 | 110 | | | | |

Sample ID: **N043107-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013113**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.998 | 0.20 | 1.000 | 0 | 99.8 | 90 | 110 | | | | |

Sample ID: **N043107-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013117**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.045 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

Sample ID: **N043107-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **148884**
Client ID: **ZZZZZZ** Batch ID: **R148884** TestNo: **EPA 218.6** Analysis Date: **11/20/2020** SeqNo: **4013119**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.030 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83081** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **11/19/2020** | RunNo: **148933** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83081** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4014832** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83081** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **11/19/2020** | RunNo: **148933** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83081** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4014833** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.502 | 1.0 | 10.00 | 0 | 95.0 | 85 | 115 | | | | |

| Sample ID: **N043097-005BMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **11/19/2020** | RunNo: **148933** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83081** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4014843** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.308 | 1.0 | 10.00 | 0 | 93.1 | 75 | 125 | | | | |

| Sample ID: **N043097-005BMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **11/19/2020** | RunNo: **148933** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83081** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/19/2020** | SeqNo: **4014844** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.244 | 1.0 | 10.00 | 0 | 92.4 | 75 | 125 | 9.308 | 0.695 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-28-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:45:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201119M** | QC Batch: **R148866** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 140 | 1.2 | 5.0 | | mg/L | 1 | 11/19/2020 03:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-923-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:55:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201119M** | QC Batch: **R148866** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 140 | 1.2 | 5.0 | | mg/L | 1 | 11/19/2020 03:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R148866** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **148866** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148866** | TestNo: **SM 2320 B** | | Analysis Date: **11/19/2020** | SeqNo: **4011607** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 100.000 | 5.0 | 100.0 | 0 | 100 | 85 | 115 | | | | |

| Sample ID: **MB-R148866** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **148866** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148866** | TestNo: **SM 2320 B** | | Analysis Date: **11/19/2020** | SeqNo: **4011608** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043099-003ADUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **148866** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148866** | TestNo: **SM 2320 B** | | Analysis Date: **11/19/2020** | SeqNo: **4011614** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 112.500 | 5.0 | | | | | | 114.6 | 1.83 | 30 | |

| Sample ID: **N043099-003AMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **148866** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148866** | TestNo: **SM 2320 B** | | Analysis Date: **11/19/2020** | SeqNo: **4011615** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 213.542 | 5.0 | 100.0 | 114.6 | 99.0 | 75 | 125 | | | | |

| Sample ID: **N043099-003AMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **148866** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148866** | TestNo: **SM 2320 B** | | Analysis Date: **11/19/2020** | SeqNo: **4011616** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 211.458 | 5.0 | 100.0 | 114.6 | 96.9 | 75 | 125 | 213.5 | 0.980 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-010

**Client Sample ID:** R-28-Q420
**Collection Date:** 11/18/2020 10:45:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201119A** QC Batch: **R148871** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.030 | 0.50 | | mg/L | 1 | 11/19/2020 12:03 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201119A** QC Batch: **R148871** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 88 | 0.70 | 10 | | mg/L | 20 | 11/19/2020 09:12 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201119A** QC Batch: **R148871** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 210 | 0.80 | 10 | | mg/L | 20 | 11/19/2020 09:12 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-015

**Client Sample ID:** MW-923-Q420
**Collection Date:** 11/18/2020 10:55:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201119A** QC Batch: **R148871** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.030 | 0.50 | | mg/L | 1 | 11/19/2020 12:17 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201119A** QC Batch: **R148871** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 88 | 0.70 | 10 | | mg/L | 20 | 11/19/2020 09:41 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201119A** QC Batch: **R148871** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 210 | 0.80 | 10 | | mg/L | 20 | 11/19/2020 09:41 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R148871_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012111** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R148871_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012112** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.261 | 0.50 | 1.250 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N043099-002AMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012125** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 13.229 | 5.0 | 12.50 | 1.107 | 97.0 | 80 | 120 | | | | |

| Sample ID: **N043099-002AMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012126** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 13.458 | 5.0 | 12.50 | 1.107 | 98.8 | 80 | 120 | 13.23 | 1.72 | 20 | |

| Sample ID: **N043099-005ADUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012127** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 5.0 | | | | | | 0 | 0 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R148871_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **148871**
Client ID: **PBW** Batch ID: **R148871** TestNo: **EPA 300.0** Analysis Date: **11/19/2020** SeqNo: **4012081**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R148871_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **148871**
Client ID: **LCSW** Batch ID: **R148871** TestNo: **EPA 300.0** Analysis Date: **11/19/2020** SeqNo: **4012082**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.953 | 0.50 | 2.000 | 0 | 97.7 | 90 | 110 | | | | |

Sample ID: **N043100-005AMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **148871**
Client ID: **ZZZZZZ** Batch ID: **R148871** TestNo: **EPA 300.0** Analysis Date: **11/19/2020** SeqNo: **4012089**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 140.574 | 10 | 40.00 | 99.15 | 104 | 80 | 120 | | | | |

Sample ID: **N043100-005AMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **148871**
Client ID: **ZZZZZZ** Batch ID: **R148871** TestNo: **EPA 300.0** Analysis Date: **11/19/2020** SeqNo: **4012090**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 139.162 | 10 | 40.00 | 99.15 | 100 | 80 | 120 | 140.6 | 1.01 | 20 | |

Sample ID: **N043100-004ADUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **148871**
Client ID: **ZZZZZZ** Batch ID: **R148871** TestNo: **EPA 300.0** Analysis Date: **11/19/2020** SeqNo: **4012091**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 121.050 | 10 | | | | | | 122.2 | 0.905 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043097-010DMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012095** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 126.912 | 10 | 40.00 | 87.60 | 98.3 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **MB-R148871_SO4** | SampType: **MBLK** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012138** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R148871_SO4** | SampType: **LCS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012139** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.055 | 0.50 | 4.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N043100-005AMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012146** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 318.524 | 10 | 80.00 | 234.6 | 105 | 80 | 120 | | | | |

| Sample ID: **N043100-005AMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012147** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 317.596 | 10 | 80.00 | 234.6 | 104 | 80 | 120 | 318.5 | 0.292 | 20 | |

| Sample ID: **N043100-004ADUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **148871** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148871** | TestNo: **EPA 300.0** | | Analysis Date: **11/19/2020** | SeqNo: **4012148** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 301.168 | 10 | | | | | | 303.1 | 0.645 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043099-004AMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **148871**
Client ID: **ZZZZZZ** Batch ID: **R148871** TestNo: **EPA 300.0** Analysis Date: **11/19/2020** SeqNo: **4012152**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1234.130 | 50 | 400.0 | 812.0 | 106 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-921-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:48:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201120A** | QC Batch: **R148869** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.28 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:10:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201120A** | QC Batch: **R148869** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.25 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 01:22 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:21:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | **SM4500-NO3F** | | | |
| RunID: **NV00922-WC_201120A** QC Batch: **R148869** PrepDate: Analyst: **JBB** | | | | | | | |
| Nitrate/Nitrite as N | 0.26 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 01:23 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:15:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201120A** | QC Batch: **R148869** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.24 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 01:25 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:27:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201120A** | QC Batch: **R148869** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.30 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 01:13 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:41:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201120G** | QC Batch: **R148906** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.27 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 06:26 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:58:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201120G** | QC Batch: **R148906** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.28 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 06:19 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-28-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:45:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | **SM4500-NO3F** | | | |
| RunID: **NV00922-WC_201120G** QC Batch: **R148906** PrepDate: Analyst: **JBB** | | | | | | | |
| Nitrate/Nitrite as N | 0.28 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 06:28 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R63-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | **SM4500-NO3F** | | | |
| RunID: **NV00922-WC_201120G** QC Batch: **R148906** PrepDate: Analyst: **JBB** | | | | | | | |
| Nitrate/Nitrite as N | 0.28 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 06:29 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-BNS-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:38:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201120G** | QC Batch: **R148906** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.27 | 0.032 | 0.050 | | mg/L | 1 | 11/20/2020 06:31 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:19:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | | | | |
| | | | **SM4500-NO3F** | | | | |
| RunID: **NV00922-WC_201123A** | QC Batch: **R148920** | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.33 | 0.032 | 0.050 | | mg/L | 1 | 11/23/2020 04:07 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:30:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | **SM4500-NO3F** | | | |
| RunID: **NV00922-WC_201123A** QC Batch: **R148920** | | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.44 | 0.032 | 0.050 | | mg/L | 1 | 11/23/2020 04:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-923-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:55:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **NITRATE/NITRITE-N BY CADMIUM REDUCTION** | | | | **SM4500-NO3F** | | | |
| RunID: **NV00922-WC_201123A** QC Batch: **R148920** | | | | PrepDate: | | | Analyst: **JBB** |
| Nitrate/Nitrite as N | 0.30 | 0.032 | 0.050 | | mg/L | 1 | 11/23/2020 04:09 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

| Sample ID: **MB-R148869** | SampType: **MBLK** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **148869** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148869** | TestNo: **SM4500-NO3** | | Analysis Date: **11/20/2020** | SeqNo: **4012016** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

| Sample ID: **LCS-R148869** | SampType: **LCS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **148869** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148869** | TestNo: **SM4500-NO3** | | Analysis Date: **11/20/2020** | SeqNo: **4012017** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.450 | 0.050 | 0.5000 | 0 | 90.1 | 85 | 115 | | | | |

| Sample ID: **N043097-005EDUP** | SampType: **DUP** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **148869** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148869** | TestNo: **SM4500-NO3** | | Analysis Date: **11/20/2020** | SeqNo: **4012019** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.309 | 0.050 | | | | | | 0.3007 | 2.79 | 20 | |

| Sample ID: **N043097-005EMS** | SampType: **MS** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **148869** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148869** | TestNo: **SM4500-NO3** | | Analysis Date: **11/20/2020** | SeqNo: **4012020** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.753 | 0.050 | 0.5000 | 0.3007 | 90.4 | 75 | 125 | | | | |

| Sample ID: **N043097-005EMSD** | SampType: **MSD** | TestCode: **4500N03F_W** | Units: **mg/L** | Prep Date: | RunNo: **148869** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148869** | TestNo: **SM4500-NO3** | | Analysis Date: **11/20/2020** | SeqNo: **4012021** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.800 | 0.050 | 0.5000 | 0.3007 | 99.9 | 75 | 125 | 0.7526 | 6.16 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

Sample ID: **MB-R148906** SampType: **MBLK** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148906**
Client ID: **PBW** Batch ID: **R148906** TestNo: **SM4500-NO3** Analysis Date: **11/20/2020** SeqNo: **4013868**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

Sample ID: **LCS-R148906** SampType: **LCS** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148906**
Client ID: **LCSW** Batch ID: **R148906** TestNo: **SM4500-NO3** Analysis Date: **11/20/2020** SeqNo: **4013869**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.450 | 0.050 | 0.5000 | 0 | 90.0 | 85 | 115 | | | | |

Sample ID: **N043097-008EDUP** SampType: **DUP** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148906**
Client ID: **ZZZZZZ** Batch ID: **R148906** TestNo: **SM4500-NO3** Analysis Date: **11/20/2020** SeqNo: **4013871**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.281 | 0.050 | | | | | | 0.2816 | 0.284 | 20 | |

Sample ID: **N043097-008EMS** SampType: **MS** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148906**
Client ID: **ZZZZZZ** Batch ID: **R148906** TestNo: **SM4500-NO3** Analysis Date: **11/20/2020** SeqNo: **4013872**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.808 | 0.050 | 0.5000 | 0.2816 | 105 | 75 | 125 | | | | |

Sample ID: **N043097-008EMSD** SampType: **MSD** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148906**
Client ID: **ZZZZZZ** Batch ID: **R148906** TestNo: **SM4500-NO3** Analysis Date: **11/20/2020** SeqNo: **4013873**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.811 | 0.050 | 0.5000 | 0.2816 | 106 | 75 | 125 | 0.8076 | 0.445 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 4500N03F_W_PGE**

Sample ID: **MB-R148920** SampType: **MBLK** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148920**
Client ID: **PBW** Batch ID: **R148920** TestNo: **SM4500-NO3** Analysis Date: **11/23/2020** SeqNo: **4014255**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | ND | 0.050 | | | | | | | | | |

Sample ID: **LCS-R148920** SampType: **LCS** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148920**
Client ID: **LCSW** Batch ID: **R148920** TestNo: **SM4500-NO3** Analysis Date: **11/23/2020** SeqNo: **4014256**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.474 | 0.050 | 0.5000 | 0 | 94.9 | 85 | 115 | | | | |

Sample ID: **N043097-014EDUP** SampType: **DUP** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148920**
Client ID: **ZZZZZZ** Batch ID: **R148920** TestNo: **SM4500-NO3** Analysis Date: **11/23/2020** SeqNo: **4014258**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 0.518 | 0.050 | | | | | | 0.4422 | 15.8 | 20 | |

Sample ID: **N043097-014EMS** SampType: **MS** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148920**
Client ID: **ZZZZZZ** Batch ID: **R148920** TestNo: **SM4500-NO3** Analysis Date: **11/23/2020** SeqNo: **4014259**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.015 | 0.050 | 0.5000 | 0.4422 | 114 | 75 | 125 | | | | |

Sample ID: **N043097-014EMSD** SampType: **MSD** TestCode: **4500N03F_W** Units: **mg/L** Prep Date: RunNo: **148920**
Client ID: **ZZZZZZ** Batch ID: **R148920** TestNo: **SM4500-NO3** Analysis Date: **11/23/2020** SeqNo: **4014260**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Nitrate/Nitrite as N | 1.094 | 0.050 | 0.5000 | 0.4422 | 130 | 75 | 125 | 1.014 | 7.58 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-001

**Client Sample ID:** MW-921-Q420
**Collection Date:** 11/18/2020 9:48:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 12:26 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 36 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:02 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-002

**Client Sample ID:** C-R22A-D-Q420
**Collection Date:** 11/18/2020 9:10:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 12:30 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 25 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-003

**Client Sample ID:** C-R22A-S-Q420
**Collection Date:** 11/18/2020 9:21:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | | **11/19/2020** | Analyst: **DJ** |
| Iron | 27 | 18 | 20 | | ug/L | 1 | 11/25/2020 12:34 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | | **11/19/2020** | Analyst: **DJ** |
| Iron | 60 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:34 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-004

**Client Sample ID:** C-R27-D-Q420
**Collection Date:** 11/18/2020 10:15:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 12:45 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 32 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:38 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-005

**Client Sample ID:** C-R27-S-Q420
**Collection Date:** 11/18/2020 10:27:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 12:08 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 38 | 18 | 20 | | ug/L | 1 | 11/25/2020 01:43 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:41:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 12:49 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 42 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:42 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-008

**Client Sample ID:** C-TAZ-S-Q420
**Collection Date:** 11/18/2020 7:58:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 12:52 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 37 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-010

**Client Sample ID:** R-28-Q420
**Collection Date:** 11/18/2020 10:45:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201202A** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Boron | ND | 74 | 100 | | ug/L | 1 | 12/2/2020 10:33 AM |
| Calcium | 58000 | 85 | 500 | | ug/L | 1 | 11/25/2020 12:56 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 12:56 PM |
| Magnesium | 25000 | 48 | 100 | | ug/L | 1 | 11/25/2020 12:56 PM |
| Potassium | 4700 | 85 | 500 | | ug/L | 1 | 12/2/2020 01:10 PM |
| Sodium | 86000 | 480 | 2500 | | ug/L | 5 | 12/2/2020 01:15 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 40 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-011

**Client Sample ID:** R63-Q420
**Collection Date:** 11/18/2020 8:51:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 01:00 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 67 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:53 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-012

**Client Sample ID:** C-BNS-Q420
**Collection Date:** 11/18/2020 9:38:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 01:03 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 50 | 18 | 20 | | ug/L | 1 | 11/25/2020 02:57 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-013

**Client Sample ID:** C-I-3-D-Q420
**Collection Date:** 11/18/2020 8:19:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 01:07 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 90 | 18 | 20 | | ug/L | 1 | 11/25/2020 03:00 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-014

**Client Sample ID:** C-I-3-S-Q420
**Collection Date:** 11/18/2020 8:30:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 01:11 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 44 | 18 | 20 | | ug/L | 1 | 11/25/2020 03:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-015

**Client Sample ID:** MW-923-Q420
**Collection Date:** 11/18/2020 10:55:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201202A** | QC Batch: **83088** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Boron | 130 | 74 | 100 | | ug/L | 1 | 12/2/2020 11:18 AM |
| Calcium | 59000 | 85 | 500 | | ug/L | 1 | 11/25/2020 01:15 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 01:15 PM |
| Magnesium | 25000 | 48 | 100 | | ug/L | 1 | 11/25/2020 01:15 PM |
| Potassium | 4700 | 85 | 500 | | ug/L | 1 | 12/2/2020 12:49 PM |
| Sodium | 86000 | 480 | 2500 | | ug/L | 5 | 12/2/2020 12:53 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83085** | | | PrepDate: | **11/19/2020** | | Analyst: **DJ** |
| Iron | 45 | 18 | 20 | | ug/L | 1 | 11/25/2020 03:08 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS-83088** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **148982** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017333** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 10309.708 | 500 | 10000 | 0 | 103 | 85 | 115 | | | | |
| Iron | 107.314 | 20 | 100.0 | 0 | 107 | 85 | 115 | | | | |
| Magnesium | 10363.705 | 100 | 10000 | 0 | 104 | 85 | 115 | | | | |

| Sample ID: **N043097-005BMS** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **148982** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017337** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 63884.835 | 500 | 10000 | 58910 | 49.7 | 75 | 125 | | | | S |
| Iron | 116.911 | 20 | 100.0 | 0 | 117 | 75 | 125 | | | | |
| Magnesium | 34253.668 | 100 | 10000 | 26250 | 80.0 | 75 | 125 | | | | |

| Sample ID: **N043097-005BMSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **148982** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017338** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 64371.174 | 500 | 10000 | 58910 | 54.6 | 75 | 125 | 63880 | 0.758 | 20 | S |
| Iron | 99.192 | 20 | 100.0 | 0 | 99.2 | 75 | 125 | 116.9 | 16.4 | 20 | |
| Magnesium | 34585.413 | 100 | 10000 | 26250 | 83.4 | 75 | 125 | 34250 | 0.964 | 20 | |

| Sample ID: **MB-83088** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **148982** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017357** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS-83088** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149067** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020665** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5118.617 | 100 | 5000 | 0 | 102 | 85 | 115 | | | | |

| Sample ID: **N043097-005BMS** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149067** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020669** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5545.912 | 100 | 5000 | 0 | 111 | 75 | 125 | | | | |

| Sample ID: **N043097-005BMSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149067** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020670** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5627.261 | 100 | 5000 | 0 | 113 | 75 | 125 | 5546 | 1.46 | 20 | |

| Sample ID: **MB-83088** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149067** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020681** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

| Sample ID: **MB-83088** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149069** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020751** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | ND | 500 | | | | | | | | | |
| Sodium | ND | 500 | | | | | | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS2-83088** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149069** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020752** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 21117.916 | 500 | 20000 | 0 | 106 | 85 | 115 | | | | |
| Sodium | 20686.871 | 500 | 20000 | 0 | 103 | 85 | 115 | | | | |

| Sample ID: **N043097-015B-MS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149069** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020756** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 25174.171 | 500 | 20000 | 4736 | 102 | 75 | 125 | | | | |

| Sample ID: **N043097-015B-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149069** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020757** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 25196.408 | 500 | 20000 | 4736 | 102 | 75 | 125 | | | | |

| Sample ID: **N043097-015B-MS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149069** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020764** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 104460.422 | 2500 | 20000 | 85960 | 92.5 | 75 | 125 | | | | |

| Sample ID: **N043097-015B-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **149069** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020765** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 99070.546 | 2500 | 20000 | 85960 | 65.6 | 75 | 125 | 104500 | 5.30 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WPGEPPB**

| Sample ID: **MB-83085** | SampType: **MBLK** | TestCode: **6010_WPGEP** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **148983** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83085** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017462** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | 20 | | | | | | | | | |

| Sample ID: **LCS-83085** | SampType: **LCS** | TestCode: **6010_WPGEP** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **148983** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83085** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017464** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 96.006 | 20 | 100.0 | 0 | 96.0 | 85 | 115 | | | | |

| Sample ID: **N043097-005CMS** | SampType: **MS** | TestCode: **6010_WPGEP** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **148983** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83085** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017468** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 129.613 | 20 | 100.0 | 37.99 | 91.6 | 75 | 125 | | | | |

| Sample ID: **N043097-005CMSD** | SampType: **MSD** | TestCode: **6010_WPGEP** | Units: **ug/L** | Prep Date: **11/19/2020** | RunNo: **148983** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83085** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017469** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 133.955 | 20 | 100.0 | 37.99 | 96.0 | 75 | 125 | 129.6 | 3.29 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043097-005B-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **148982** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017336** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 64324.574 | 500 | 10000 | 58910 | 54.1 | 80 | 120 | | | | S |
| Iron | 111.327 | 20 | 100.0 | 0 | 111 | 80 | 120 | | | | |
| Magnesium | 34660.367 | 100 | 10000 | 26250 | 84.1 | 80 | 120 | | | | |

| Sample ID: **N043097-005B-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149067** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020668** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5464.411 | 100 | 5000 | 0 | 109 | 80 | 120 | | | | |

| Sample ID: **N043097-015B-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149069** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020755** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 24615.583 | 500 | 20000 | 4736 | 99.4 | 80 | 120 | | | | |

| Sample ID: **N043097-015B-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149069** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83088** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/2/2020** | SeqNo: **4020763** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 99453.022 | 2500 | 20000 | 85960 | 67.5 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WPGEPPB**

| Sample ID: **N043097-005C-PS** | SampType: **PS** | TestCode: **6010_WPGEP** | Units: **ug/L** | Prep Date: | RunNo: **148983** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83085** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **11/25/2020** | SeqNo: **4017467** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 131.372 | 20 | 100.0 | 37.99 | 93.4 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-001

**Client Sample ID:** MW-921-Q420
**Collection Date:** 11/18/2020 9:48:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 05:40 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 05:40 PM |
| Manganese | 1.0 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 05:40 PM |
| Molybdenum | 4.4 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 05:40 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 05:40 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:10:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 05:46 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 05:46 PM |
| Manganese | 1.8 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 05:46 PM |
| Molybdenum | 4.3 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 05:46 PM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 05:46 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R22A-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:21:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-003 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201119A** QC Batch: **83081** PrepDate: **11/19/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 05:51 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 05:51 PM |
| Manganese | 1.6 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 05:51 PM |
| Molybdenum | 4.4 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 05:51 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 05:51 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-R27-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:15:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 05:57 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 05:57 PM |
| Manganese | 1.0 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 05:57 PM |
| Molybdenum | 4.4 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 05:57 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 05:57 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-005

**Client Sample ID:** C-R27-S-Q420
**Collection Date:** 11/18/2020 10:27:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | PrepDate: | | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.5 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 06:03 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 06:03 PM |
| Manganese | 0.93 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 06:03 PM |
| Molybdenum | 4.4 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 06:03 PM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 06:03 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-TAZ-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 7:41:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-006 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201119A** QC Batch: **83081** PrepDate: **11/19/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 06:49 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 06:49 PM |
| Manganese | 1.3 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 06:49 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 06:49 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 06:49 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-008

**Client Sample ID:** C-TAZ-S-Q420
**Collection Date:** 11/18/2020 7:58:00 AM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201119A** QC Batch: **83081** PrepDate: **11/19/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 06:55 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 06:55 PM |
| Manganese | 1.3 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 06:55 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 06:55 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 06:55 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-010

**Client Sample ID:** R-28-Q420
**Collection Date:** 11/18/2020 10:45:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | PrepDate: | | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.5 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 07:01 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 07:01 PM |
| Manganese | 1.5 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 07:01 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 07:01 PM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 07:01 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801
**Lab ID:** N043097-011

**Client Sample ID:** R63-Q420
**Collection Date:** 11/18/2020 8:51:00 AM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201119A** QC Batch: **83081** PrepDate: **11/19/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 07:07 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 07:07 PM |
| Manganese | 2.4 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 07:07 PM |
| Molybdenum | 4.6 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 07:07 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 07:07 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-BNS-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 9:38:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 07:13 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 07:13 PM |
| Manganese | 0.79 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 07:13 PM |
| Molybdenum | 4.4 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 07:13 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 07:13 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-D-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:19:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 07:18 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 07:18 PM |
| Manganese | 1.3 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 07:18 PM |
| Molybdenum | 4.6 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 07:18 PM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 07:18 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-I-3-S-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 8:30:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.5 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 07:36 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 07:36 PM |
| Manganese | 1.0 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 07:36 PM |
| Molybdenum | 4.6 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 07:36 PM |
| Selenium | 1.7 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 07:36 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-923-Q420 |
| **Lab Order:** | N043097 | **Collection Date:** | 11/18/2020 10:55:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.0801 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043097-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201119A** | QC Batch: **83081** | | | | PrepDate: | **11/19/2020** | Analyst: **CEI** |
| Arsenic | 2.5 | 0.081 | 0.10 | | µg/L | 1 | 11/19/2020 07:42 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/19/2020 07:42 PM |
| Manganese | 1.3 | 0.26 | 0.50 | | µg/L | 1 | 11/19/2020 07:42 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/19/2020 07:42 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/19/2020 07:42 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83081** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/19/2020** RunNo: **148933**
Client ID: **PBW** Batch ID: **83081** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/19/2020** SeqNo: **4014885**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-83081** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/19/2020** RunNo: **148933**
Client ID: **LCSW** Batch ID: **83081** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/19/2020** SeqNo: **4014886**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.107 | 0.10 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Barium | 10.064 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Manganese | 95.983 | 0.50 | 100.0 | 0 | 96.0 | 85 | 115 | | | | |
| Molybdenum | 9.534 | 0.50 | 10.00 | 0 | 95.3 | 85 | 115 | | | | |
| Selenium | 10.039 | 0.50 | 10.00 | 0 | 100 | 85 | 115 | | | | |

Sample ID: **N043097-005BMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/19/2020** RunNo: **148933**
Client ID: **ZZZZZZ** Batch ID: **83081** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/19/2020** SeqNo: **4014896**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12.282 | 0.10 | 10.00 | 2.546 | 97.4 | 75 | 125 | | | | |
| Barium | 114.325 | 1.0 | 10.00 | 110.5 | 38.1 | 75 | 125 | | | | S |
| Manganese | 93.736 | 0.50 | 100.0 | 0.9254 | 92.8 | 75 | 125 | | | | |
| Molybdenum | 14.533 | 0.50 | 10.00 | 4.444 | 101 | 75 | 125 | | | | |
| Selenium | 11.378 | 0.50 | 10.00 | 1.573 | 98.0 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043097-005BMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **11/19/2020** RunNo: **148933**
Client ID: **ZZZZZZ** Batch ID: **83081** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/19/2020** SeqNo: **4014897**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12.626 | 0.10 | 10.00 | 2.546 | 101 | 75 | 125 | 12.28 | 2.76 | 20 | |
| Barium | 114.652 | 1.0 | 10.00 | 110.5 | 41.4 | 75 | 125 | 114.3 | 0.286 | 20 | S |
| Manganese | 93.143 | 0.50 | 100.0 | 0.9254 | 92.2 | 75 | 125 | 93.74 | 0.634 | 20 | |
| Molybdenum | 14.696 | 0.50 | 10.00 | 4.444 | 103 | 75 | 125 | 14.53 | 1.12 | 20 | |
| Selenium | 11.088 | 0.50 | 10.00 | 1.573 | 95.2 | 75 | 125 | 11.38 | 2.57 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043097
**Project:** PG&E Topock - RMP, RC000753.0801

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043097-005B-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **148933**
Client ID: **ZZZZZZ** Batch ID: **83081** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **11/19/2020** SeqNo: **4014895**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12.689 | 0.10 | 10.00 | 2.546 | 101 | 80 | 120 | | | | |
| Barium | 122.540 | 1.0 | 10.00 | 110.5 | 120 | 80 | 120 | | | | S |
| Manganese | 93.988 | 0.50 | 100.0 | 0.9254 | 93.1 | 80 | 120 | | | | |
| Molybdenum | 14.648 | 0.50 | 10.00 | 4.444 | 102 | 80 | 120 | | | | |
| Selenium | 11.505 | 0.50 | 10.00 | 1.573 | 99.3 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD

Page 1 of 1


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓; Specify: RWQCB; Global ID: |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State: |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Sample Receipt Condition: Y / N — 1. Chilled; 2. Headspace; 3. Container Intact; 4. Seal Present; 5. IR number; 6. Method of Cooling: |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# | Sample Temp: |
| Submitted By: | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | |
| Title: | | | |
| Signature: Date: | Sampled By: | Matrix: Ground x Sediment; Potable Soil; NPDES Other Solid; Surface | Courier: |
| *I hereby authorize ASSET Labs to perform the tests indicated below* | *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for* | | Tracking No.: |
| Project Name: PG&E Topock - RMP | Signature: Date: | | |
| Project Number: RC000753.0801 | | | |

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH — 3x250 mL poly | Field QC Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 Cr — 3x500mL poly | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 Ca, Mg, K, Na, B — 3x500mL poly | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 As, Mn, Fe, Se, Mo, Ba — 3x500mL poly | Total metals (SW6010B); HNO3 Fe — 500 mL poly | Anions (E300.0); Br, Cl, SO4 — 1 liter poly | Specific Conductance (E120.1) — 1 liter poly | pH (SM4500HB) — 1 liter poly | TDS (SM2540C) — 1 liter poly | Alkalinity (Total, reported as CaCO3) (SM2320B) — 1 liter poly | TSS (SM2540) — 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrogen; H2SO4 — 125 mL poly | Oxygen and deuterium stable isotopes (CFIRM) — 1 250 mL poly | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043097-01 | MW-921-Q420 | 11/18/2020 | 9:48 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| 2 | -02 | C-R22A-D-Q420 | 11/18/2020 | 9:10 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| 3 | -03 | C-R22A-S-Q420 | 11/18/2020 | 9:21 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| 4 | -04 | C-R27-D-Q420 | 11/18/2020 | 10:15 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| 5 | -05 | C-R27-S-Q420 | 11/18/2020 | 10:27 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| | -06 | C-TAZ-D-Q420 | 11/18/2020 | 7:41 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| 7 | -07 | AmbientBlank-1-Q420 | 11/18/2020 | 8:00 | | | X | | | | | | | | | | | | | E | 1 | P | BNS | Hold |
| 8 | -08 | C-TAZ-S-Q420 | 11/18/2020 | 7:58 | | X | | X | | X | X | | X | X | | | X | X | | E | 8 | P | BNS | |
| 9 | -09 | AmbientBlank-2-Q420 | 11/18/2020 | 11:00 | | | X | | | | | | | | | | | | | E | 1 | P | BNS | Hold |
| 10 | -10 | R-28-Q420 | 11/18/2020 | 10:45 | | X | | X | X | X | X | X | X | X | X | X | X | X | X | E | 7 | P | BNS | |
| 11 | -11 | R63-Q420 | 11/18/2020 | 8:51 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| 12 | -12 | C-BNS-Q420 | 11/18/2020 | 9:38 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| 13 | -13 | C-I-3-D-Q420 | 11/18/2020 | 8:19 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |
| 14 | -14 | C-I-3-S-Q420 | 11/18/2020 | 8:30 | | X | | X | | X | X | | X | X | | | X | X | | E | 7 | P | BNS | |

Reliquished by (Signature and Printed Name): Date/Time:

Reliquished by (Signature and Printed Name): Date/Time:

Reliquished by (Signature and Printed Name): Date/Time:

Reliquished by (Signature and Printed Name): Date/Time:

Reliquished by (Signature and Printed Name): Date/Time:

Reliquished by (Signature and Printed Name): Date/Time:

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD


Contact us:
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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com




| | | |
|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# |
| Submitted By: | | Phone: 949-727-1400, ext 200 Fax: |
| Title: | Phone: 916-786-3302 Fax: | |
| Signature: Date: | Sampled By: | |
| *I hereby authorize ASSET Labs to perform the tests indicated below.* | *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for* | |
| Project Name: PG&E Topock - RMP | Signature: Date: | |
| Project Number: RC000753.0801 | | |

| EDD Requirement | | QA/QC | |
|---|---|---|---|
| Excel EDD | | RTNE | |
| Geotracker | | RWQCB | ✓ |
| Labspec | | CalTrans | |
| Others | ✓ | LEVEL III | |
| Specify: RWQCB | | LEVEL IV | |
| Global ID: | | Regulatory | |
| | | Specify State: | |

| Sample Receipt Condition | Y | N |
|---|---|---|
| 1. Chilled | | |
| 2. Headspace | | |
| 3. Container Intact | | |
| 4. Seal Present | | |
| 5. IR number | | |
| 6. Method of Cooling: | | |
| Sample Temp: | | |

Courier:

Tracking No.:

| Matrix | | | |
|---|---|---|---|
| Ground | x | Sediment | |
| Potable | | Soil | |
| NPDES | | Other Solid | |
| Surface | | | |

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (3x250 mL poly) | Field QC Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH (250 ml Poly) | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 Cr (3x500mL poly) | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 Ca, Mg, K, Na, B (3x500mL poly) | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 As, Mn, Fe, Se, Mo, Ba (3x500mL poly) | Total metals (SW6010B); HNO3 Fe (500 mL poly) | Anions (E300.0); Br, Cl, SO4 (1 liter poly) | Specific Conductance (E120.1) (1 liter poly) | pH (SM4500HB) (1 liter poly) | TDS (SM2540C) (1 liter poly) | Alkalinity (Total, reported as CaCO3) (SM2320B) (1 liter poly) | TSS (SM2540) (1 liter poly) | Nitrate/Nitrite (SM4500N03) Nitrogen, H2SO4 (125 mL poly) | Oxygen and deuterium stable isotopes (CFIRM) (1 250 mL poly) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | N043097-15 | MW-923-Q420 | 11/18/2020 | 10:55 | | X | | X | X | X | X | X | X | X | X | X | X | X | E | 8 | P | BNS |
| | -16 | SW1-Q420 | 11/18/2020 | 12:30 | | X | | X | | | | | X | X | | | | | E | 5 | P | BNS |
| | -17 | SW2-Q420 | 11/18/2020 | 13:30 | | X | | X | | | | | X | X | | | | | E | 5 | P | BNS |

| Reliquished by (Signature and Printed Name): | Date/Time: | Reliquished by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Reliquished by (Signature and Printed Name): | Date/Time: | Reliquished by (Signature and Printed Name): | Date/Time: |
| Reliquished by (Signature and Printed Name): | Date/Time: | Reliquished by (Signature and Printed Name): | Date/Time: |

**Turn Around Time (TAT)**

| | | |
|---|---|---|
| | A | < 24 Hrs or Same Day TAT |
| | B | = Next Workday |
| | C | = 2 Workdays |
| | D | = 3 Workdays |
| X | E | = Routine 5-7 Workdays |

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

| **Preservatives:** | | | | **Container Type:** | | |
|---|---|---|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C | T=Tube | V=VOA | P=Pint |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | | J=Jar | B=Tedlar | G=Glass |
| Others/Specify: | B (NH4)2SO4/NH4OH | | | M=Metal | M=Metal | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 11/18/2020 | Workorder: | N043097 |
| Rep sample Temp (Deg C): | 3.1/3.9/2.6 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☐ | No ☑ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments: Samples for pH received past holding time.

For:

Checklist Completed By: YR BHdez 11/20/2020

Reviewed By: MBC 11/25/2020

**Subject:** RE: PG&E Topock - RMP, RC000753.0801 (ASSET Labs No. N043097)
**From:** "Madsen, Laura" <Laura.Madsen@arcadis.com>
**Date:** 11/25/2020, 11:47 AM
**To:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**CC:** "maryann.balilu@assetlaboratoriesph.com" <maryann.balilu@assetlaboratoriesph.com>, "rustico.aquino@assetlaboratoriesph.com" <rustico.aquino@assetlaboratoriesph.com>

Yes, please run the MS/MSD

Thanks,
Laura

---

**From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**Sent:** Wednesday, November 25, 2020 1:04 PM
**To:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Cc:** maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com
**Subject:** PG&E Topock - RMP, RC000753.0801 (ASSET Labs No. N043097)

Hi Laura,

Please I'd like to confirm if we need to run MS/MSD on sample 5 as requested on the original COC, it was not marked on the revised one.

--
**Thanks,**

**Yoandra Rodriguez**
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

ASSET LABORATORIES - Serving Clients with Passion and Professionalism

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# ASSET Laboratories

## WORK ORDER Summary

*19-Nov-20*

**WorkOrder:** N043097

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-001A | MW-921-Q420 | 11/18/2020 9:48:00 AM | 12/4/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-001B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-001C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-001D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-001E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-002A | C-R22A-D-Q420 | 11/18/2020 9:10:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-002B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-002C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-002D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |

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*19-Nov-20*

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**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-002D | C-R22A-D-Q420 | 11/18/2020 9:10:00 AM | 12/4/2020 | Groundwater | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-002E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-003A | C-R22A-S-Q420 | 11/18/2020 9:21:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-003B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-003C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-003D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-003E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-004A | C-R27-D-Q420 | 11/18/2020 10:15:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-004B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |

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## WORK ORDER Summary

*19-Nov-20*

**WorkOrder:** N043097

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-004B | C-R27-D-Q420 | 11/18/2020 10:15:00 AM | 12/4/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-004C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-004D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-004E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-005A | C-R27-S-Q420 | 11/18/2020 10:27:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043097-005B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043097-005C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☑ | ☐ | WW |
| N043097-005D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☑ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☑ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☑ | ☐ | lsr |

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## WORK ORDER Summary

*19-Nov-20*

**WorkOrder:** N043097

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-005E | C-R27-S-Q420 | 11/18/2020 10:27:00 AM | 12/4/2020 | Groundwater | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☐ | WW |
| N043097-006A | C-TAZ-D-Q420 | 11/18/2020 7:41:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-006B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-006C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-006D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-006E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-007A | AmbientBlank-1-Q420 | 11/18/2020 8:00:00 AM | | | | | ☐ | ☐ | ☐ | WW |
| N043097-008A | C-TAZ-S-Q420 | 11/18/2020 7:58:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-008B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

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*19-Nov-20*

**WorkOrder:** N043097

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**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-008C | C-TAZ-S-Q420 | 11/18/2020 7:58:00 AM | 12/4/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-008D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-008E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-009A | AmbientBlank-2-420 | 11/18/2020 11:00:00 AM | | | | | ☐ | ☐ | ☐ | WW |
| N043097-010A | R-28-Q420 | 11/18/2020 10:45:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-010B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-010C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-010D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |

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*19-Nov-20*

**WorkOrder:** N043097

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-010D | R-28-Q420 | 11/18/2020 10:45:00 AM | 12/4/2020 | Groundwater | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | lsr |
| N043097-010E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-010F | | | 12/4/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043097-011A | R63-Q420 | 11/18/2020 8:51:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-011B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-011C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-011D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-011E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-012A | C-BNS-Q420 | 11/18/2020 9:38:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*19-Nov-20*

**WorkOrder:** N043097

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-012B | C-BNS-Q420 | 11/18/2020 9:38:00 AM | 12/4/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-012C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-012D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-012E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-013A | C-I-3-D-Q420 | 11/18/2020 8:19:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-013B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-013C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-013D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |

# ASSET Laboratories

## WORK ORDER Summary

*19-Nov-20*

**WorkOrder:** N043097

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-013D | C-I-3-D-Q420 | 11/18/2020 8:19:00 AM | 12/4/2020 | Groundwater | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-013E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-014A | C-I-3-S-Q420 | 11/18/2020 8:30:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-014B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-014C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-014D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| N043097-014E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-015A | MW-923-Q420 | 11/18/2020 10:55:00 AM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-015B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*19-Nov-20*

**WorkOrder:** N043097

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-015B | MW-923-Q420 | 11/18/2020 10:55:00 AM | 12/4/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-015C | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043097-015D | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | lsr |
| N043097-015E | | | 12/4/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043097-015F | | | 12/4/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043097-016A | SW1-Q420 | 11/18/2020 12:30:00 PM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043097-016B | | | 12/4/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-016C | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| N043097-017A | SW2-Q420 | 11/18/2020 1:30:00 PM | 12/4/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*19-Nov-20*

**WorkOrder:** N043097

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.0801 **QC Level:** Level IV **Date Received:** 11/18/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043097-017B | SW2-Q420 | 11/18/2020 1:30:00 PM | 12/4/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/4/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043097-017C | | | 12/4/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | lsr |
| | | | 12/4/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | lsr |
| N043097-018A | FOLDER | 12/4/2020 | 12/4/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/4/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/4/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/4/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

Zymax
220 William Pitt Way
Pittsburgh, PA 15238

TEL: (760) 781 3338
FAX: (805) 544-8226
Acct #:

Field Sampler: Reggie Tep

**19-Nov-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043097-010F / R-28-Q420 | Groundwater | 11/18/2020 10:45:00 AM | 8OZP | 1 | | |
| N043097-015F / MW-923-Q420 | Groundwater | 11/18/2020 10:55:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43097A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium Stable Isotopes by CFIRM. EDD requirement Labspec7 edata.

Fedex #: 772138044699

| | | Date/Time | | Date/Time |
|---|---|---|---|---|
| **Relinquished by:** | YRJ | 11/19/2020 1700 | **Received by:** | |
| **Relinquished by:** | | | **Received by:** | |

December 10, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043107

RE: PG&E Topock - RMP, RC000753.801D

Attention: Dan Bush

Enclosed are the results for sample(s) received on November 19, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time except for pH. pH testing is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

Sample N043107-013 (AmbientBlank-3-Q420) was not analyzed as per attached correspondence.

Subcontracted Analyses:

SM 4500NO3F was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 6010B_Dissolved:

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for Iron. Analyte recovery on both met acceptance criteria.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Barium in QC samples N043107-008BMS and N043107-008BMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab Order:** N043107
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043107-001A | C-CON-D-Q420 | Ground Water | 11/19/2020 8:40:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-001B | C-CON-D-Q420 | Ground Water | 11/19/2020 8:40:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-001C | C-CON-D-Q420 | Ground Water | 11/19/2020 8:40:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-001D | C-CON-D-Q420 | Ground Water | 11/19/2020 8:40:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-001E | C-CON-D-Q420 | Ground Water | 11/19/2020 8:40:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-002A | C-CON-S-Q420 | Ground Water | 11/19/2020 8:51:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-002B | C-CON-S-Q420 | Ground Water | 11/19/2020 8:51:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-002C | C-CON-S-Q420 | Ground Water | 11/19/2020 8:51:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-002D | C-CON-S-Q420 | Ground Water | 11/19/2020 8:51:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-002E | C-CON-S-Q420 | Ground Water | 11/19/2020 8:51:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-003A | C-NR4-S-Q420 | Ground Water | 11/19/2020 10:28:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-003B | C-NR4-S-Q420 | Ground Water | 11/19/2020 10:28:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-003C | C-NR4-S-Q420 | Ground Water | 11/19/2020 10:28:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-003D | C-NR4-S-Q420 | Ground Water | 11/19/2020 10:28:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-003E | C-NR4-S-Q420 | Ground Water | 11/19/2020 10:28:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-004A | C-NR1-D-Q420 | Ground Water | 11/19/2020 9:11:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-004B | C-NR1-D-Q420 | Ground Water | 11/19/2020 9:11:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-004C | C-NR1-D-Q420 | Ground Water | 11/19/2020 9:11:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-004D | C-NR1-D-Q420 | Ground Water | 11/19/2020 9:11:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-004E | C-NR1-D-Q420 | Ground Water | 11/19/2020 9:11:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-005A | C-NR1-S-Q420 | Ground Water | 11/19/2020 9:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-005B | C-NR1-S-Q420 | Ground Water | 11/19/2020 9:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-005C | C-NR1-S-Q420 | Ground Water | 11/19/2020 9:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-005D | C-NR1-S-Q420 | Ground Water | 11/19/2020 9:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-005E | C-NR1-S-Q420 | Ground Water | 11/19/2020 9:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-006A | C-NR3-D-Q420 | Ground Water | 11/19/2020 9:42:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-006B | C-NR3-D-Q420 | Ground Water | 11/19/2020 9:42:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-006C | C-NR3-D-Q420 | Ground Water | 11/19/2020 9:42:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-006D | C-NR3-D-Q420 | Ground Water | 11/19/2020 9:42:00 AM | 11/19/2020 | 12/10/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab Order:** N043107
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043107-006E | C-NR3-D-Q420 | Ground Water | 11/19/2020 9:42:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-007A | C-MAR-D-Q420 | Ground Water | 11/19/2020 7:32:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-007B | C-MAR-D-Q420 | Ground Water | 11/19/2020 7:32:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-007C | C-MAR-D-Q420 | Ground Water | 11/19/2020 7:32:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-007D | C-MAR-D-Q420 | Ground Water | 11/19/2020 7:32:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-007E | C-MAR-D-Q420 | Ground Water | 11/19/2020 7:32:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-008A | C-MAR-S-Q420 | Ground Water | 11/19/2020 7:44:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-008B | C-MAR-S-Q420 | Ground Water | 11/19/2020 7:44:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-008C | C-MAR-S-Q420 | Ground Water | 11/19/2020 7:44:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-008D | C-MAR-S-Q420 | Ground Water | 11/19/2020 7:44:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-008E | C-MAR-S-Q420 | Ground Water | 11/19/2020 7:44:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-009A | C-NR3-S-Q420 | Ground Water | 11/19/2020 9:54:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-009B | C-NR3-S-Q420 | Ground Water | 11/19/2020 9:54:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-009C | C-NR3-S-Q420 | Ground Water | 11/19/2020 9:54:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-009D | C-NR3-S-Q420 | Ground Water | 11/19/2020 9:54:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-009E | C-NR3-S-Q420 | Ground Water | 11/19/2020 9:54:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-010A | R-19-Q420 | Ground Water | 11/19/2020 8:01:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-010B | R-19-Q420 | Ground Water | 11/19/2020 8:01:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-010C | R-19-Q420 | Ground Water | 11/19/2020 8:01:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-010D | R-19-Q420 | Ground Water | 11/19/2020 8:01:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-010E | R-19-Q420 | Ground Water | 11/19/2020 8:01:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-011A | RRB-Q420 | Ground Water | 11/19/2020 8:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-011B | RRB-Q420 | Ground Water | 11/19/2020 8:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-011C | RRB-Q420 | Ground Water | 11/19/2020 8:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-011D | RRB-Q420 | Ground Water | 11/19/2020 8:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-011E | RRB-Q420 | Ground Water | 11/19/2020 8:22:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-012A | MW-922-Q420 | Ground Water | 11/19/2020 10:04:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-012B | MW-922-Q420 | Ground Water | 11/19/2020 10:04:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-012C | MW-922-Q420 | Ground Water | 11/19/2020 10:04:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-012D | MW-922-Q420 | Ground Water | 11/19/2020 10:04:00 AM | 11/19/2020 | 12/10/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab Order:** N043107
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043107-012E | MW-922-Q420 | Ground Water | 11/19/2020 10:04:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-013A | AmbientBlank-3-Q420 | Ground Water | 11/19/2020 10:40:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-014A | C-NR4-D-Q420 | Ground Water | 11/19/2020 10:17:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-014B | C-NR4-D-Q420 | Ground Water | 11/19/2020 10:17:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-014C | C-NR4-D-Q420 | Ground Water | 11/19/2020 10:17:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-014D | C-NR4-D-Q420 | Ground Water | 11/19/2020 10:17:00 AM | 11/19/2020 | 12/10/2020 |
| N043107-014E | C-NR4-D-Q420 | Ground Water | 11/19/2020 10:17:00 AM | 11/19/2020 | 12/10/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:40:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| **EPA 120.1** | | | | | | | |
| RunID: **NV00922-WC_201119I** QC Batch: **R148861** PrepDate: Analyst: **LR** | | | | | | | |
| Specific Conductance | 870 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 860 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:28:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 860 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:11:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 850 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 860 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:42:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 860 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:32:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 940 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:44:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 880 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:54:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 870 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-19-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:01:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 860 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | RRB-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 870 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-922-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:04:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 870 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:17:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201119I** | QC Batch: **R148861** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 890 | 0.10 | 0.10 | | umhos/cm | 1 | 11/19/2020 05:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

| Sample ID | N043107-005DDUP | SampType: | DUP | TestCode: | 120.1_WPGE | Units: | umhos/cm | Prep Date: | | RunNo: | 148861 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148861 | TestNo: | EPA 120.1 | | | Analysis Date: | 11/19/2020 | SeqNo: | 4011450 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 867.000 | 0.10 | | | | | | 863.0 | 0.462 | 2 | |

| Sample ID | N043107-014DDUP | SampType: | DUP | TestCode: | 120.1_WPGE | Units: | umhos/cm | Prep Date: | | RunNo: | 148861 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148861 | TestNo: | EPA 120.1 | | | Analysis Date: | 11/19/2020 | SeqNo: | 4011459 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 894.000 | 0.10 | | | | | | 889.0 | 0.561 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:40:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:28:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.2 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:11:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:42:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:32:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.2 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:44:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

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|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:54:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-19-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:01:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | RRB-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.1 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-922-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:04:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.4 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:17:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201119K** | QC Batch: **R148863** | | | PrepDate: | | | Analyst: **LR** |
| pH | 8.3 | 0.10 | 0.10 | H | pH Units | 1 | 11/19/2020 05:30 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 11/19/2020 05:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 150.1_4500H+B_W**

| Sample ID | **N043107-005DDUP** | SampType: | **DUP** | TestCode: | **150.1_4500H** | Units: | **pH Units** | Prep Date: | | RunNo: | **148863** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R148863** | TestNo: | **SM4500-H+B** | | | Analysis Date: | **11/19/2020** | SeqNo: | **4011568** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 8.370 | 0.10 | | | | | | 8.360 | 0.120 | 10 | H |
| Temp. at time of pH Analysis | 25.000 | 0.10 | | | | | | 25.00 | 0 | 10 | H |

| Sample ID | **N043107-014DDUP** | SampType: | **DUP** | TestCode: | **150.1_4500H** | Units: | **pH Units** | Prep Date: | | RunNo: | **148863** |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | **ZZZZZZ** | Batch ID: | **R148863** | TestNo: | **SM4500-H+B** | | | Analysis Date: | **11/19/2020** | SeqNo: | **4011577** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 8.290 | 0.10 | | | | | | 8.290 | 0 | 10 | H |
| Temp. at time of pH Analysis | 25.000 | 0.10 | | | | | | 25.00 | 0 | 10 | H |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:40:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:28:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:11:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:42:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:32:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | 14 | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:44:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:54:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-19-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:01:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120C** QC Batch: **83110** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | RRB-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120D** QC Batch: **83111** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | 6.5 | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-922-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:04:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120D** QC Batch: **83111** | | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:17:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL NON-FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540D** | | | | |
| RunID: **NV00922-WC_201120D** | QC Batch: **83111** | | | PrepDate: | **11/20/2020** | | Analyst: **LR** |
| Suspended Solids (Residue, Non-Filterable) | ND | 5.0 | 5.0 | | mg/L | 1 | 11/20/2020 10:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.2_2540D_W**

| Sample ID | LCS-83110 | SampType: | LCS | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/20/2020 | RunNo: | 148876 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83110 | TestNo: | SM2540D | | | Analysis Date: | 11/20/2020 | SeqNo: | 4012417 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | 964.000 | 10 | 1000 | 0 | 96.4 | 80 | 120 | | | | |

| Sample ID | MB-83110 | SampType: | MBLK | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/20/2020 | RunNo: | 148876 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83110 | TestNo: | SM2540D | | | Analysis Date: | 11/20/2020 | SeqNo: | 4012418 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 10 | | | | | | | | | |

| Sample ID | N043107-008DDUP | SampType: | DUP | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/20/2020 | RunNo: | 148876 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83110 | TestNo: | SM2540D | | | Analysis Date: | 11/20/2020 | SeqNo: | 4012427 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 5.0 | | | | | | 0 | 0 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.2_2540D_W**

| Sample ID | LCS-83111 | SampType: | LCS | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/20/2020 | RunNo: | 148877 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83111 | TestNo: | SM2540D | | | Analysis Date: | 11/20/2020 | SeqNo: | 4012430 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | 952.000 | 10 | 1000 | 0 | 95.2 | 80 | 120 | | | | |

| Sample ID | MB-83111 | SampType: | MBLK | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/20/2020 | RunNo: | 148877 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83111 | TestNo: | SM2540D | | | Analysis Date: | 11/20/2020 | SeqNo: | 4012431 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 10 | | | | | | | | | |

| Sample ID | N043097-015DDUP | SampType: | DUP | TestCode: | 160.2_2540D | Units: | mg/L | Prep Date: | 11/20/2020 | RunNo: | 148877 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83111 | TestNo: | SM2540D | | | Analysis Date: | 11/20/2020 | SeqNo: | 4012435 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Suspended Solids (Residue, Non-Filter | ND | 5.0 | | | | | | 0 | 0 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:40:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 11:36 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 03:42 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 11:55 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 03:48 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:28:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | **EPA 218.6** | | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 12:33 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 03:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:11:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** | QC Batch: **R148884** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 12:52 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 03:59 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 01:11 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 04:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:42:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 01:30 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 04:11 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:32:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** | QC Batch: **R148884** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 02:46 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 04:17 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:44:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 02:07 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 04:22 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:54:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 03:24 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 05:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | R-19-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:01:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** | QC Batch: **R148884** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 03:43 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 05:09 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | RRB-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 04:02 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 05:14 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-012

**Client Sample ID:** MW-922-Q420
**Collection Date:** 11/19/2020 10:04:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 04:40 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 05:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:17:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201120A** QC Batch: **R148884** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 11/20/2020 05:18 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 11/24/2020 05:26 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID **MB-R1488884** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148884** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R148884** | TestNo: **EPA 218.6** | | Analysis Date: **11/20/2020** | SeqNo: **4013080** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID **LCS-R148884** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148884** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R148884** | TestNo: **EPA 218.6** | | Analysis Date: **11/20/2020** | SeqNo: **4013081** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.896 | 0.20 | 5.000 | 0 | 97.9 | 90 | 110 | | | | |

| Sample ID **N043097-016AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148884** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148884** | TestNo: **EPA 218.6** | | Analysis Date: **11/20/2020** | SeqNo: **4013083** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.008 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

| Sample ID **N043097-017AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148884** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148884** | TestNo: **EPA 218.6** | | Analysis Date: **11/20/2020** | SeqNo: **4013085** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.023 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID **N043107-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **148884** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R148884** | TestNo: **EPA 218.6** | | Analysis Date: **11/20/2020** | SeqNo: **4013087** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.048 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N043107-002AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013089 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.044 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

| Sample ID | N043107-003AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013093 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.001 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

| Sample ID | N043107-004AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013095 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.046 | 0.20 | 1.000 | 0 | 105 | 90 | 110 | | | | |

| Sample ID | N043107-005AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013097 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.035 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

| Sample ID | N043107-006AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013099 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.056 | 0.20 | 1.000 | 0 | 106 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N043097-016ADUP | SampType: | DUP | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013101 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | 0 | 0 | 20 | |

| Sample ID | N043107-007AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013105 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.056 | 0.20 | 1.000 | 0 | 106 | 90 | 110 | | | | |

| Sample ID | N043107-008AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013106 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.021 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

| Sample ID | N043107-008AMSD | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013107 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | 1.021 | 1.16 | 0 | |

| Sample ID | N043107-009AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013109 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.028 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID | N043107-010AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013111 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.056 | 0.20 | 1.000 | 0 | 106 | 90 | 110 | | | | |

| Sample ID | N043107-011AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013113 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.998 | 0.20 | 1.000 | 0 | 99.8 | 90 | 110 | | | | |

| Sample ID | N043107-012AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013117 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.045 | 0.20 | 1.000 | 0 | 104 | 90 | 110 | | | | |

| Sample ID | N043107-014AMS | SampType: | MS | TestCode: | 218.6_WPGE | Units: | µg/L | Prep Date: | | RunNo: | 148884 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | R148884 | TestNo: | EPA 218.6 | | | Analysis Date: | 11/20/2020 | SeqNo: | 4013119 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.030 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID | MB-83121 | SampType: | MBLK | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 11/23/2020 | RunNo: | 148974 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83121 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/24/2020 | SeqNo: | 4017042 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID | LCS-83121 | SampType: | LCS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 11/23/2020 | RunNo: | 148974 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83121 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/24/2020 | SeqNo: | 4017043 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.784 | 1.0 | 10.00 | 0 | 97.8 | 85 | 115 | | | | |

| Sample ID | N043107-008BMS | SampType: | MS | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 11/23/2020 | RunNo: | 148974 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83121 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/24/2020 | SeqNo: | 4017056 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.717 | 1.0 | 10.00 | 0 | 97.2 | 75 | 125 | | | | |

| Sample ID | N043107-008BMSD | SampType: | MSD | TestCode: | 6020DIS_CrP | Units: | µg/L | Prep Date: | 11/23/2020 | RunNo: | 148974 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83121 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/24/2020 | SeqNo: | 4017057 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.599 | 1.0 | 10.00 | 0 | 96.0 | 75 | 125 | 9.717 | 1.22 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:40:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 03:46 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 26 | 18 | 20 | | ug/L | 1 | 11/25/2020 05:34 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 03:50 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 34 | 18 | 20 | | ug/L | 1 | 11/25/2020 05:38 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-003

**Client Sample ID:** C-NR4-S-Q420
**Collection Date:** 11/19/2020 10:28:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 03:53 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 05:41 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-004

**Client Sample ID:** C-NR1-D-Q420
**Collection Date:** 11/19/2020 9:11:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:05 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 34 | 18 | 20 | | ug/L | 1 | 11/25/2020 05:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:08 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 05:56 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:42:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:12 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 22 | 18 | 20 | | ug/L | 1 | 11/25/2020 06:00 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:32:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:16 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 350 | 18 | 20 | | ug/L | 1 | 11/25/2020 06:04 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:44:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 21 | 18 | 20 | | ug/L | 1 | 11/25/2020 03:27 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 110 | 18 | 20 | | ug/L | 1 | 11/25/2020 05:15 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:54:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:19 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 06:08 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-010

**Client Sample ID:** R-19-Q420
**Collection Date:** 11/19/2020 8:01:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:23 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 06:11 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | RRB-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:27 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| **EPA 3010A** | | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 41 | 18 | 20 | | ug/L | 1 | 11/25/2020 06:15 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-012

**Client Sample ID:** MW-922-Q420
**Collection Date:** 11/19/2020 10:04:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:31 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | 22 | 18 | 20 | | ug/L | 1 | 11/25/2020 06:19 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-014

**Client Sample ID:** C-NR4-D-Q420
**Collection Date:** 11/19/2020 10:17:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125C** | QC Batch: **83130** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 04:35 PM |
| **TOTAL METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201125D** | QC Batch: **83129** | | | PrepDate: | **11/23/2020** | | Analyst: **DJ** |
| Iron | ND | 18 | 20 | | ug/L | 1 | 11/25/2020 06:23 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID | MB-83130 | SampType: | MBLK | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/23/2020 | RunNo: | 148982 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83130 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/25/2020 | SeqNo: | 4017383 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | 20 | | | | | | | | | |

| Sample ID | LCS-83130 | SampType: | LCS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/23/2020 | RunNo: | 148982 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83130 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/25/2020 | SeqNo: | 4017384 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 107.421 | 20 | 100.0 | 0 | 107 | 85 | 115 | | | | |

| Sample ID | N043107-008BMS | SampType: | MS | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/23/2020 | RunNo: | 148982 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83130 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/25/2020 | SeqNo: | 4017388 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 126.046 | 20 | 100.0 | 21.26 | 105 | 75 | 125 | | | | |

| Sample ID | N043107-008BMSD | SampType: | MSD | TestCode: | 6010_WDPG | Units: | ug/L | Prep Date: | 11/23/2020 | RunNo: | 148982 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83130 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/25/2020 | SeqNo: | 4017389 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 98.878 | 20 | 100.0 | 21.26 | 77.6 | 75 | 125 | 126.0 | 24.2 | 20 | R |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WPGEPPB**

| Sample ID | MB-83129 | SampType: | MBLK | TestCode: | 6010_WPGE | Units: | ug/L | Prep Date: | 11/23/2020 | RunNo: | 148983 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | PBW | Batch ID: | 83129 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/25/2020 | SeqNo: | 4017510 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | ND | 20 | | | | | | | | | |

| Sample ID | LCS-83129 | SampType: | LCS | TestCode: | 6010_WPGE | Units: | ug/L | Prep Date: | 11/23/2020 | RunNo: | 148983 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | LCSW | Batch ID: | 83129 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/25/2020 | SeqNo: | 4017515 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 103.249 | 20 | 100.0 | 0 | 103 | 85 | 115 | | | | |

| Sample ID | N043107-008CMS | SampType: | MS | TestCode: | 6010_WPGE | Units: | ug/L | Prep Date: | 11/23/2020 | RunNo: | 148983 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83129 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/25/2020 | SeqNo: | 4017519 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 206.417 | 20 | 100.0 | 107.9 | 98.5 | 75 | 125 | | | | |

| Sample ID | N043107-008CMSD | SampType: | MSD | TestCode: | 6010_WPGE | Units: | ug/L | Prep Date: | 11/23/2020 | RunNo: | 148983 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83129 | TestNo: | EPA 6010B | EPA 3010A | | Analysis Date: | 11/25/2020 | SeqNo: | 4017520 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 212.753 | 20 | 100.0 | 107.9 | 105 | 75 | 125 | 206.4 | 3.02 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-001

**Client Sample ID:** C-CON-D-Q420
**Collection Date:** 11/19/2020 8:40:00 AM
**Matrix:** GROUND WATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201124C** QC Batch: **83121** PrepDate: **11/23/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 03:42 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 03:42 PM |
| Manganese | 0.96 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 03:42 PM |
| Molybdenum | 4.7 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 03:42 PM |
| Selenium | 1.7 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 03:42 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-CON-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:51:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 03:48 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 03:48 PM |
| Manganese | 1.1 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 03:48 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 03:48 PM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 03:48 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-003

**Client Sample ID:** C-NR4-S-Q420
**Collection Date:** 11/19/2020 10:28:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | PrepDate: | | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 03:53 PM |
| Barium | 120 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 03:53 PM |
| Manganese | 0.62 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 03:53 PM |
| Molybdenum | 4.7 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 03:53 PM |
| Selenium | 1.7 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 03:53 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR1-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:11:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 03:59 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 03:59 PM |
| Manganese | 0.96 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 03:59 PM |
| Molybdenum | 4.6 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 03:59 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 03:59 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-005

**Client Sample ID:** C-NR1-S-Q420
**Collection Date:** 11/19/2020 9:22:00 AM
**Matrix:** GROUND WATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201124C** QC Batch: **83121** PrepDate: **11/23/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 04:05 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 04:05 PM |
| Manganese | 0.98 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 04:05 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 04:05 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 04:05 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:42:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 04:11 PM |
| Barium | 100 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 04:11 PM |
| Manganese | 0.70 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 04:11 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 04:11 PM |
| Selenium | 1.4 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 04:11 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-MAR-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 7:32:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 04:17 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 04:17 PM |
| Manganese | 9.9 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 04:17 PM |
| Molybdenum | 4.8 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 04:17 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 04:17 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-008

**Client Sample ID:** C-MAR-S-Q420
**Collection Date:** 11/19/2020 7:44:00 AM
**Matrix:** GROUND WATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201124C** QC Batch: **83121** PrepDate: **11/23/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 04:22 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 04:22 PM |
| Manganese | 3.4 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 04:22 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 04:22 PM |
| Selenium | 1.4 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 04:22 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR3-S-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 9:54:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 05:03 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 05:03 PM |
| Manganese | 0.68 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 05:03 PM |
| Molybdenum | 4.6 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 05:03 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 05:03 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-010

**Client Sample ID:** R-19-Q420
**Collection Date:** 11/19/2020 8:01:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 05:09 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 05:09 PM |
| Manganese | 1.6 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 05:09 PM |
| Molybdenum | 4.7 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 05:09 PM |
| Selenium | 1.4 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 05:09 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | RRB-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 8:22:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 05:14 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 05:14 PM |
| Manganese | 5.2 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 05:14 PM |
| Molybdenum | 4.6 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 05:14 PM |
| Selenium | 1.4 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 05:14 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D
**Lab ID:** N043107-012

**Client Sample ID:** MW-922-Q420
**Collection Date:** 11/19/2020 10:04:00 AM
**Matrix:** GROUND WATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | PrepDate: | | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 05:20 PM |
| Barium | 100 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 05:20 PM |
| Manganese | 0.67 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 05:20 PM |
| Molybdenum | 4.5 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 05:20 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 05:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | C-NR4-D-Q420 |
| **Lab Order:** | N043107 | **Collection Date:** | 11/19/2020 10:17:00 AM |
| **Project:** | PG&E Topock - RMP, RC000753.801D | **Matrix:** | GROUND WATER |
| **Lab ID:** | N043107-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201124C** | QC Batch: **83121** | | | | PrepDate: | **11/23/2020** | Analyst: **CEI** |
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 11/24/2020 05:26 PM |
| Barium | 110 | 0.15 | 1.0 | | µg/L | 1 | 11/24/2020 05:26 PM |
| Manganese | 0.57 | 0.26 | 0.50 | | µg/L | 1 | 11/24/2020 05:26 PM |
| Molybdenum | 4.7 | 0.21 | 0.50 | | µg/L | 1 | 11/24/2020 05:26 PM |
| Selenium | 1.5 | 0.36 | 0.50 | | µg/L | 1 | 11/24/2020 05:26 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID **MB-83121** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **11/23/2020** | RunNo: **148974** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83121** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/24/2020** | SeqNo: **4018661** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

| Sample ID **LCS-83121** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **11/23/2020** | RunNo: **148974** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83121** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/24/2020** | SeqNo: **4018662** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.135 | 0.10 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Barium | 10.120 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Manganese | 100.902 | 0.50 | 100.0 | 0 | 101 | 85 | 115 | | | | |
| Molybdenum | 9.418 | 0.50 | 10.00 | 0 | 94.2 | 85 | 115 | | | | |
| Selenium | 10.086 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |

| Sample ID **N043107-008BMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **11/23/2020** | RunNo: **148974** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83121** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/24/2020** | SeqNo: **4018675** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12.575 | 0.10 | 10.00 | 2.265 | 103 | 75 | 125 | | | | |
| Barium | 111.863 | 1.0 | 10.00 | 106.7 | 51.6 | 75 | 125 | | | | S |
| Manganese | 102.104 | 0.50 | 100.0 | 3.426 | 98.7 | 75 | 125 | | | | |
| Molybdenum | 15.193 | 0.50 | 10.00 | 4.535 | 107 | 75 | 125 | | | | |
| Selenium | 11.382 | 0.50 | 10.00 | 1.439 | 99.4 | 75 | 125 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID | N043107-008BMSD | SampType: | MSD | TestCode: | 6020_DIS_TP | Units: | µg/L | Prep Date: | 11/23/2020 | RunNo: | 148974 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Client ID: | ZZZZZZ | Batch ID: | 83121 | TestNo: | EPA 6020 | EPA 3010A | | Analysis Date: | 11/24/2020 | SeqNo: | 4018676 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12.552 | 0.10 | 10.00 | 2.265 | 103 | 75 | 125 | 12.58 | 0.187 | 20 | |
| Barium | 112.469 | 1.0 | 10.00 | 106.7 | 57.6 | 75 | 125 | 111.9 | 0.540 | 20 | S |
| Manganese | 101.901 | 0.50 | 100.0 | 3.426 | 98.5 | 75 | 125 | 102.1 | 0.199 | 20 | |
| Molybdenum | 15.447 | 0.50 | 10.00 | 4.535 | 109 | 75 | 125 | 15.19 | 1.66 | 20 | |
| Selenium | 11.651 | 0.50 | 10.00 | 1.439 | 102 | 75 | 125 | 11.38 | 2.33 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043107
**Project:** PG&E Topock - RMP, RC000753.801D

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Sample ID **N043107-008B-PS** | SampType: **PS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: | | | RunNo: **148974** | | |
| Client ID: **ZZZZZZ** | Batch ID: **83121** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **11/24/2020** | | | SeqNo: **4018674** | | |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 12.641 | 0.10 | 10.00 | 2.265 | 104 | 80 | 120 | | | | |
| Barium | 117.668 | 1.0 | 10.00 | 106.7 | 110 | 80 | 120 | | | | |
| Manganese | 102.144 | 0.50 | 100.0 | 3.426 | 98.7 | 80 | 120 | | | | |
| Molybdenum | 15.411 | 0.50 | 10.00 | 4.535 | 109 | 80 | 120 | | | | |
| Selenium | 11.715 | 0.50 | 10.00 | 1.439 | 103 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

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# CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓; Specify: RWQCB; Global ID: |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State: |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.mcrae@critigen.com | Address: | Sample Receipt Condition (Y / N): 1. Chilled ✓; 2. Headspace; 3. Container Intact ✓; 4. Seal Present ✓; 5. IR number 2 |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# | 6. Method of Cooling: ICE |
| Submitted By: Reggie Tep | | Phone: 949-727-1400, ext 200 Fax: | Sample Temp: 4.1/4.3/3.5 C |
| Title: Field Tech | Phone: 916-786-3302 Fax: | | |
| Signature: Date: 11/19/20 — *I hereby authorize ASSET Labs to perform the tests indicated below.* | Sampled By: Reggie Tep — *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.* | | |
| Project Name: PG&E Topock - RMP | Signature: Date: 11/19/20 | | Courier: Tracking No.: |
| Project Number: RC000753.801D | | | |

Matrix: Ground | Potable | NPDES | Surface; x Sediment | Soil | Other Solid

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Field QC Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 Cr | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 Ca, Mg, K, Na, B | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 As, Mn, Fe, Se, Mo, Ba | Total metals (SW6010B); HNO3 Fe | Anions (E300.0); Br, Cl, SO4 | Specific Conductance (E120.1) | pH (SM4500HB) | TDS (SM2540C) | Alkalinity (Total, reported as CaCO3) (SM2320B) | TSS (SM2540) | Nitrate/Nitrite (SM4500N03) Nitrogen; H2SO4 | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 3x250 mL poly | TRUE | 3x500mL poly | 3x500mL poly | 3x500mL poly | 500 mL poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 125 mL poly | | | | | |
| 1 | N043107-01 | C-CON-D-Q420 | 11/19/20 | 8:40 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 2 | -02 | C-CON-S-Q420 | | 8:51 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 3 | -03 | C-NR4-S-Q420 | | 10:28 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 4 | -04 | C-NR1-D-Q420 | | 9:11 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 5 | -05 | C-NR1-S-Q420 | | 9:22 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 6 | -06 | C-NR3-D-Q420 | | 9:42 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 7 | -07 | C-MAR-D-Q420 | | 7:32 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | ~~MS/MSD~~ (3) |
| 8 | -08 | C-MAR-S-Q420 | | 7:44 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | MS/MSD |
| 9 | -09 | C-NR3-S-Q420 | | 9:54 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 10 | -10 | R-19-Q420 | | 8:01 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 11 | -11 | RRB-Q420 | | 8:22 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 12 | -12 | MW-922-Q420 | | 10:04 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |
| 13 | -13 | AmbientBlank-3-Q420 | | 10:40 | | | X | | | | | | | | | | | | E | 1 | P | 3NS | |
| 14 | -14 | C-NR4-D-Q420 | ↓ | 10:17 | | X | | X | | X | X | | X | X | | | X | X | E | 7 | P | 3NS | |

| Relinquished by (Signature and Printed Name) | Date/Time | Received by (Signature and Printed Name) | Date/Time |
|---|---|---|---|
| Reggie Tep | 11/19/20 1305 | J Lee | 11/19/20 1305 |
| J Lee | 11/19/20 1520 | Joanna Rodriguez | 11/19/20 1520 |
| | | | |

**Turn Around Time (TAT)**

| | | |
|---|---|---|
| | A | < 24 Hrs or Same Day TAT |
| | B | = Next Workday |
| | C | = 2 Workdays |
| | D | = 3 Workdays |
| x | E | = Routine 5-7 Workdays |

TAT Starts at 8 AM the following day if samples received after 3.00PM.

**Special Instruction:**

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analyses
Less than 24 Hrs =200% Next Day= 100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.

5. Trip Blanks and Equipment Blanks are billable sample
6. Asset Laboratories is not responsible for samples collected using incorrect methodology;
7. Terms are net 30 days
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary

| Preservatives: | | | | Container Type: | | |
|---|---|---|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C | T=Tube | V=VOA | P=Pint |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | | J=Jar | B=Tedlar | G=Glass |
| Others/Specify: | B | (NH4)2SO4/NH4OH | | M=Metal | M=Metal | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 11/19/2020 | Workorder: | N043107 |
| Rep sample Temp (Deg C): | 4.1/4.3/3.5 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☐ | No ☑ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments: Samples for pH received past holding time.

For:

Checklist Completed By: YR BHdez 11/20/2020

Reviewed By: MBC 11/23/2020

## Mary Ann Balilu (maryann.balilu@assetlaboratoriesph.com)

**From:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Sent:** Friday, November 20, 2020 12:01 PM
**To:** Yoandra Rodriguez
**Cc:** maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com; Tina Rice
**Subject:** RE: PG&E Topock - RMP, RC000753.801D (ASSET Labs No. N043107)

Hi Yoandra,
Sample 13 should be placed on hold.

Thank you!
Laura

---

**From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**Sent:** Friday, November 20, 2020 1:38 PM
**To:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Cc:** maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com; Tina Rice <Tina.Rice@critigen.com>
**Subject:** PG&E Topock - RMP, RC000753.801D (ASSET Labs No. N043107)

Hi Laura,

Please, I'd like to confirm is sample 13 (AmbientBlank-3-Q420) has to be analyzed or should be on hold.

COC is attached for reference.

--
**Thanks,**

**Yoandra Rodriguez**
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

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# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-001A | C-CON-D-Q420 | 11/19/2020 8:40:00 AM | 12/3/2020 | Ground Water | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-001B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-001C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-001D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-001E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-002A | C-CON-S-Q420 | 11/19/2020 8:51:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-002B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-002C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-002D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |



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ORELAP/NELAP Cert 4046

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-002D | C-CON-S-Q420 | 11/19/2020 8:51:00 AM | 12/3/2020 | Ground Water | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-002E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-003A | C-NR4-S-Q420 | 11/19/2020 10:28:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-003B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-003C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-003D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-003E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-004A | C-NR1-D-Q420 | 11/19/2020 9:11:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-004B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |



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# WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-004B | C-NR1-D-Q420 | 11/19/2020 9:11:00 AM | 12/3/2020 | Ground Water | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-004C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-004D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-004E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-005A | C-NR1-S-Q420 | 11/19/2020 9:22:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-005B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-005C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-005D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |



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# WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-005E | C-NR1-S-Q420 | 11/19/2020 9:22:00 AM | 12/3/2020 | Ground Water | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-006A | C-NR3-D-Q420 | 11/19/2020 9:42:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-006B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-006C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-006D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-006E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-007A | C-MAR-D-Q420 | 11/19/2020 7:32:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-007B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-007C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |



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ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

# WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-007C | C-MAR-D-Q420 | 11/19/2020 7:32:00 AM | 12/3/2020 | Ground Water | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-007D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-007E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-008A | C-MAR-S-Q420 | 11/19/2020 7:44:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043107-008B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043107-008C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☑ | ☐ | WW |
| N043107-008D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☑ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☑ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☑ | ☐ | WW |
| N043107-008E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☑ | WW |
| N043107-009A | C-NR3-S-Q420 | 11/19/2020 9:54:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-009B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |



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# WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-009B | C-NR3-S-Q420 | 11/19/2020 9:54:00 AM | 12/3/2020 | Ground Water | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-009C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-009D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-009E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-010A | R-19-Q420 | 11/19/2020 8:01:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-010B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-010C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-010D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |



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# WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-010D | R-19-Q420 | 11/19/2020 8:01:00 AM | 12/3/2020 | Ground Water | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-010E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-011A | RRB-Q420 | 11/19/2020 8:22:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-011B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-011C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-011D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-011E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-012A | MW-922-Q420 | 11/19/2020 10:04:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-012B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |



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# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-012C | MW-922-Q420 | 11/19/2020 10:04:00 AM | 12/3/2020 | Ground Water | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-012D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-012E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043107-013A | AmbientBlank-3-Q420 | 11/19/2020 10:40:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☑ | ☐ | ☐ | WW |
| N043107-014A | C-NR4-D-Q420 | 11/19/2020 10:17:00 AM | 12/3/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043107-014B | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043107-014C | | | 12/3/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | EPA 6010B | TOTAL METALS BY ICP | ☐ | ☐ | ☐ | WW |
| N043107-014D | | | 12/3/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | SM2540D | TOTAL NON-FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/3/2020 | | | Total Suspended Solids Prep | ☐ | ☐ | ☐ | WW |
| N043107-014E | | | 12/3/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |



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# WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043107

**Client ID:** ARCUS02

**Project:** PG&E Topock - RMP, RC000753.801D **QC Level:** Level IV **Date Received:** 11/19/2020

**Comments:**

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043107-015A | FOLDER | 12/3/2020 | 12/3/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | LAB |
| | | | 12/3/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/3/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/3/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |



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**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Reggie Tep

**08-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **SM4500-NO3F** | | |
| N043107-001E / C-CON-D-Q420 | Ground Water | 11/19/2020 8:40:00 AM | 8OZP | 1 | | |
| N043107-002E / C-CON-S-Q420 | Ground Water | 11/19/2020 8:51:00 AM | 8OZP | 1 | | |
| N043107-003E / C-NR4-S-Q420 | Ground Water | 11/19/2020 10:28:00 AM | 8OZP | 1 | | |
| N043107-004E / C-NR1-D-Q420 | Ground Water | 11/19/2020 9:11:00 AM | 8OZP | 1 | | |
| N043107-005E / C-NR1-S-Q420 | Ground Water | 11/19/2020 9:22:00 AM | 8OZP | 1 | | |
| N043107-006E / C-NR3-D-Q420 | Ground Water | 11/19/2020 9:42:00 AM | 8OZP | 1 | | |
| N043107-007E / C-MAR-D-Q420 | Ground Water | 11/19/2020 7:32:00 AM | 8OZP | 1 | | |
| N043107-008E / C-MAR-S-Q420 | Ground Water | 11/19/2020 7:44:00 AM | 8OZP | 1 | (MS/MSD) | |
| N043107-009E / C-NR3-S-Q420 | Ground Water | 11/19/2020 9:54:00 AM | 8OZP | 1 | | |
| N043107-010E / R-19-Q420 | Ground Water | 11/19/2020 8:01:00 AM | 8OZP | 1 | | |
| N043107-011E / RRB-Q420 | Ground Water | 11/19/2020 8:22:00 AM | 8OZP | 1 | | |
| N043107-012E / MW-922-Q420 | Ground Water | 11/19/2020 10:04:00 AM | 8OZP | 1 | | |
| N043107-014E / C-NR4-D-Q420 | Ground Water | 11/19/2020 10:17:00 AM | 8OZP | 1 | | |

Please run MS/MSD on sample N043107-008E / C-MARS-Q420)

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43107A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/Nitrite by SM4500NO3F. EDD requirement Labspec7 edata.

GSO #: 551447082 / 551447083

| | **Date/Time** | | **Date/Time** |
|---|---|---|---|
| **Relinquished by:** YRJ | 12/7/2020 1630 | **Received by:** | |
| **Relinquished by:** | | **Received by:** | |

December 14, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043194

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on November 30, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043194

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Sample N043194-006 (MW-38D-Q420) was not analyzed as per COC.

Samples N043194-011(MW-47-115-Q420) and -012 (MW-47-055-Q420) were not analyzed for SM 4500-NO3F. Please see attached correspondence.

Subcontracted Analyses:

SM 4500-NO3F was subcontracted to BC Labs- Bakersfield,CA.

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for samples N043194-004 and -013 due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Method Blank (MB) has detect greater than 1/2 the reporting limit for Sulfate. However, samples result were greater than 5x the Method Blank detection therefore reanalysis of the samples was not necessary.

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for sample N043194-013 since plasma was extinguished when sample was analyzed at lower dilution.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042309-003DMS1, N042309-003DMSD1, N042309-003DMS2 and N042309-003DMSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042309-003DMS1 and N042309-003DMSD1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Beryllium in QC samples N043194-003DMS and N043194-003DMSD possibly due to matrix interference. Post Spike (PS) passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N042309-003DMS and N042309-003DMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043194
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043194-001A | MW-70BR-225-Q420 | Groundwater | 11/30/2020 1:28:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-001B | MW-70BR-225-Q420 | Groundwater | 11/30/2020 1:28:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-001C | MW-70BR-225-Q420 | Groundwater | 11/30/2020 1:28:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-001D | MW-70BR-225-Q420 | Groundwater | 11/30/2020 1:28:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-002A | MW-70-105-Q420 | Groundwater | 11/30/2020 2:12:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-002B | MW-70-105-Q420 | Groundwater | 11/30/2020 2:12:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-002C | MW-70-105-Q420 | Groundwater | 11/30/2020 2:12:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-002D | MW-70-105-Q420 | Groundwater | 11/30/2020 2:12:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-003A | MW-58BR-Q420 | Groundwater | 11/30/2020 2:53:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-003B | MW-58BR-Q420 | Groundwater | 11/30/2020 2:53:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-003C | MW-58BR-Q420 | Groundwater | 11/30/2020 2:53:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-003D | MW-58BR-Q420 | Groundwater | 11/30/2020 2:53:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-004A | MW-64BR-Q420 | Groundwater | 11/30/2020 3:58:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-004B | MW-64BR-Q420 | Groundwater | 11/30/2020 3:58:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-004C | MW-64BR-Q420 | Groundwater | 11/30/2020 3:58:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-004D | MW-64BR-Q420 | Groundwater | 11/30/2020 3:58:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-005A | EB-702-1120 | Groundwater | 11/30/2020 4:15:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-006A | MW-38D-Q420 | Groundwater | 11/30/2020 2:49:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-006B | MW-38D-Q420 | Groundwater | 11/30/2020 2:49:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-006C | MW-38D-Q420 | Groundwater | 11/30/2020 2:49:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-006D | MW-38D-Q420 | Groundwater | 11/30/2020 2:49:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-007A | MW-38S-Q420 | Groundwater | 11/30/2020 1:53:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-007B | MW-38S-Q420 | Groundwater | 11/30/2020 1:53:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-007C | MW-38S-Q420 | Groundwater | 11/30/2020 1:53:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-007D | MW-38S-Q420 | Groundwater | 11/30/2020 1:53:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-008A | MW-10-Q420 | Groundwater | 11/30/2020 3:31:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-008B | MW-10-Q420 | Groundwater | 11/30/2020 3:31:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-008C | MW-10-Q420 | Groundwater | 11/30/2020 3:31:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-008D | MW-10-Q420 | Groundwater | 11/30/2020 3:31:00 PM | 11/30/2020 | 12/14/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043194
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043194-009A | MW-904-Q420 | Groundwater | 11/30/2020 3:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-009B | MW-904-Q420 | Groundwater | 11/30/2020 3:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-009C | MW-904-Q420 | Groundwater | 11/30/2020 3:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-009D | MW-904-Q420 | Groundwater | 11/30/2020 3:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-010A | EB-703-Q420 | Groundwater | 11/30/2020 4:00:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-011A | MW-47-115-Q420 | Groundwater | 11/30/2020 2:01:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-011B | MW-47-115-Q420 | Groundwater | 11/30/2020 2:01:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-011C | MW-47-115-Q420 | Groundwater | 11/30/2020 2:01:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-011D | MW-47-115-Q420 | Groundwater | 11/30/2020 2:01:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-011E | MW-47-115-Q420 | Groundwater | 11/30/2020 2:01:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-012A | MW-47-055-Q420 | Groundwater | 11/30/2020 2:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-012B | MW-47-055-Q420 | Groundwater | 11/30/2020 2:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-012C | MW-47-055-Q420 | Groundwater | 11/30/2020 2:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-012D | MW-47-055-Q420 | Groundwater | 11/30/2020 2:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-012E | MW-47-055-Q420 | Groundwater | 11/30/2020 2:41:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-013A | TW-04-Q420 | Groundwater | 11/30/2020 3:36:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-013B | TW-04-Q420 | Groundwater | 11/30/2020 3:36:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-013C | TW-04-Q420 | Groundwater | 11/30/2020 3:36:00 PM | 11/30/2020 | 12/14/2020 |
| N043194-014A | EB-701-1120 | Groundwater | 11/30/2020 3:56:00 PM | 11/30/2020 | 12/14/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-70BR-225-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 1:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 13000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-70-105-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-58BR-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7400 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-64BR-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 13000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38S-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 1:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-10-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2300 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-904-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2300 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-47-115-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 14000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-47-055-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 5000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-04-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201201A** | QC Batch: **R149039** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 19000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/1/2020 10:05 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043194-001BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149039**
Client ID: **ZZZZZZ** Batch ID: **R149039** TestNo: **EPA 120.1** Analysis Date: **12/1/2020** SeqNo: **4019490**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 12570.000 | 0.10 | | | | | | 12550 | 0.159 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-70BR-225-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 1:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | | PrepDate: | **12/1/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 8300 | 100 | 100 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-70-105-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | PrepDate: | **12/1/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1900 | 25 | 25 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-58BR-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | | PrepDate: | **12/1/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4600 | 50 | 50 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-64BR-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | PrepDate: | **12/1/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 8700 | 100 | 100 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38S-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 1:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | PrepDate: | **12/1/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 940 | 13 | 13 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-10-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | PrepDate: | **12/1/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1400 | 17 | 17 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-904-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | PrepDate: | **12/1/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1400 | 17 | 17 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-47-115-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | PrepDate: | **12/1/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 8700 | 100 | 100 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-47-055-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | PrepDate: | **12/1/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 3100 | 33 | 33 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-04-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201201D** | QC Batch: **83219** | | | PrepDate: | **12/1/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 14000 | 100 | 100 | | mg/L | 1 | 12/1/2020 01:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83219** | SampType: **LCS** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/1/2020** | RunNo: **149061** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83219** | TestNo: **SM2540C** | | Analysis Date: **12/1/2020** | SeqNo: **4020605** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 963.000 | 10 | 1000 | 0 | 96.3 | 80 | 120 | | | | |

| Sample ID: **MB-83219** | SampType: **MBLK** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/1/2020** | RunNo: **149061** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83219** | TestNo: **SM2540C** | | Analysis Date: **12/1/2020** | SeqNo: **4020606** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043194-013BDUP** | SampType: **DUP** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/1/2020** | RunNo: **149061** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83219** | TestNo: **SM2540C** | | Analysis Date: **12/1/2020** | SeqNo: **4020617** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 13730.000 | 100 | | | | | | 13960 | 1.66 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-70BR-225-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 1:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 1300 | 6.6 | 40 | | µg/L | 200 | 12/1/2020 09:07 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 1300 | 1.3 | 10 | | µg/L | 10 | 12/3/2020 11:48 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-70-105-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 150 | 0.66 | 4.0 | | µg/L | 20 | 12/1/2020 11:49 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 150 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:23 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-58BR-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** QC Batch: **R149068** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 5.2 | 0.033 | 0.20 | | µg/L | 1 | 12/1/2020 09:27 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** QC Batch: **83223** | | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 5.7 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:27 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-64BR-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/1/2020 10:43 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:32 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-702-1120 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 4:15:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/1/2020 02:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38S-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 1:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** QC Batch: **R149068** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 7.2 | 0.033 | 0.20 | | µg/L | 1 | 12/1/2020 11:02 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** QC Batch: **83223** | | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 7.8 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-10-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 120 | 0.66 | 4.0 | | µg/L | 20 | 12/1/2020 01:14 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 120 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:41 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-904-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 120 | 0.66 | 4.0 | | µg/L | 20 | 12/1/2020 01:33 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 120 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:46 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-703-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 4:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/1/2020 02:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-47-115-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** QC Batch: **R149068** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 18 | 0.17 | 1.0 | | µg/L | 5 | 12/1/2020 11:30 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201203A** QC Batch: **83223** | | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 18 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:51 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-47-055-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** QC Batch: **R149068** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 17 | 0.17 | 1.0 | | µg/L | 5 | 12/1/2020 11:40 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201203A** QC Batch: **83223** | | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 17 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 06:05 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-04-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 6.4 | 0.17 | 1.0 | | µg/L | 5 | 12/1/2020 01:52 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 6.6 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 06:09 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-701-1120 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:56:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201201A** | QC Batch: **R149068** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/1/2020 03:08 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149068** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149068** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149068** | TestNo: **EPA 218.6** | | Analysis Date: **12/1/2020** | SeqNo: **4020700** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149068** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149068** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149068** | TestNo: **EPA 218.6** | | Analysis Date: **12/1/2020** | SeqNo: **4020701** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.870 | 0.20 | 5.000 | 0 | 97.4 | 90 | 110 | | | | |

| Sample ID: **N043194-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149068** | TestNo: **EPA 218.6** | | Analysis Date: **12/1/2020** | SeqNo: **4020704** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2306.460 | 40 | 1000 | 1292 | 101 | 90 | 110 | | | | |

| Sample ID: **N043194-003AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149068** | TestNo: **EPA 218.6** | | Analysis Date: **12/1/2020** | SeqNo: **4020705** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 10.522 | 0.20 | 5.000 | 5.229 | 106 | 90 | 110 | | | | |

| Sample ID: **N043194-004AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149068** | TestNo: **EPA 218.6** | | Analysis Date: **12/1/2020** | SeqNo: **4020709** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.802 | 1.0 | 5.000 | 0 | 96.0 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043194-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020714**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 245.558 | 4.0 | 100.0 | 148.5 | 97.1 | 90 | 110 | | | | |

Sample ID: **N043194-002AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020715**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 244.948 | 4.0 | 100.0 | 148.5 | 96.5 | 90 | 110 | 245.6 | 0.249 | 20 | |

Sample ID: **N043194-007ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020718**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 7.342 | 0.20 | | | | | | 7.243 | 1.35 | 20 | |

Sample ID: **N043194-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020719**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 12.624 | 0.20 | 5.000 | 7.243 | 108 | 90 | 110 | | | | |

Sample ID: **N043194-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020721**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 217.084 | 4.0 | 100.0 | 120.7 | 96.4 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043194-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020723**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 217.174 | 4.0 | 100.0 | 119.6 | 97.6 | 90 | 110 | | | | |

Sample ID: **N043194-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020725**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 11.584 | 1.0 | 5.000 | 6.450 | 103 | 90 | 110 | | | | |

Sample ID: **N043194-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020729**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.996 | 0.20 | 1.000 | 0 | 99.6 | 90 | 110 | | | | |

Sample ID: **N043194-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020731**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.985 | 0.20 | 1.000 | 0 | 98.5 | 90 | 110 | | | | |

Sample ID: **N043194-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149068**
Client ID: **ZZZZZZ** Batch ID: **R149068** TestNo: **EPA 218.6** Analysis Date: **12/1/2020** SeqNo: **4020733**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.979 | 0.20 | 1.000 | 0 | 97.9 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043194-011AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149068** | TestNo: **EPA 218.6** | | Analysis Date: **12/1/2020** | SeqNo: **4020734** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 43.805 | 1.0 | 25.00 | 17.66 | 105 | 90 | 110 | | | | |

| Sample ID: **N043194-012AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149068** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149068** | TestNo: **EPA 218.6** | | Analysis Date: **12/1/2020** | SeqNo: **4020735** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 42.093 | 1.0 | 25.00 | 17.09 | 100 | 90 | 110 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83223** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031442** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83223** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031443** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 10.103 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |

| Sample ID: **N043209-003DMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031471** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 72.444 | 1.0 | 10.00 | 65.46 | 69.9 | 75 | 125 | | | | S |

| Sample ID: **N043209-003DMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031474** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 71.801 | 1.0 | 10.00 | 65.46 | 63.5 | 75 | 125 | 72.44 | 0.891 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

Sample ID: **N043209-003D-PS** SampType: **PS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **149247**
Client ID: **ZZZZZZ** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031468**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 73.796 | 1.0 | 10.00 | 65.46 | 83.4 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-70BR-225-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 1:28:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 47 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-70-105-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:12:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 98 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-58BR-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 47 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-64BR-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:58:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 69 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-38S-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 1:53:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 150 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-10-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 120 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-904-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 120 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-47-115-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:01:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 59 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-47-055-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 2:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 65 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-04-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:36:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201201B** | QC Batch: **R149045** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 68 | 1.2 | 5.0 | | mg/L | 1 | 12/1/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149045** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149045** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149045** | TestNo: **SM 2320 B** | | Analysis Date: **12/1/2020** | SeqNo: **4019673** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 98.958 | 5.0 | 100.0 | 0 | 99.0 | 85 | 115 | | | | |

| Sample ID: **MB-R149045** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149045** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149045** | TestNo: **SM 2320 B** | | Analysis Date: **12/1/2020** | SeqNo: **4019674** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043194-007BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149045** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149045** | TestNo: **SM 2320 B** | | Analysis Date: **12/1/2020** | SeqNo: **4019680** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 152.083 | 5.0 | | | | | | 152.1 | 0 | 30 | |

| Sample ID: **N043194-013BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149045** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149045** | TestNo: **SM 2320 B** | | Analysis Date: **12/1/2020** | SeqNo: **4019686** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 164.583 | 5.0 | 100.0 | 67.71 | 96.9 | 75 | 125 | | | | |

| Sample ID: **N043194-013BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149045** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149045** | TestNo: **SM 2320 B** | | Analysis Date: **12/1/2020** | SeqNo: **4019687** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 166.667 | 5.0 | 100.0 | 67.71 | 99.0 | 75 | 125 | 164.6 | 1.26 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-001

**Client Sample ID:** MW-70BR-225-Q420
**Collection Date:** 11/30/2020 1:28:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/1/2020 09:52 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3900 | 35 | 500 | | mg/L | 1000 | 12/1/2020 02:53 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 720 | 4.0 | 50 | | mg/L | 100 | 12/1/2020 04:33 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-002

**Client Sample ID:** MW-70-105-Q420
**Collection Date:** 11/30/2020 2:12:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/1/2020 10:45 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 840 | 7.0 | 100 | | mg/L | 200 | 12/1/2020 05:02 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 240 | 0.80 | 10 | | mg/L | 20 | 12/1/2020 07:25 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-003

**Client Sample ID:** MW-58BR-Q420
**Collection Date:** 11/30/2020 2:53:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/1/2020 11:00 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2200 | 17 | 250 | | mg/L | 500 | 12/1/2020 05:16 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 470 | 2.0 | 25 | | mg/L | 50 | 12/1/2020 07:39 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-004

**Client Sample ID:** MW-64BR-Q420
**Collection Date:** 11/30/2020 3:58:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/1/2020 11:14 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 4300 | 35 | 500 | | mg/L | 1000 | 12/1/2020 05:31 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 590 | 2.0 | 25 | | mg/L | 50 | 12/1/2020 07:54 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-007

**Client Sample ID:** MW-38S-Q420
**Collection Date:** 11/30/2020 1:53:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/1/2020 11:28 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 310 | 3.5 | 50 | | mg/L | 100 | 12/1/2020 02:10 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 150 | 0.80 | 10 | | mg/L | 20 | 12/1/2020 03:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-008

**Client Sample ID:** MW-10-Q420
**Collection Date:** 11/30/2020 3:31:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/1/2020 11:43 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 520 | 3.5 | 50 | | mg/L | 100 | 12/1/2020 05:45 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 250 | 0.80 | 10 | | mg/L | 20 | 12/1/2020 08:08 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-009

**Client Sample ID:** MW-904-Q420
**Collection Date:** 11/30/2020 3:41:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/1/2020 11:57 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 520 | 3.5 | 50 | | mg/L | 100 | 12/1/2020 05:59 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 260 | 0.80 | 10 | | mg/L | 20 | 12/1/2020 08:22 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-011

**Client Sample ID:** MW-47-115-Q420
**Collection Date:** 11/30/2020 2:01:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/1/2020 12:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 4400 | 35 | 500 | | mg/L | 1000 | 12/1/2020 06:42 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 800 | 4.0 | 50 | | mg/L | 100 | 12/1/2020 08:51 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-012

**Client Sample ID:** MW-47-055-Q420
**Collection Date:** 11/30/2020 2:41:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/1/2020 12:54 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1500 | 17 | 250 | | mg/L | 500 | 12/1/2020 06:56 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 280 | 0.80 | 10 | | mg/L | 20 | 12/1/2020 08:36 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-013

**Client Sample ID:** TW-04-Q420
**Collection Date:** 11/30/2020 3:36:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/1/2020 01:08 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6700 | 70 | 1000 | | mg/L | 2000 | 12/1/2020 07:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201201A** QC Batch: **R149058** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1100 | 4.0 | 50 | | mg/L | 100 | 12/1/2020 09:34 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149058_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149058** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149058** | TestNo: **EPA 300.0** | | Analysis Date: **12/1/2020** | SeqNo: **4019869** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149058_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149058** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149058** | TestNo: **EPA 300.0** | | Analysis Date: **12/1/2020** | SeqNo: **4019870** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.261 | 0.50 | 1.250 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N043194-001BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149058** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149058** | TestNo: **EPA 300.0** | | Analysis Date: **12/1/2020** | SeqNo: **4019883** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.244 | 5.0 | 12.50 | 0.4640 | 94.2 | 80 | 120 | | | | |

| Sample ID: **N043194-001BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149058** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149058** | TestNo: **EPA 300.0** | | Analysis Date: **12/1/2020** | SeqNo: **4019884** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 12.593 | 5.0 | 12.50 | 0.4640 | 97.0 | 80 | 120 | 12.24 | 2.81 | 20 | |

| Sample ID: **N043194-007BDUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149058** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149058** | TestNo: **EPA 300.0** | | Analysis Date: **12/1/2020** | SeqNo: **4019885** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.678 | 1.0 | | | | | | 0.6434 | 0 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149058_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **PBW** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019840**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149058_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **LCSW** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019841**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.932 | 0.50 | 2.000 | 0 | 96.6 | 90 | 110 | | | | |

Sample ID: **N043194-007BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **ZZZZZZ** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019845**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 499.340 | 50 | 200.0 | 311.2 | 94.1 | 80 | 120 | | | | |

Sample ID: **N043194-007BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **ZZZZZZ** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019846**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 501.210 | 50 | 200.0 | 311.2 | 95.0 | 80 | 120 | 499.3 | 0.374 | 20 | |

Sample ID: **N043194-001BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **ZZZZZZ** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019848**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3884.500 | 500 | | | | | | 3892 | 0.201 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149058_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **PBW** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019898**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.298 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149058_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **LCSW** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019899**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.063 | 0.50 | 4.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043194-007BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **ZZZZZZ** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019905**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 230.850 | 10 | 80.00 | 151.6 | 99.0 | 80 | 120 | | | | |

Sample ID: **N043194-007BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **ZZZZZZ** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019906**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 231.880 | 10 | 80.00 | 151.6 | 100 | 80 | 120 | 230.8 | 0.445 | 20 | |

Sample ID: **N043194-001BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149058**
Client ID: **ZZZZZZ** Batch ID: **R149058** TestNo: **EPA 300.0** Analysis Date: **12/1/2020** SeqNo: **4019908**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 724.800 | 50 | | | | | | 721.5 | 0.458 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-001

**Client Sample ID:** MW-70BR-225-Q420
**Collection Date:** 11/30/2020 1:28:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | | **12/2/2020** | Analyst: **DJ** |
| Boron | 1800 | 74 | 100 | | ug/L | 1 | 12/4/2020 11:13 AM |
| Calcium | 600000 | 420 | 2500 | | ug/L | 5 | 12/4/2020 01:26 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/4/2020 11:13 AM |
| Magnesium | 32000 | 48 | 100 | | ug/L | 1 | 12/4/2020 11:13 AM |
| Sodium | 2000000 | 9600 | 50000 | | ug/L | 100 | 12/6/2020 06:37 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-002

**Client Sample ID:** MW-70-105-Q420
**Collection Date:** 11/30/2020 2:12:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | | **12/2/2020** | Analyst: **DJ** |
| Boron | 950 | 74 | 100 | | ug/L | 1 | 12/4/2020 11:42 AM |
| Calcium | 72000 | 85 | 500 | | ug/L | 1 | 12/4/2020 11:42 AM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/4/2020 11:42 AM |
| Magnesium | 11000 | 48 | 100 | | ug/L | 1 | 12/4/2020 11:42 AM |
| Sodium | 500000 | 9600 | 50000 | | ug/L | 100 | 12/6/2020 06:41 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-003

**Client Sample ID:** MW-58BR-Q420
**Collection Date:** 11/30/2020 2:53:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | | **12/2/2020** | Analyst: **DJ** |
| Boron | 1300 | 74 | 100 | | ug/L | 1 | 12/4/2020 11:46 AM |
| Calcium | 320000 | 85 | 500 | | ug/L | 1 | 12/4/2020 11:46 AM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/4/2020 11:46 AM |
| Magnesium | 31000 | 48 | 100 | | ug/L | 1 | 12/4/2020 11:46 AM |
| Sodium | 1000000 | 9600 | 50000 | | ug/L | 100 | 12/6/2020 06:44 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-004

**Client Sample ID:** MW-64BR-Q420
**Collection Date:** 11/30/2020 3:58:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | | **12/2/2020** | Analyst: **DJ** |
| Boron | 2000 | 74 | 100 | | ug/L | 1 | 12/4/2020 11:51 AM |
| Calcium | 260000 | 85 | 500 | | ug/L | 1 | 12/4/2020 11:51 AM |
| Iron | 710 | 18 | 20 | | ug/L | 1 | 12/4/2020 11:51 AM |
| Magnesium | 22000 | 48 | 100 | | ug/L | 1 | 12/4/2020 11:51 AM |
| Sodium | 2600000 | 9600 | 50000 | | ug/L | 100 | 12/6/2020 06:47 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-007

**Client Sample ID:** MW-38S-Q420
**Collection Date:** 11/30/2020 1:53:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | **12/2/2020** | Analyst: **DJ** | |
| Boron | 990 | 74 | 100 | | ug/L | 1 | 12/4/2020 11:57 AM |
| Calcium | 23000 | 85 | 500 | | ug/L | 1 | 12/4/2020 11:57 AM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/4/2020 11:57 AM |
| Magnesium | 6200 | 48 | 100 | | ug/L | 1 | 12/4/2020 11:57 AM |
| Sodium | 270000 | 2400 | 12000 | | ug/L | 25 | 12/6/2020 06:51 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-008

**Client Sample ID:** MW-10-Q420
**Collection Date:** 11/30/2020 3:31:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | **12/2/2020** | Analyst: **DJ** | |
| Boron | 1000 | 74 | 100 | | ug/L | 1 | 12/4/2020 12:01 PM |
| Calcium | 120000 | 85 | 500 | | ug/L | 1 | 12/4/2020 12:01 PM |
| Iron | 29 | 18 | 20 | | ug/L | 1 | 12/4/2020 12:01 PM |
| Magnesium | 26000 | 48 | 100 | | ug/L | 1 | 12/4/2020 12:01 PM |
| Sodium | 280000 | 2400 | 12000 | | ug/L | 25 | 12/6/2020 06:54 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-009

**Client Sample ID:** MW-904-Q420
**Collection Date:** 11/30/2020 3:41:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | **12/2/2020** | Analyst: **DJ** | |
| Boron | 1000 | 74 | 100 | | ug/L | 1 | 12/4/2020 12:07 PM |
| Calcium | 120000 | 85 | 500 | | ug/L | 1 | 12/4/2020 12:07 PM |
| Iron | 26 | 18 | 20 | | ug/L | 1 | 12/4/2020 12:07 PM |
| Magnesium | 26000 | 48 | 100 | | ug/L | 1 | 12/4/2020 12:07 PM |
| Sodium | 300000 | 2400 | 12000 | | ug/L | 25 | 12/6/2020 06:57 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-011

**Client Sample ID:** MW-47-115-Q420
**Collection Date:** 11/30/2020 2:01:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | | **12/2/2020** | Analyst: **DJ** |
| Boron | 1500 | 74 | 100 | | ug/L | 1 | 12/4/2020 12:12 PM |
| Calcium | 270000 | 85 | 500 | | ug/L | 1 | 12/4/2020 12:12 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/4/2020 12:12 PM |
| Magnesium | 46000 | 48 | 100 | | ug/L | 1 | 12/4/2020 12:12 PM |
| Sodium | 2800000 | 24000 | 120000 | | ug/L | 250 | 12/6/2020 07:00 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-012

**Client Sample ID:** MW-47-055-Q420
**Collection Date:** 11/30/2020 2:41:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | | **12/2/2020** | Analyst: **DJ** |
| Boron | 1200 | 74 | 100 | | ug/L | 1 | 12/4/2020 12:18 PM |
| Calcium | 170000 | 85 | 500 | | ug/L | 1 | 12/4/2020 12:18 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/4/2020 12:18 PM |
| Magnesium | 41000 | 48 | 100 | | ug/L | 1 | 12/4/2020 12:18 PM |
| Sodium | 730000 | 9600 | 50000 | | ug/L | 100 | 12/6/2020 07:04 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-013

**Client Sample ID:** TW-04-Q420
**Collection Date:** 11/30/2020 3:36:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | | **12/2/2020** | Analyst: **DJ** |
| Boron | 3200 | 370 | 500 | | ug/L | 5 | 12/4/2020 12:30 PM |
| Calcium | 330000 | 420 | 2500 | | ug/L | 5 | 12/4/2020 12:30 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/4/2020 12:30 PM |
| Magnesium | 71000 | 240 | 500 | | ug/L | 5 | 12/4/2020 12:30 PM |
| Sodium | 4000000 | 24000 | 120000 | | ug/L | 250 | 12/6/2020 07:24 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83225** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149121**
Client ID: **PBW** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4023864**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83225** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149121**
Client ID: **LCSW** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4023865**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5000.017 | 100 | 5000 | 0 | 100 | 85 | 115 | | | | |
| Calcium | 10868.896 | 500 | 10000 | 0 | 109 | 85 | 115 | | | | |
| Iron | 110.370 | 20 | 100.0 | 0 | 110 | 85 | 115 | | | | |
| Magnesium | 11157.304 | 100 | 10000 | 0 | 112 | 85 | 115 | | | | |

Sample ID: **N043209-003DMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149121**
Client ID: **ZZZZZZ** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4023869**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 10822.786 | 500 | 5000 | 3914 | 138 | 75 | 125 | | | | S |
| Calcium | 357324.245 | 2500 | 10000 | 328900 | 284 | 75 | 125 | | | | S |
| Iron | 116.137 | 100 | 100.0 | 0 | 116 | 75 | 125 | | | | |
| Magnesium | 25430.378 | 500 | 10000 | 11830 | 136 | 75 | 125 | | | | S |

Sample ID: **N043209-003DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149121**
Client ID: **ZZZZZZ** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4023870**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 10756.208 | 500 | 5000 | 3914 | 137 | 75 | 125 | 10820 | 0.617 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043209-003DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149121**
Client ID: **ZZZZZZ** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4023870**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 350301.993 | 2500 | 10000 | 328900 | 214 | 75 | 125 | 357300 | 1.98 | 20 | S |
| Iron | 121.417 | 100 | 100.0 | 0 | 121 | 75 | 125 | 116.1 | 4.45 | 20 | |
| Magnesium | 25166.631 | 500 | 10000 | 11830 | 133 | 75 | 125 | 25430 | 1.04 | 20 | S |

Sample ID: **MB-83225** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149175**
Client ID: **PBW** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/6/2020** SeqNo: **4027478**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

Sample ID: **LCS2-83225** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149175**
Client ID: **LCSW** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/6/2020** SeqNo: **4027479**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18877.847 | 500 | 20000 | 0 | 94.4 | 85 | 115 | | | | |

Sample ID: **N043209-003DMS2** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149175**
Client ID: **ZZZZZZ** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/6/2020** SeqNo: **4027485**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 4466816.388 | 250000 | 20000 | 5441000 | -4870 | 75 | 125 | | | | S |

Sample ID: **N043209-003DMSD2** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/2/2020** RunNo: **149175**
Client ID: **ZZZZZZ** Batch ID: **83225** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/6/2020** SeqNo: **4027486**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 4200224.491 | 250000 | 20000 | 5441000 | -6200 | 75 | 125 | 4467000 | 6.15 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043209-003D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149121** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4023868** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 10424.179 | 500 | 5000 | 3914 | 130 | 80 | 120 | | | | S |
| Calcium | 349653.165 | 2500 | 10000 | 328900 | 208 | 80 | 120 | | | | S |
| Iron | 128.794 | 100 | 100.0 | 0 | 129 | 80 | 120 | | | | S |
| Magnesium | 24747.700 | 500 | 10000 | 11830 | 129 | 80 | 120 | | | | S |

| Sample ID: **N043209-003D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149175** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/6/2020** | SeqNo: **4027484** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 4430094.714 | 250000 | 20000 | 5441000 | -5050 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-001

**Client Sample ID:** MW-70BR-225-Q420
**Collection Date:** 11/30/2020 1:28:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 1.7 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 05:18 PM |
| Manganese | 7.1 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 05:18 PM |
| Molybdenum | 19 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 05:18 PM |
| Selenium | 2.2 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 05:18 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-002

**Client Sample ID:** MW-70-105-Q420
**Collection Date:** 11/30/2020 2:12:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 4.3 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 05:23 PM |
| Manganese | 48 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 05:23 PM |
| Molybdenum | 84 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 05:23 PM |
| Selenium | 3.2 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 05:23 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-003

**Client Sample ID:** MW-58BR-Q420
**Collection Date:** 11/30/2020 2:53:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 2.4 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 05:27 PM |
| Manganese | 330 | 1.3 | 2.5 | | µg/L | 5 | 12/3/2020 11:53 PM |
| Molybdenum | 27 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 05:27 PM |
| Selenium | 2.3 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 05:27 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-004

**Client Sample ID:** MW-64BR-Q420
**Collection Date:** 11/30/2020 3:58:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 2.3 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 05:32 PM |
| Manganese | 1000 | 2.6 | 5.0 | | µg/L | 10 | 12/3/2020 11:57 PM |
| Molybdenum | 68 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 05:32 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 05:32 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-007

**Client Sample ID:** MW-38S-Q420
**Collection Date:** 11/30/2020 1:53:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 6.5 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 05:37 PM |
| Manganese | 61 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 05:37 PM |
| Molybdenum | 20 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 05:37 PM |
| Selenium | 3.0 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 05:37 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-008

**Client Sample ID:** MW-10-Q420
**Collection Date:** 11/30/2020 3:31:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201203A** QC Batch: **83223** PrepDate: **12/3/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Barium | 51 | 0.15 | 1.0 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Manganese | 7.1 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Molybdenum | 21 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Nickel | 11 | 0.26 | 1.0 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Selenium | 6.0 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Vanadium | 14 | 0.28 | 1.0 | | µg/L | 1 | 12/3/2020 05:41 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/3/2020 05:41 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-009

**Client Sample ID:** MW-904-Q420
**Collection Date:** 11/30/2020 3:41:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Arsenic | 2.2 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Barium | 50 | 0.15 | 1.0 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Manganese | 6.7 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Molybdenum | 20 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Nickel | 11 | 0.26 | 1.0 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Selenium | 5.3 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Vanadium | 14 | 0.28 | 1.0 | | µg/L | 1 | 12/3/2020 05:46 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/3/2020 05:46 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-011

**Client Sample ID:** MW-47-115-Q420
**Collection Date:** 11/30/2020 2:01:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Manganese | 3.2 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 05:51 PM |
| Molybdenum | 24 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 05:51 PM |
| Selenium | 0.95 | 0.36 | 0.50 | | µg/L | 1 | 12/4/2020 12:16 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-012

**Client Sample ID:** MW-47-055-Q420
**Collection Date:** 11/30/2020 2:41:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 1.2 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 06:05 PM |
| Manganese | 0.56 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 06:05 PM |
| Molybdenum | 9.1 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 06:05 PM |
| Selenium | 0.86 | 0.36 | 0.50 | | µg/L | 1 | 12/4/2020 12:02 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043194
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043194-013

**Client Sample ID:** TW-04-Q420
**Collection Date:** 11/30/2020 3:36:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Manganese | 48 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 06:09 PM |
| Molybdenum | 56 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 06:09 PM |
| Selenium | 0.63 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 06:09 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **MB-83223** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031547** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | ND | 1.0 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Copper | ND | 1.0 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

| Sample ID: **LCS-83223** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031548** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.265 | 0.50 | 10.00 | 0 | 103 | 85 | 115 | | | | |
| Arsenic | 10.378 | 0.10 | 10.00 | 0 | 104 | 85 | 115 | | | | |
| Barium | 10.162 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Beryllium | 9.917 | 0.50 | 10.00 | 0 | 99.2 | 85 | 115 | | | | |
| Cadmium | 10.026 | 0.50 | 10.00 | 0 | 100 | 85 | 115 | | | | |
| Cobalt | 10.139 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Copper | 10.383 | 1.0 | 10.00 | 0 | 104 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **LCS-83223** | SampType: **LCS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031548** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead | 10.056 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Manganese | 100.725 | 0.50 | 100.0 | 0 | 101 | 85 | 115 | | | | |
| Molybdenum | 9.778 | 0.50 | 10.00 | 0 | 97.8 | 85 | 115 | | | | |
| Nickel | 10.276 | 1.0 | 10.00 | 0 | 103 | 85 | 115 | | | | |
| Selenium | 9.920 | 0.50 | 10.00 | 0 | 99.2 | 85 | 115 | | | | |
| Silver | 10.688 | 0.50 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Thallium | 9.638 | 0.50 | 10.00 | 0 | 96.4 | 85 | 115 | | | | |
| Vanadium | 10.192 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Zinc | 109.420 | 10 | 100.0 | 0 | 109 | 85 | 115 | | | | |

| Sample ID: **N043209-003DMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031576** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.115 | 0.50 | 10.00 | 0.1876 | 99.3 | 75 | 125 | | | | |
| Arsenic | 13.963 | 0.10 | 10.00 | 3.816 | 101 | 75 | 125 | | | | |
| Barium | 82.255 | 1.0 | 10.00 | 73.79 | 84.7 | 75 | 125 | | | | |
| Cadmium | 9.313 | 0.50 | 10.00 | 0.06743 | 92.5 | 75 | 125 | | | | |
| Cobalt | 8.623 | 0.50 | 10.00 | 0.1288 | 84.9 | 75 | 125 | | | | |
| Copper | 9.793 | 1.0 | 10.00 | 0 | 97.9 | 75 | 125 | | | | |
| Lead | 10.281 | 1.0 | 10.00 | 0.2103 | 101 | 75 | 125 | | | | |
| Molybdenum | 71.854 | 0.50 | 10.00 | 62.62 | 92.3 | 75 | 125 | | | | |
| Nickel | 12.683 | 1.0 | 10.00 | 3.441 | 92.4 | 75 | 125 | | | | |
| Selenium | 11.005 | 0.50 | 10.00 | 1.754 | 92.5 | 75 | 125 | | | | |
| Silver | 9.407 | 0.50 | 10.00 | 0 | 94.1 | 75 | 125 | | | | |
| Thallium | 7.682 | 0.50 | 10.00 | 0 | 76.8 | 75 | 125 | | | | |
| Vanadium | 13.404 | 1.0 | 10.00 | 3.588 | 98.2 | 75 | 125 | | | | |
| Zinc | 93.759 | 10 | 100.0 | 2.490 | 91.3 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: N043209-003DMS | SampType: MS | TestCode: 6020_DIS_TP | Units: µg/L | Prep Date: 12/3/2020 | RunNo: 149247 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: 83223 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 12/3/2020 | SeqNo: 4031577 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 37.310 | 2.5 | 50.00 | 0 | 74.6 | 75 | 125 | | | | S |
| Manganese | 598.606 | 2.5 | 500.0 | 121.6 | 95.4 | 75 | 125 | | | | |

| Sample ID: N043209-003DMSD | SampType: MSD | TestCode: 6020_DIS_TP | Units: µg/L | Prep Date: 12/3/2020 | RunNo: 149247 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: 83223 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 12/3/2020 | SeqNo: 4031579 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.064 | 0.50 | 10.00 | 0.1876 | 98.8 | 75 | 125 | 10.12 | 0.509 | 20 | |
| Arsenic | 13.745 | 0.10 | 10.00 | 3.816 | 99.3 | 75 | 125 | 13.96 | 1.57 | 20 | |
| Barium | 81.701 | 1.0 | 10.00 | 73.79 | 79.1 | 75 | 125 | 82.25 | 0.675 | 20 | |
| Cadmium | 9.568 | 0.50 | 10.00 | 0.06743 | 95.0 | 75 | 125 | 9.313 | 2.71 | 20 | |
| Cobalt | 8.542 | 0.50 | 10.00 | 0.1288 | 84.1 | 75 | 125 | 8.623 | 0.943 | 20 | |
| Copper | 9.571 | 1.0 | 10.00 | 0 | 95.7 | 75 | 125 | 9.793 | 2.29 | 20 | |
| Lead | 10.267 | 1.0 | 10.00 | 0.2103 | 101 | 75 | 125 | 10.28 | 0.141 | 20 | |
| Molybdenum | 72.214 | 0.50 | 10.00 | 62.62 | 96.0 | 75 | 125 | 71.85 | 0.500 | 20 | |
| Nickel | 12.575 | 1.0 | 10.00 | 3.441 | 91.3 | 75 | 125 | 12.68 | 0.852 | 20 | |
| Selenium | 11.203 | 0.50 | 10.00 | 1.754 | 94.5 | 75 | 125 | 11.01 | 1.79 | 20 | |
| Silver | 9.485 | 0.50 | 10.00 | 0 | 94.9 | 75 | 125 | 9.407 | 0.831 | 20 | |
| Thallium | 8.147 | 0.50 | 10.00 | 0 | 81.5 | 75 | 125 | 7.682 | 5.88 | 20 | |
| Vanadium | 13.201 | 1.0 | 10.00 | 3.588 | 96.1 | 75 | 125 | 13.40 | 1.52 | 20 | |
| Zinc | 94.404 | 10 | 100.0 | 2.490 | 91.9 | 75 | 125 | 93.76 | 0.686 | 20 | |

| Sample ID: N043209-003DMSD | SampType: MSD | TestCode: 6020_DIS_TP | Units: µg/L | Prep Date: 12/3/2020 | RunNo: 149247 |
|---|---|---|---|---|---|
| Client ID: ZZZZZZ | Batch ID: 83223 | TestNo: EPA 6020 | EPA 3010A | Analysis Date: 12/3/2020 | SeqNo: 4031580 |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 37.062 | 2.5 | 50.00 | 0 | 74.1 | 75 | 125 | 37.31 | 0.667 | 20 | S |
| Manganese | 600.963 | 2.5 | 500.0 | 121.6 | 95.9 | 75 | 125 | 598.6 | 0.393 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043209-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149247**
Client ID: **ZZZZZZ** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031573**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.290 | 0.50 | 10.00 | 0.1876 | 101 | 80 | 120 | | | | |
| Arsenic | 14.051 | 0.10 | 10.00 | 3.816 | 102 | 80 | 120 | | | | |
| Barium | 82.492 | 1.0 | 10.00 | 73.79 | 87.0 | 80 | 120 | | | | |
| Cadmium | 9.802 | 0.50 | 10.00 | 0.06743 | 97.3 | 80 | 120 | | | | |
| Cobalt | 8.821 | 0.50 | 10.00 | 0.1288 | 86.9 | 80 | 120 | | | | |
| Copper | 9.339 | 1.0 | 10.00 | 0 | 93.4 | 80 | 120 | | | | |
| Lead | 10.620 | 1.0 | 10.00 | 0.2103 | 104 | 80 | 120 | | | | |
| Molybdenum | 72.015 | 0.50 | 10.00 | 62.62 | 94.0 | 80 | 120 | | | | |
| Nickel | 12.490 | 1.0 | 10.00 | 3.441 | 90.5 | 80 | 120 | | | | |
| Selenium | 10.584 | 0.50 | 10.00 | 1.754 | 88.3 | 80 | 120 | | | | |
| Silver | 9.719 | 0.50 | 10.00 | 0 | 97.2 | 80 | 120 | | | | |
| Thallium | 7.929 | 0.50 | 10.00 | 0 | 79.3 | 80 | 120 | | | | S |
| Vanadium | 13.631 | 1.0 | 10.00 | 3.588 | 100 | 80 | 120 | | | | |
| Zinc | 93.099 | 10 | 100.0 | 2.490 | 90.6 | 80 | 120 | | | | |

Sample ID: **N043209-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149247**
Client ID: **ZZZZZZ** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031574**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 37.296 | 2.5 | 50.00 | 0 | 74.6 | 80 | 120 | | | | S |
| Manganese | 598.673 | 2.5 | 500.0 | 121.6 | 95.4 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-10-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:31:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201202A** | QC Batch: **83229** | | | PrepDate: | | **12/2/2020** | Analyst: **CEI** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/2/2020 02:12 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-904-Q420 |
| **Lab Order:** | N043194 | **Collection Date:** | 11/30/2020 3:41:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043194-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201202A** | QC Batch: **83229** | | | PrepDate: | | **12/2/2020** | Analyst: **CEI** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/2/2020 02:15 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **MB-83229** | SampType: **MBLK** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021715** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-83229** | SampType: **LCS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021716** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.700 | 0.20 | 5.000 | 0 | 94.0 | 85 | 115 | | | | |

| Sample ID: **N043203-002DMS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021723** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.010 | 0.20 | 5.000 | 0 | 100 | 75 | 125 | | | | |

| Sample ID: **N043203-002DMSD** | SampType: **MSD** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021726** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.900 | 0.20 | 5.000 | 0 | 98.0 | 75 | 125 | 5.010 | 2.22 | 20 | |

| Sample ID: **N043209-003DMS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021746** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.980 | 0.20 | 5.000 | 0 | 99.6 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043194
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **N043209-003DMSD** | SampType: **MSD** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021747** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.010 | 0.20 | 5.000 | 0 | 100 | 75 | 125 | 4.980 | 0.601 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


Page 1 of 2

| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 |
| Submitted By: Nara Tay | | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Sample Tech | Phone: 916-786-3302 Fax: | | |
| Signature: Date: 11/30/20 | Sampled By: Matt Trainotti | | |
| Project Name: PG&E Topock - GMP | Signature: Date: 11/30/20 | | |
| Project Number: 30035275 | | | |

*I hereby authorize ASSET Labs to perform the tests indicated below.*

*I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.*

Matrix: Ground x Sediment; Potable; Soil; NPDES; Other Solid; Surface

EDD Requirement: Excel EDD; Geotracker; Labspec; Others ✓; Specify: RWQCB; Global ID:

QA/QC: RTNE; RWQCB ✓; CalTrans; LEVEL III; LEVEL IV; Regulatory; Specify State:

Sample Receipt Condition (Y / N):
1. Chilled ✓
2. Headspace
3. Container Intact ✓
4. Seal Present ✓
5. IR number 2
6. Method of Cooling: ICE
Sample Temp: 0.6°C / 1.8°C

Courier: ASET
Tracking No.:

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | 250 mL poly Cr(VI) FF (E218.6) (NH4)2 SO4, NH4, OH | 250 mL poly Oxygen and Deuterium Isotopes (CFIRM), Ice | 250 mL WL poly Cr(VI) FF (E218.6) (NH4)2 SO4, NH4, OH | 1 liter poly Alkalinity, Total as CaCO3 (SM2320B) | 1 liter poly Bromide, Sulfate, Chloride (EPA 300.0) | 1 liter poly Fluoride (EPA 300.0) | 1 liter poly Specific Conductance (EPA 120.1) | 1 liter poly Total Dissolved Solids (SM2540) | 125 mL poly Nitrate/Nitrite (SM4500NO3) Nitrate; H2SO4 | 3x40 mL poly Total Organic Carbon (SM5310C); H2SO4 | 500 mL poly Metals Dissolved (EPA7470A FF) Hg; HNO3 | 500 mL poly Dissolved Metals (SW 6010B); HNO3 Potassium | 500 mL poly Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | 500 mL poly Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | 500 mL poly Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | 500 mL poly Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | 500 mL poly Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | 500 mL poly Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | 500 mL poly Total metals, Chromium (non-filter) (EPA 200.8), HNO3 | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043194-01 | MW-70BR-225-Q420 | 11/30/2020 | 13:28 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 2 | -02 | MW-70-105-Q420 | 11/30/2020 | 14:12 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 3 | -03 | MW-58BR-Q420 | 11/30/2020 | 14:53 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 4 | -04 | MW-64BR-Q420 | 11/30/2020 | 15:58 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 5 | -05 | EB-702-Q420 | 11/30/2020 | 16:15 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 6 | -06 | MW-38D-Q420 | 11/30/2020 | 14:49 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | E | 4 | P | BNS | HOLD |
| 7 | -07 | MW-38S-Q430 | 11/30/2020 | 13:53 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 8 | -08 | MW-10-Q420 | 11/30/2020 | 15:31 | | X | | | X | X | | X | X | X | | X | | | | | | | | X | X | E | 4 | P | BNS | |
| 9 | -09 | MW-904-Q420 | 11/30/2020 | 15:41 | | X | | | X | X | | X | X | X | | X | | | | | | | | X | X | E | 4 | P | BNS | |
| 10 | -10 | EB-703-Q420 | 11/30/2020 | 16:00 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 11 | -11 | MW-47-115-Q420 | 11/30/2020 | 14:01 | | X | X | | X | X | | X | X | X | | | | X | | | | | | | X | E | 3 | P | BNS | |
| 12 | -12 | MW-47-055-Q420 | 11/30/2020 | 14:41 | | X | X | | X | X | | X | X | X | | | | | X | X | | | | | | E | 3 | P | BNS | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nara Tay | 11/30/20 1700 | | 11-30-20 1700 |
| | 11-30-20 7:35 PM | | 11-30-20 7:35 PM |
| | | | |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Terms**
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 5% of the total project price.
4. Add 10% surcharge for Level II Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

# CHAIN OF CUSTODY RECORD

Page 2 of 2

| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-788-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Nara Tep | | Phone: 949-727-1400, ext 200 Fax: | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Sample Tech | Phone: 916-788-3302 Fax: | P.O.# SWA-ASSET-C9817-057 | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 11/30/20 | Sampled By: Nara Tep | Global ID: | | Regulatory | 5. IR number 2 |
| *I hereby authorize ASSET Labs to perform the tests indicated below.* | *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.* | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: Date: 11/30/20 | | | | Sample Temp: 0.6°C / 1.8°C |
| Project Number: 30035275 | | | | | Courier: Asset |
| | | | | | Tracking No.: |

Matrix: Ground x Sediment; Potable; Soil; NPDES; Other Solid; Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | 250 mL poly | 250 mL poly | 250 mL poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 125 mL poly | 3x40 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 600 mL poly | 500 mL poly | 500 mL poly | | | | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Oxygen and Deuterium Isotopes (CFIRM), Ica | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Alkalinity, Total as CaCO3 (SM2320B) | Bromide, Sulfate, Chloride (EPA 300.0) | Fluoride (EPA 300.0) | Specific Conductance (EPA 120.1) | Total Dissolved Solids (SM92540) | Nitrate/Nitrite (SM4500NO3) Nitrate; H2SO4 | Total Organic Carbon (SM5310C); H2SO4 | Metals Dissolved (EPA7470A FF) Hg; HNO3 | Dissolved Metals (SW 6010B); HNO3 Potassium | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 | | | | | | | | |
| 1 | N043194-13 | TW-04-Q420 | 11/30/2020 | 15:36 | | | | X | X | X | | X | X | | | | | X | | | | | | X | | | | E | 4 | P | BNS | |
| 2 | -14 | EB-701-Q420 | 11/30/2020 | 15:56 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nara Tep | 11/30/20 1700 | | 11-30-20 1700 |
| | | | 11-30-20 7:35 PM |
| | | | |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Terms**
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD

Page 1 of 2


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-057 |
| Submitted By: Nara Tep | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Sample tech | | | |
| Signature: Date: 11/30/20 | Sampled By: Matt Trainotti | | |
| *I hereby authorize ASSET Labs to perform the tests indicated below.* | *I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.* | | |
| Project Name: PG&E Topock - GMP | Signature: Date: 11/30/20 | | |
| Project Number: 30035275 | | | |

| EDD Requirement | | QA/QC | | Sample Receipt Condition | Y | N |
|---|---|---|---|---|---|---|
| Excel EDD | | RTNE | | 1. Chilled | ✓ | |
| Geotracker | | RWQCB | ✓ | 2. Headspace | | |
| Labspec | | CalTrans | | 3. Container Intact | ✓ | |
| Others | ✓ | LEVEL III | | 4. Seal Present | | |
| Specify: RWQCB | | LEVEL IV | | 5. IR number | | |
| Global ID: | | Regulatory | | 6. Method of Cooling: | | |
| | | Specify State: | | Sample Temp: | | |

Matrix: Ground x Sediment; Potable; Soil; NPDES; Other Solid; Surface

Courier:

Tracking No.:

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CFIRM), ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 2x250 mL poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL poly | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | | | | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043194-01 | MW-70BR-225-Q420 | 11/30/2020 | 13:28 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 2 | -02 | MW-70-105-Q420 | 11/30/2020 | 14:12 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 3 | -03 | MW-58BR-Q420 | 11/30/2020 | 14:53 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 4 | -04 | MW-64BR-Q420 | 11/30/2020 | 15:58 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 5 | -05 | EB-702-Q420 | 11/30/2020 | 16:15 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 6 | -06 | MW-38D-Q420 | 11/30/2020 | 14:49 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | HOLD |
| 7 | -07 | MW-38S-Q430 | 11/30/2020 | 13:53 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | | E | 4 | P | BNS | |
| 8 | -08 | MW-10-Q420 | 11/30/2020 | 15:31 | | X | | | X | X | | X | X | X | | X | | | | X | X | — | — | | | 12/1/20 | | E | 4 | P | BNS | |
| 9 | -09 | MW-904-Q420 | 11/30/2020 | 15:41 | | X | | | X | X | | X | X | X | | X | | | | X | X | — | — | | | 12/1/20 | | E | 4 | P | BNS | |
| 10 | -10 | EB-703-Q420 | 11/30/2020 | 16:00 | | X | | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 11 | -11 | MW-47-115-Q420 | 11/30/2020 | 14:01 | | X | X | | X | X | | X | X | — | — | | | X | | | | | X | | | | | E | 3 | P | BNS | |
| 12 | -12 | MW-47-055-Q420 | 11/30/2020 | 14:41 | | X | X | | X | X | | X | X | — | — | | | X | X | | | | | | | | | E | 3 | P | BNS | |

| | | | |
|---|---|---|---|
| Relinquished by (Signature and Printed Name): Nara Tep | Date/Time: 11/30/20 1700 | Received by (Signature and Printed Name): | Date/Time: 11-30-20 1700 |
| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [x] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Terms**
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
   Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=$Zn(AC)_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 11/30/2020 | Workorder: | N043194 |
| Rep sample Temp (Deg C): | 0.6/1.8 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☐ | No ☑ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☑ | No ☐ | NA ☐ |

Comments: See Correspondence.

Checklist Completed By: BHN BHdez 12/1/2020

Reviewed By: MBC 12/08/2020

## Mary Ann Balilu (maryann.balilu@assetlaboratoriesph.com)

**From:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Sent:** Tuesday, December 01, 2020 12:36 PM
**To:** Yoandra Rodriguez
**Cc:** maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com
**Subject:** RE: PG&E Topock - GMP, 30035275 (ASSET Labs No. N043194)

Hi Yoandra,

- Sample 7: ID should be MW-38S-Q420.

- Sample 11 (MW-47-115-Q420) and 12 (MW-47-055-Q420): Nitrate/Nitrate by SM4500 is requested on the COC, but we did not receive the bottles. Please kindly check. Nitrate is not needed for these samples, the COC inadvertently was marked for nitrate.

Thanks!
Laura

---

**From:** Yoandra Rodriguez <yoandra@assetlaboratories.com>
**Sent:** Tuesday, December 1, 2020 2:06 PM
**To:** Madsen, Laura <Laura.Madsen@arcadis.com>
**Cc:** maryann.balilu@assetlaboratoriesph.com; rustico.aquino@assetlaboratoriesph.com
**Subject:** PG&E Topock - GMP, 30035275 (ASSET Labs No. N043194)

Hi Laura,

Please kindly advise on the following issues for the attached COC:

- Sample 7: ID is MW-38S-Q430 on COC and MW-38S-Q420 on labels.

- Sample 11 (MW-47-115-Q420) and 12 (MW-47-055-Q420): Nitrate/Nitrate by SM4500 is requested on the COC, but we did not receive the bottles. Please kindly check.

--
**Thanks,**

**Yoandra Rodriguez**
Nevada: 3151 W. Post Road, Las Vegas, NV 89118 | P: 702.307.2659 | F: 702.307.2691
California: 11110 Artesia Blvd., Ste. B, Cerritos, CA 90703 | P: 562.219.7435 | F: 562.219.7436

ASSET LABORATORIES - Serving Clients with Passion and Professionalism

This message is intended for the use of the individual or entity to which it is addressed. This may contain information that is privileged, confidential, and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient, or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone and delete the original message. Thank you.

**Subject:** Re: Sample ID Updates
**From:** Nancy Sibucao <nancy@assetlaboratories.com>
**Date:** 12/8/2020, 11:14 AM
**To:** Tina Rice <Tina.Rice@critigen.com>, Yoandra Rodriguez <yoandra@assetlaboratories.com>, "maryann.balilu@assetlaboratoriesph.com" <maryann.balilu@assetlaboratoriesph.com>

Will do Tina.

Thanks,
Nancy

---

**From:** Tina Rice [mailto:Tina.Rice@critigen.com]
**Sent:** Tuesday, December 8, 2020, 11:09 AM
**To:** Nancy Sibucao
**Subject:** Sample ID Updates

> Hi Nancy,
>
> Could you please make the following sample updates?
>
> Hinkley
>
| WorkOrder | ClientSampID | New ClientSampID |
|---|---|---|
| N043208 | EB-792-Q420 | EB-792-RE-Q420 |
| N043208 | EB-793-Q420 | EB-793-RE-Q420 |

> Topock
>
| WorkOrder | ClientSampID | New ClientSampID |
|---|---|---|
| N043194 | EB-701-Q420 | EB-701-1120 |
| N043194 | EB-702-Q420 | EB-702-1120 |
| N043305 | Trip Blank | Trip Blank_20201204 |

> Thank you!

# ASSET Laboratories

## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-001A | MW-70BR-225-Q420 | 11/30/2020 1:28:00 PM | 12/14/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-001B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-001C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043194-001D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043194-002A | MW-70-105-Q420 | 11/30/2020 2:12:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-002B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-002B | MW-70-105-Q420 | 11/30/2020 2:12:00 PM | 12/14/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-002C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043194-002D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043194-003A | MW-58BR-Q420 | 11/30/2020 2:53:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-003B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-003C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043194-003D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-003D | MW-58BR-Q420 | 11/30/2020 2:53:00 PM | 12/14/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043194-004A | MW-64BR-Q420 | 11/30/2020 3:58:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-004B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-004C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043194-004D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043194-005A | EB-702-1120 | 11/30/2020 4:15:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-006A | MW-38D-Q420 | 11/30/2020 2:49:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☑ | ☐ | ☐ | WW |
| N043194-006B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☑ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-006B | MW-38D-Q420 | 11/30/2020 2:49:00 PM | 12/14/2020 | Groundwater | SM 2320 B | ALKALINITY, SPECIATED | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☑ | ☐ | ☐ | WW |
| N043194-006C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☑ | ☐ | ☐ | WW |
| N043194-006D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☑ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☑ | ☐ | ☐ | WW |
| N043194-007A | MW-38S-Q420 | 11/30/2020 1:53:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-007B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-007C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-007D | MW-38S-Q420 | 11/30/2020 1:53:00 PM | 12/14/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043194-008A | MW-10-Q420 | 11/30/2020 3:31:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-008B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-008C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043194-008D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-008D | MW-10-Q420 | 11/30/2020 3:31:00 PM | 12/14/2020 | Groundwater | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043194-009A | MW-904-Q420 | 11/30/2020 3:41:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-009B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-009C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | WW |
| N043194-009D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043194-010A | EB-703-Q420 | 11/30/2020 4:00:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-011A | MW-47-115-Q420 | 11/30/2020 2:01:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-011B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-011B | MW-47-115-Q420 | 11/30/2020 2:01:00 PM | 12/14/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-011C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☑ | ☐ | ☐ | WW |
| N043194-011D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043194-011E | | | 12/14/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043194-012A | MW-47-055-Q420 | 11/30/2020 2:41:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-012B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

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## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-012B | MW-47-055-Q420 | 11/30/2020 2:41:00 PM | 12/14/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-012C | | | 12/14/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☑ | ☐ | ☐ | WW |
| N043194-012D | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043194-012E | | | 12/14/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043194-013A | TW-04-Q420 | 11/30/2020 3:36:00 PM | 12/14/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-013B | | | 12/14/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/14/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043194-013C | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/14/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*08-Dec-20*

**WorkOrder:** N043194

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 11/30/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043194-014A | EB-701-1120 | 11/30/2020 3:56:00 PM | 12/14/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043194-015A | FOLDER | 12/14/2020 | 12/14/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/14/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/14/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/14/2020 | | | QA Review | ☐ | ☐ | ☐ | LAB |
| | | | 12/14/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Signed

**08-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **SM4500-NO3F** | | |
| N043194-001C / MW-70BR-225-Q420 | Groundwater | 11/30/2020 1:28:00 PM | 8ZOP | 1 | | |
| N043194-002C / MW-70-105-Q420 | Groundwater | 11/30/2020 2:12:00 PM | 8ZOP | 1 | | |
| N043194-003C / MW-58BR-Q420 | Groundwater | 11/30/2020 2:53:00 PM | 8ZOP | 1 | | |
| N043194-004C / MW-64BR-Q420 | Groundwater | 11/30/2020 3:58:00 PM | 8ZOP | 1 | | |
| N043194-007C / MW-38S-Q420 | Groundwater | 11/30/2020 1:53:00 PM | 8ZOP | 1 | | |
| N043194-008C / MW-10-Q420 | Groundwater | 11/30/2020 3:31:00 PM | 8ZOP | 1 | | |
| N043194-009C / MW-904-Q420 | Groundwater | 11/30/2020 3:41:00 PM | 8ZOP | 1 | | |

PO#: N43194B

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:~~N43194A~~ Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/Nitrite by SM4500NO3F. EDD requirement Labspec7 edata.

GSO #: 551447082 / 551447083

| | | Date/Time | | Date/Time |
|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/7/2020 1630 | **Received by:** | |
| **Relinquished by:** | | | **Received by:** | |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: Signed

**07-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043194-011E / MW-47-115-Q420 | Groundwater | 11/30/2020 2:01:00 PM | 4OZP | 1 | | |
| N043194-012E / MW-47-055-Q420 | Groundwater | 11/30/2020 2:41:00 PM | 4OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43194A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:Standard TAT.

Please analyze for Oxygen and Deuterium by CF-IRMS. EDD Requirement Labspec7 edata.

Fedex #: 772289919056

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/7/2020 1600 | **Received by:** | | |
| **Relinquished by:** | | | **Received by:** | | |

December 15, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043209

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 01, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

SM 4500-NO3F was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 218.6:

Dilution was necessary for sample N043209-003 due to matrix interference. Sample was analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Sample was reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of sample upon the addition of eluent.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042309-003DMS1, N042309-003DMSD1, N042309-003DMS2 and N042309-003DMSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042309-003DMS1 and N042309-003DMSD1 possibly due to matrix interference. Post

Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Dilution was necessary on Beryllium for sample N043209-003 due to associated internal standard not meeting method criteria possibly due to matrix interference. Sample was analyzed with dilution and internal standard met method criteria. Affected analytes for this failed internal standard were reported at dilution that meets internal standard recovery limit.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Beryllium in QC samples N043209-003DMS and N043209-003DMSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N042309-003DMS and N042309-003DMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043209
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043209-001A | MW-24A-Q420 | Groundwater | 12/1/2020 2:32:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-001B | MW-24A-Q420 | Groundwater | 12/1/2020 2:32:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-001C | MW-24A-Q420 | Groundwater | 12/1/2020 2:32:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-001D | MW-24A-Q420 | Groundwater | 12/1/2020 2:32:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-002A | MW-908-Q420 | Groundwater | 12/1/2020 2:42:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-002B | MW-908-Q420 | Groundwater | 12/1/2020 2:42:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-002C | MW-908-Q420 | Groundwater | 12/1/2020 2:42:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-002D | MW-908-Q420 | Groundwater | 12/1/2020 2:42:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-003A | MW-24B-Q420 | Groundwater | 12/1/2020 1:42:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-003B | MW-24B-Q420 | Groundwater | 12/1/2020 1:42:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-003C | MW-24B-Q420 | Groundwater | 12/1/2020 1:42:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-003D | MW-24B-Q420 | Groundwater | 12/1/2020 1:42:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-004A | EB-704-Q420 | Groundwater | 12/1/2020 4:00:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-005A | MW-09-Q420 | Groundwater | 12/1/2020 3:07:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-005B | MW-09-Q420 | Groundwater | 12/1/2020 3:07:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-005C | MW-09-Q420 | Groundwater | 12/1/2020 3:07:00 PM | 12/1/2020 | 12/15/2020 |
| N043209-005D | MW-09-Q420 | Groundwater | 12/1/2020 3:07:00 PM | 12/1/2020 | 12/15/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24A-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 2:32:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201202A** | QC Batch: **R149062** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1800 | 0.10 | 0.10 | | umhos/cm | 1 | 12/2/2020 09:35 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-908-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 2:42:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201202A** | QC Batch: **R149062** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 1800 | 0.10 | 0.10 | | umhos/cm | 1 | 12/2/2020 09:35 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24B-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 1:42:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201202A** | QC Batch: **R149062** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 20000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/2/2020 09:35 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-09-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 3:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201202A** | QC Batch: **R149062** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3200 | 0.10 | 0.10 | | umhos/cm | 1 | 12/2/2020 09:35 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043209-003BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149062**
Client ID: **ZZZZZZ** Batch ID: **R149062** TestNo: **EPA 120.1** Analysis Date: **12/2/2020** SeqNo: **4020623**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 20300.000 | 0.10 | | | | | | 20100 | 0.990 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-09-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 3:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201202F** | QC Batch: **83242** | | | PrepDate: | **12/2/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1700 | 25 | 25 | | mg/L | 1 | 12/2/2020 01:32 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83242** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/2/2020** | RunNo: **149097** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83242** | TestNo: **SM2540C** | | Analysis Date: **12/2/2020** | SeqNo: **4022910** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 981.000 | 10 | 1000 | 0 | 98.1 | 80 | 120 | | | | |

| Sample ID: **MB-83242** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/2/2020** | RunNo: **149097** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83242** | TestNo: **SM2540C** | | Analysis Date: **12/2/2020** | SeqNo: **4022911** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043203-014ADUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/2/2020** | RunNo: **149097** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83242** | TestNo: **SM2540C** | | Analysis Date: **12/2/2020** | SeqNo: **4022916** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 17900.000 | 500 | | | | | | 17300 | 3.41 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24A-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 2:32:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201202A** | QC Batch: **R149098** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/2/2020 11:01 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 06:14 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-908-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 2:42:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201202A** | QC Batch: **R149098** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/2/2020 12:25 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 06:28 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24B-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 1:42:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201202A** QC Batch: **R149098** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 64 | 0.33 | 2.0 | | µg/L | 10 | 12/2/2020 02:24 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201203A** QC Batch: **83223** | | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 65 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 06:57 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-704-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 4:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201202A** | QC Batch: **R149098** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/2/2020 01:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-09-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 3:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201202A** | QC Batch: **R149098** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 120 | 0.66 | 4.0 | | µg/L | 20 | 12/2/2020 11:20 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 120 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 08:26 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149098** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149098** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149098** | TestNo: **EPA 218.6** | | Analysis Date: **12/2/2020** | SeqNo: **4022926** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149098** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149098** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149098** | TestNo: **EPA 218.6** | | Analysis Date: **12/2/2020** | SeqNo: **4022927** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.938 | 0.20 | 5.000 | 0 | 98.8 | 90 | 110 | | | | |

| Sample ID: **N043208-008ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149098** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149098** | TestNo: **EPA 218.6** | | Analysis Date: **12/2/2020** | SeqNo: **4022949** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.050 | 0.20 | | | | | | 2.060 | 0.477 | 20 | |

| Sample ID: **N043209-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149098** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149098** | TestNo: **EPA 218.6** | | Analysis Date: **12/2/2020** | SeqNo: **4022950** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.987 | 0.20 | 1.000 | 0 | 98.7 | 90 | 110 | | | | |

| Sample ID: **N043209-002AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149098** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149098** | TestNo: **EPA 218.6** | | Analysis Date: **12/2/2020** | SeqNo: **4022952** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.997 | 0.20 | 1.000 | 0 | 99.7 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043209-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149098**
Client ID: **ZZZZZZ** Batch ID: **R149098** TestNo: **EPA 218.6** Analysis Date: **12/2/2020** SeqNo: **4022953**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 222.262 | 4.0 | 100.0 | 123.9 | 98.4 | 90 | 110 | | | | |

Sample ID: **N043209-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149098**
Client ID: **ZZZZZZ** Batch ID: **R149098** TestNo: **EPA 218.6** Analysis Date: **12/2/2020** SeqNo: **4022955**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.969 | 0.20 | 1.000 | 0 | 96.9 | 90 | 110 | | | | |

Sample ID: **N043209-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149098**
Client ID: **ZZZZZZ** Batch ID: **R149098** TestNo: **EPA 218.6** Analysis Date: **12/2/2020** SeqNo: **4022959**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 113.819 | 2.0 | 50.00 | 64.28 | 99.1 | 90 | 110 | | | | |

Sample ID: **N043209-003AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149098**
Client ID: **ZZZZZZ** Batch ID: **R149098** TestNo: **EPA 218.6** Analysis Date: **12/2/2020** SeqNo: **4022960**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 115.054 | 2.0 | 50.00 | 64.28 | 102 | 90 | 110 | 113.8 | 1.08 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83223** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031442** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83223** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031443** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 10.103 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |

| Sample ID: **N043209-003DMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031471** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 72.444 | 1.0 | 10.00 | 65.46 | 69.9 | 75 | 125 | | | | S |

| Sample ID: **N043209-003DMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031474** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 71.801 | 1.0 | 10.00 | 65.46 | 63.5 | 75 | 125 | 72.44 | 0.891 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **N043209-003D-PS** | SampType: **PS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031468** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 73.796 | 1.0 | 10.00 | 65.46 | 83.4 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-09-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 3:07:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201202D** | QC Batch: **R149089** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 120 | 1.2 | 5.0 | | mg/L | 1 | 12/2/2020 03:40 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149089** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149089** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149089** | TestNo: **SM 2320 B** | | Analysis Date: **12/2/2020** | SeqNo: **4022542** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 98.958 | 5.0 | 100.0 | 0 | 99.0 | 85 | 115 | | | | |

| Sample ID: **MB-R149089** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149089** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149089** | TestNo: **SM 2320 B** | | Analysis Date: **12/2/2020** | SeqNo: **4022543** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043203-002AMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149089** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149089** | TestNo: **SM 2320 B** | | Analysis Date: **12/2/2020** | SeqNo: **4022545** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 192.708 | 5.0 | 100.0 | 92.71 | 100 | 75 | 125 | | | | |

| Sample ID: **N043203-002AMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149089** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149089** | TestNo: **SM 2320 B** | | Analysis Date: **12/2/2020** | SeqNo: **4022546** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 193.750 | 5.0 | 100.0 | 92.71 | 101 | 75 | 125 | 192.7 | 0.539 | 20 | |

| Sample ID: **N043203-013ADUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149089** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149089** | TestNo: **SM 2320 B** | | Analysis Date: **12/2/2020** | SeqNo: **4022558** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 39.583 | 5.0 | | | | | | 38.54 | 2.67 | 30 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043209
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043209-005

**Client Sample ID:** MW-09-Q420
**Collection Date:** 12/1/2020 3:07:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/3/2020 08:33 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 740 | 7.0 | 100 | | mg/L | 200 | 12/3/2020 09:11 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 250 | 0.80 | 10 | | mg/L | 20 | 12/3/2020 09:26 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149119_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028146** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149119_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028147** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.257 | 0.50 | 1.250 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N043221-006AMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028168** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.492 | 2.5 | 6.250 | 0.1825 | 101 | 80 | 120 | | | | |

| Sample ID: **N043221-006AMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028169** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.378 | 2.5 | 6.250 | 0.1825 | 99.1 | 80 | 120 | 6.492 | 1.78 | 20 | |

| Sample ID: **N043223-012BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028170** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.470 | 2.5 | 6.250 | 0.4460 | 96.4 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **N043223-012BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028171** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.428 | 2.5 | 6.250 | 0.4460 | 95.7 | 80 | 120 | 6.470 | 0.644 | 20 | |

| Sample ID: **N043221-002ADUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028172** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.710 | 5.0 | | | | | | 0.7990 | 0 | 20 | |

| Sample ID: **N043221-002AMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028173** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 13.145 | 5.0 | 12.50 | 0.7990 | 98.8 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149119_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **PBW** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023703**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149119_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **LCSW** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023704**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.972 | 0.50 | 2.000 | 0 | 98.6 | 90 | 110 | | | | |

Sample ID: **N043221-006AMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023712**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1260.380 | 100 | 400.0 | 865.9 | 98.6 | 80 | 120 | | | | |

Sample ID: **N043221-006AMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023713**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1265.060 | 100 | 400.0 | 865.9 | 99.8 | 80 | 120 | 1260 | 0.371 | 20 | |

Sample ID: **N043223-012BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023715**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4754.100 | 500 | 2000 | 2933 | 91.1 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043223-012BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023716** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4818.900 | 500 | 2000 | 2933 | 94.3 | 80 | 120 | 4754 | 1.35 | 20 | |

| Sample ID: **N043221-011ADUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023718** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2988.600 | 500 | | | | | | 2985 | 0.114 | 20 | |

| Sample ID: **N043221-011AMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023719** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4955.400 | 500 | 2000 | 2985 | 98.5 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **MB-R149119_SO4** | SampType: **MBLK** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023801** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.228 | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149119_SO4** | SampType: **LCS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023802** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.980 | 0.50 | 4.000 | 0 | 99.5 | 90 | 110 | | | | |

| Sample ID: **N043221-006AMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023812** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 278.040 | 10 | 80.00 | 194.9 | 104 | 80 | 120 | | | | |

| Sample ID: **N043221-006AMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023813** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 276.284 | 10 | 80.00 | 194.9 | 102 | 80 | 120 | 278.0 | 0.634 | 20 | |

| Sample ID: **N043223-012BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023815** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1069.290 | 50 | 400.0 | 673.7 | 98.9 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043223-012BMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023816** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1080.340 | 50 | 400.0 | 673.7 | 102 | 80 | 120 | 1069 | 1.03 | 20 | |

| Sample ID: **N043221-011ADUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023818** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1340.860 | 100 | | | | | | 1347 | 0.488 | 20 | |

| Sample ID: **N043221-011AMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023819** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2146.180 | 100 | 800.0 | 1347 | 99.8 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043209
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043209-005

**Client Sample ID:** MW-09-Q420
**Collection Date:** 12/1/2020 3:07:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201204B** | QC Batch: **83225** | | | PrepDate: | **12/2/2020** | Analyst: **DJ** | |
| Boron | 1000 | 74 | 100 | | ug/L | 1 | 12/4/2020 01:20 PM |
| Calcium | 100000 | 85 | 500 | | ug/L | 1 | 12/4/2020 01:20 PM |
| Iron | ND | 18 | 20 | | ug/L | 1 | 12/4/2020 01:20 PM |
| Magnesium | 36000 | 48 | 100 | | ug/L | 1 | 12/4/2020 01:20 PM |
| Sodium | 450000 | 2400 | 12000 | | ug/L | 25 | 12/6/2020 04:29 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **MB-83225** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149121** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4023864** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

| Sample ID: **LCS1-83225** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149121** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4023865** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5000.017 | 100 | 5000 | 0 | 100 | 85 | 115 | | | | |
| Calcium | 10868.896 | 500 | 10000 | 0 | 109 | 85 | 115 | | | | |
| Iron | 110.370 | 20 | 100.0 | 0 | 110 | 85 | 115 | | | | |
| Magnesium | 11157.304 | 100 | 10000 | 0 | 112 | 85 | 115 | | | | |

| Sample ID: **N043209-003DMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149121** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4023869** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 10822.786 | 500 | 5000 | 3914 | 138 | 75 | 125 | | | | S |
| Calcium | 357324.245 | 2500 | 10000 | 328900 | 284 | 75 | 125 | | | | S |
| Iron | 116.137 | 100 | 100.0 | 0 | 116 | 75 | 125 | | | | |
| Magnesium | 25430.378 | 500 | 10000 | 11830 | 136 | 75 | 125 | | | | S |

| Sample ID: **N043209-003DMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149121** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4023870** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 10756.208 | 500 | 5000 | 3914 | 137 | 75 | 125 | 10820 | 0.617 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043209-003DMSD1** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149121** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4023870** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 350301.993 | 2500 | 10000 | 328900 | 214 | 75 | 125 | 357300 | 1.98 | 20 | S |
| Iron | 121.417 | 100 | 100.0 | 0 | 121 | 75 | 125 | 116.1 | 4.45 | 20 | |
| Magnesium | 25166.631 | 500 | 10000 | 11830 | 133 | 75 | 125 | 25430 | 1.04 | 20 | S |

| Sample ID: **MB-83225** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149175** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/6/2020** | SeqNo: **4027478** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

| Sample ID: **LCS2-83225** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149175** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/6/2020** | SeqNo: **4027479** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18877.847 | 500 | 20000 | 0 | 94.4 | 85 | 115 | | | | |

| Sample ID: **N043209-003DMS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149175** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/6/2020** | SeqNo: **4027485** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 4466816.388 | 250000 | 20000 | 5441000 | -4870 | 75 | 125 | | | | S |

| Sample ID: **N043209-003DMSD2** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/2/2020** | RunNo: **149175** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/6/2020** | SeqNo: **4027486** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 4200224.491 | 250000 | 20000 | 5441000 | -6200 | 75 | 125 | 4467000 | 6.15 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043209-003D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149121** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4023868** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 10424.179 | 500 | 5000 | 3914 | 130 | 80 | 120 | | | | S |
| Calcium | 349653.165 | 2500 | 10000 | 328900 | 208 | 80 | 120 | | | | S |
| Iron | 128.794 | 100 | 100.0 | 0 | 129 | 80 | 120 | | | | S |
| Magnesium | 24747.700 | 500 | 10000 | 11830 | 129 | 80 | 120 | | | | S |

| Sample ID: **N043209-003D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149175** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83225** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/6/2020** | SeqNo: **4027484** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 4430094.714 | 250000 | 20000 | 5441000 | -5050 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043209
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043209-001

**Client Sample ID:** MW-24A-Q420
**Collection Date:** 12/1/2020 2:32:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201203A** QC Batch: **83223** PrepDate: **12/3/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Arsenic | 0.43 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Barium | 23 | 0.15 | 1.0 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Manganese | 20 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Molybdenum | 120 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Nickel | 1.2 | 0.26 | 1.0 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Vanadium | ND | 0.28 | 1.0 | | µg/L | 1 | 12/3/2020 06:14 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/3/2020 06:14 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043209
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043209-002

**Client Sample ID:** MW-908-Q420
**Collection Date:** 12/1/2020 2:42:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201203A** QC Batch: **83223** PrepDate: **12/3/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Arsenic | 0.35 | 0.081 | 0.10 | | µg/L | 1 | 12/4/2020 12:11 AM |
| Barium | 23 | 0.15 | 1.0 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Manganese | 20 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Molybdenum | 110 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Nickel | 1.4 | 0.26 | 1.0 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Vanadium | ND | 0.28 | 1.0 | | µg/L | 1 | 12/3/2020 06:28 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/3/2020 06:28 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043209
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043209-003

**Client Sample ID:** MW-24B-Q420
**Collection Date:** 12/1/2020 1:42:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP-MS

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP7_201203A** QC Batch: **83223** PrepDate: **12/3/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Arsenic | 3.8 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Barium | 74 | 0.15 | 1.0 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Beryllium | ND | 0.21 | 2.5 | | µg/L | 5 | 12/3/2020 07:02 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Manganese | 120 | 1.3 | 2.5 | | µg/L | 5 | 12/3/2020 07:02 PM |
| Molybdenum | 63 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Nickel | 3.4 | 0.26 | 1.0 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Selenium | 1.8 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Vanadium | 3.6 | 0.28 | 1.0 | | µg/L | 1 | 12/3/2020 06:57 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/3/2020 06:57 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043209
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043209-005

**Client Sample ID:** MW-09-Q420
**Collection Date:** 12/1/2020 3:07:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83223** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 1.8 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 08:26 PM |
| Manganese | 1.7 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 08:26 PM |
| Molybdenum | 4.4 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 08:26 PM |
| Selenium | 5.3 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 08:26 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83223** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/3/2020** RunNo: **149247**
Client ID: **PBW** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031547**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | ND | 1.0 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Copper | ND | 1.0 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | ND | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

Sample ID: **LCS-83223** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/3/2020** RunNo: **149247**
Client ID: **LCSW** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031548**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.265 | 0.50 | 10.00 | 0 | 103 | 85 | 115 | | | | |
| Arsenic | 10.378 | 0.10 | 10.00 | 0 | 104 | 85 | 115 | | | | |
| Barium | 10.162 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Beryllium | 9.917 | 0.50 | 10.00 | 0 | 99.2 | 85 | 115 | | | | |
| Cadmium | 10.026 | 0.50 | 10.00 | 0 | 100 | 85 | 115 | | | | |
| Cobalt | 10.139 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Copper | 10.383 | 1.0 | 10.00 | 0 | 104 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **LCS-83223** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/3/2020** RunNo: **149247**
Client ID: **LCSW** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031548**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead | 10.056 | 1.0 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Manganese | 100.725 | 0.50 | 100.0 | 0 | 101 | 85 | 115 | | | | |
| Molybdenum | 9.778 | 0.50 | 10.00 | 0 | 97.8 | 85 | 115 | | | | |
| Nickel | 10.276 | 1.0 | 10.00 | 0 | 103 | 85 | 115 | | | | |
| Selenium | 9.920 | 0.50 | 10.00 | 0 | 99.2 | 85 | 115 | | | | |
| Silver | 10.688 | 0.50 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Thallium | 9.638 | 0.50 | 10.00 | 0 | 96.4 | 85 | 115 | | | | |
| Vanadium | 10.192 | 1.0 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Zinc | 109.420 | 10 | 100.0 | 0 | 109 | 85 | 115 | | | | |

Sample ID: **N043209-003DMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/3/2020** RunNo: **149247**
Client ID: **ZZZZZZ** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031576**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.115 | 0.50 | 10.00 | 0.1876 | 99.3 | 75 | 125 | | | | |
| Arsenic | 13.963 | 0.10 | 10.00 | 3.816 | 101 | 75 | 125 | | | | |
| Barium | 82.255 | 1.0 | 10.00 | 73.79 | 84.7 | 75 | 125 | | | | |
| Cadmium | 9.313 | 0.50 | 10.00 | 0.06743 | 92.5 | 75 | 125 | | | | |
| Cobalt | 8.623 | 0.50 | 10.00 | 0.1288 | 84.9 | 75 | 125 | | | | |
| Copper | 9.793 | 1.0 | 10.00 | 0 | 97.9 | 75 | 125 | | | | |
| Lead | 10.281 | 1.0 | 10.00 | 0.2103 | 101 | 75 | 125 | | | | |
| Molybdenum | 71.854 | 0.50 | 10.00 | 62.62 | 92.3 | 75 | 125 | | | | |
| Nickel | 12.683 | 1.0 | 10.00 | 3.441 | 92.4 | 75 | 125 | | | | |
| Selenium | 11.005 | 0.50 | 10.00 | 1.754 | 92.5 | 75 | 125 | | | | |
| Silver | 9.407 | 0.50 | 10.00 | 0 | 94.1 | 75 | 125 | | | | |
| Thallium | 7.682 | 0.50 | 10.00 | 0 | 76.8 | 75 | 125 | | | | |
| Vanadium | 13.404 | 1.0 | 10.00 | 3.588 | 98.2 | 75 | 125 | | | | |
| Zinc | 93.759 | 10 | 100.0 | 2.490 | 91.3 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **N043209-003DMS** | SampType: **MS** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031577** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 37.310 | 2.5 | 50.00 | 0 | 74.6 | 75 | 125 | | | | S |
| Manganese | 598.606 | 2.5 | 500.0 | 121.6 | 95.4 | 75 | 125 | | | | |

| Sample ID: **N043209-003DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031579** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.064 | 0.50 | 10.00 | 0.1876 | 98.8 | 75 | 125 | 10.12 | 0.509 | 20 | |
| Arsenic | 13.745 | 0.10 | 10.00 | 3.816 | 99.3 | 75 | 125 | 13.96 | 1.57 | 20 | |
| Barium | 81.701 | 1.0 | 10.00 | 73.79 | 79.1 | 75 | 125 | 82.25 | 0.675 | 20 | |
| Cadmium | 9.568 | 0.50 | 10.00 | 0.06743 | 95.0 | 75 | 125 | 9.313 | 2.71 | 20 | |
| Cobalt | 8.542 | 0.50 | 10.00 | 0.1288 | 84.1 | 75 | 125 | 8.623 | 0.943 | 20 | |
| Copper | 9.571 | 1.0 | 10.00 | 0 | 95.7 | 75 | 125 | 9.793 | 2.29 | 20 | |
| Lead | 10.267 | 1.0 | 10.00 | 0.2103 | 101 | 75 | 125 | 10.28 | 0.141 | 20 | |
| Molybdenum | 72.214 | 0.50 | 10.00 | 62.62 | 96.0 | 75 | 125 | 71.85 | 0.500 | 20 | |
| Nickel | 12.575 | 1.0 | 10.00 | 3.441 | 91.3 | 75 | 125 | 12.68 | 0.852 | 20 | |
| Selenium | 11.203 | 0.50 | 10.00 | 1.754 | 94.5 | 75 | 125 | 11.01 | 1.79 | 20 | |
| Silver | 9.485 | 0.50 | 10.00 | 0 | 94.9 | 75 | 125 | 9.407 | 0.831 | 20 | |
| Thallium | 8.147 | 0.50 | 10.00 | 0 | 81.5 | 75 | 125 | 7.682 | 5.88 | 20 | |
| Vanadium | 13.201 | 1.0 | 10.00 | 3.588 | 96.1 | 75 | 125 | 13.40 | 1.52 | 20 | |
| Zinc | 94.404 | 10 | 100.0 | 2.490 | 91.9 | 75 | 125 | 93.76 | 0.686 | 20 | |

| Sample ID: **N043209-003DMSD** | SampType: **MSD** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83223** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031580** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 37.062 | 2.5 | 50.00 | 0 | 74.1 | 75 | 125 | 37.31 | 0.667 | 20 | S |
| Manganese | 600.963 | 2.5 | 500.0 | 121.6 | 95.9 | 75 | 125 | 598.6 | 0.393 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043209-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149247**
Client ID: **ZZZZZZ** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031573**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.290 | 0.50 | 10.00 | 0.1876 | 101 | 80 | 120 | | | | |
| Arsenic | 14.051 | 0.10 | 10.00 | 3.816 | 102 | 80 | 120 | | | | |
| Barium | 82.492 | 1.0 | 10.00 | 73.79 | 87.0 | 80 | 120 | | | | |
| Cadmium | 9.802 | 0.50 | 10.00 | 0.06743 | 97.3 | 80 | 120 | | | | |
| Cobalt | 8.821 | 0.50 | 10.00 | 0.1288 | 86.9 | 80 | 120 | | | | |
| Copper | 9.339 | 1.0 | 10.00 | 0 | 93.4 | 80 | 120 | | | | |
| Lead | 10.620 | 1.0 | 10.00 | 0.2103 | 104 | 80 | 120 | | | | |
| Molybdenum | 72.015 | 0.50 | 10.00 | 62.62 | 94.0 | 80 | 120 | | | | |
| Nickel | 12.490 | 1.0 | 10.00 | 3.441 | 90.5 | 80 | 120 | | | | |
| Selenium | 10.584 | 0.50 | 10.00 | 1.754 | 88.3 | 80 | 120 | | | | |
| Silver | 9.719 | 0.50 | 10.00 | 0 | 97.2 | 80 | 120 | | | | |
| Thallium | 7.929 | 0.50 | 10.00 | 0 | 79.3 | 80 | 120 | | | | S |
| Vanadium | 13.631 | 1.0 | 10.00 | 3.588 | 100 | 80 | 120 | | | | |
| Zinc | 93.099 | 10 | 100.0 | 2.490 | 90.6 | 80 | 120 | | | | |

Sample ID: **N043209-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149247**
Client ID: **ZZZZZZ** Batch ID: **83223** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031574**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Beryllium | 37.296 | 2.5 | 50.00 | 0 | 74.6 | 80 | 120 | | | | S |
| Manganese | 598.673 | 2.5 | 500.0 | 121.6 | 95.4 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24A-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 2:32:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201202A** | QC Batch: **83229** | | | PrepDate: | | **12/2/2020** | Analyst: **CEI** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/2/2020 03:39 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-908-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 2:42:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201202A** | QC Batch: **83229** | | | PrepDate: | | **12/2/2020** | Analyst: **CEI** |
| Mercury | 0.61 | 0.13 | 0.20 | | µg/L | 1 | 12/2/2020 03:42 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24B-Q420 |
| **Lab Order:** | N043209 | **Collection Date:** | 12/1/2020 1:42:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043209-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201202A** | QC Batch: **83229** | | | PrepDate: | | **12/2/2020** | Analyst: **CEI** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/2/2020 03:46 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **MB-83229** | SampType: **MBLK** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021715** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-83229** | SampType: **LCS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021716** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.700 | 0.20 | 5.000 | 0 | 94.0 | 85 | 115 | | | | |

| Sample ID: **N043203-002DMS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021723** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.010 | 0.20 | 5.000 | 0 | 100 | 75 | 125 | | | | |

| Sample ID: **N043203-002DMSD** | SampType: **MSD** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021726** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.900 | 0.20 | 5.000 | 0 | 98.0 | 75 | 125 | 5.010 | 2.22 | 20 | |

| Sample ID: **N043209-003DMS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021746** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 4.980 | 0.20 | 5.000 | 0 | 99.6 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043209
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **N043209-003DMSD** | SampType: **MSD** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/2/2020** | RunNo: **149077** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83229** | TestNo: **EPA 7470A** | | Analysis Date: **12/2/2020** | SeqNo: **4021747** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.010 | 0.20 | 5.000 | 0 | 100 | 75 | 125 | 4.980 | 0.601 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

N043209


ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

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California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


# CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Others ✓; Specify: RWQCB |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RWQCB ✓ |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Sample Receipt Condition: 1. Chilled Y ✓; 2. Headspace; 3. Container Intact Y ✓; 4. Seal Present Y ✓; 5. IR number 2; 6. Method of Cooling: Ice |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.#: SWA-ASSET-C9817-057 |
| Submitted By: Nam Tey | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Sample Tech | Sampled By: Matt Tominetti | Global ID: | Specify State: |
| Signature: Date: 12/1/20 | Signature: Date: 12-1-20 | | Sample Temp: 4.1°C / 3.4°C |
| Project Name: PG&E Topock - GMP | | | Courier: ASSETS |
| Project Number: 30035275 | | | Tracking No.: |

I hereby authorize ASSET Labs to perform the tests indicated below.

I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action.

Matrix: Ground x; Sediment; Potable; Soil; NPDES; Other Solid; Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CFIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250/60 mL poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL poly | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 Cu, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043209-01 | MW-24A-Q420 | 12/1/2020 | 14:32 | | X | | | | | | X | | X | | X | | | | | | | | X | X | | E | 4 | P | BNS | |
| 2 | -02 | MW-908-Q420 | 12/1/2020 | 14:42 | | X | | | | | | X | | X | | X | | | | | | | | X | X | | E | 4 | P | BNS | |
| 3 | -03 | MW-24B-Q420 | 12/1/2020 | 13:42 | | X | | | | | | X | | X | | X | | | | | | | | X | X | | E | 4 | P | BNS | MSMSD |
| 4 | -04 | EB-704-Q420 | 12/1/2020 | 16:00 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 5 | -05 | MW-09-Q420 | 12/1/2020 | 15:07 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---|---|
| Relinquished by (Signature and Printed Name): Nam Tey Date/Time: 12/1/20 1715 | Received by (Signature and Printed Name): Date/Time: 12-01-20 1715 |
| Relinquished by (Signature and Printed Name): Date/Time: 12-01-20 8:01 PM | Received by (Signature and Printed Name): Date/Time: 12-01-20 8:01 PM |
| Relinquished by (Signature and Printed Name): Date/Time: | Received by (Signature and Printed Name): Date/Time: |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

| Preservatives: | | | | Container Type: | | |
|---|---|---|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C | T=Tube | V=VOA | P=Pint |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | | J=Jar | B=Tedlar | G=Glass |
| Others/Specify: | B (NH4)2SO4/NH4OH | | | M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/1/2020 | Workorder: | N043209 |
| Rep sample Temp (Deg C): | 4.1/3.4 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/2/2020

Reviewed By: MBC 12/03/2020

# ASSET Laboratories

## WORK ORDER Summary

*02-Dec-20*

**WorkOrder:** N043209

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/1/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043209-001A | MW-24A-Q420 | 12/1/2020 2:32:00 PM | 12/11/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043209-001B | | | 12/11/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| N043209-001C | | | 12/11/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043209-001D | | | 12/11/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043209-002A | MW-908-Q420 | 12/1/2020 2:42:00 PM | 12/11/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043209-002B | | | 12/11/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| N043209-002C | | | 12/11/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043209-002D | | | 12/11/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043209-003A | MW-24B-Q420 | 12/1/2020 1:42:00 PM | 12/11/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043209-003B | | | 12/11/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | LSR |
| N043209-003C | | | 12/11/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☐ | WW |
| N043209-003D | | | 12/11/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*02-Dec-20*

**WorkOrder:** N043209

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/1/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043209-003D | MW-24B-Q420 | 12/1/2020 1:42:00 PM | 12/11/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/11/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☑ | ☐ | WW |
| | | | 12/11/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043209-004A | EB-704-Q420 | 12/1/2020 4:00:00 PM | 12/11/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043209-005A | MW-09-Q420 | 12/1/2020 3:07:00 PM | 12/11/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043209-005B | | | 12/11/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/11/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/11/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/11/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/11/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/11/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/11/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/11/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043209-005C | | | 12/11/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043209-005D | | | 12/11/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/11/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043209-006A | FOLDER | 12/11/2020 | 12/11/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

# ASSET Laboratories

## WORK ORDER Summary

*02-Dec-20*

**WorkOrder:** N043209

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/1/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043209-006A | FOLDER | 12/11/2020 | 12/11/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/11/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/15/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: SIGNED

**08-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **SM4500-NO3F** | | |
| N043209-001C / MW-24A-Q420 | Groundwater | 12/1/2020 2:32:00 PM | 8OZP | 1 | | |
| N043209-002C / MW-908-Q420 | Groundwater | 12/1/2020 2:42:00 PM | 8OZP | 1 | | |
| N043209-003C / MW-24B-Q420 | Groundwater | 12/1/2020 1:42:00 PM | 8OZP | 1 | (MS/MSD) | |
| N043209-005C / MW-09-Q420 | Groundwater | 12/1/2020 3:07:00 PM | 8OZP | 1 | | |

Please run MS/MSD on sample N043209-003C / MW-24B-Q420)

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43209A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/Nitrite by SM4500NO3F. EDD Requirement Labspec7 edata.

GSO #: 551447082 / 551447083

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/7/2020 1630 | **Received by:** | | |
| **Relinquished by:** | | | **Received by:** | | |

December 21, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043223

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 02, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043223

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

SM 4500-NO3F was subcontracted to BC Labs- Bakersfield,CA.

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (8.8 ug/L) and hexavalent chromium (5.0 ug/L) for sample N043223-005 (MW-33-150-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (15 ug/L) and hexavalent chromium (12 ug/L) for sample N043223-006 (MW-33-210-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (1.8 ug/L) and hexavalent chromium (0 ug/L) for sample N043223-010 (MW-33-040-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Because the results for total dissolved chromium (11 ug/L) and hexavalent chromium (3.1 ug/L) for sample N043223-012 (MW-33-090-Q420) are discrepant, sample re-analysis and Matrix Spike protocol

were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for some samples since plasma was extinguished when samples were analyzed at lower dilution.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043223-012DMSD1, N043223-012D-MS2 and N043223-012D-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Because the results for total dissolved chromium (8.8 ug/L) and hexavalent chromium (5.0 ug/L) for sample N043223-005 (MW-33-150-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 8.6 and 5.7 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (15 ug/L) and hexavalent chromium (12 ug/L) for sample N043223-006 (MW-33-210-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 15 and 12 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (1.8 ug/L) and hexavalent chromium (0 ug/L) for sample N043223-010 (MW-33-040-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 1.4 and 0.83 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Because the results for total dissolved chromium (11 ug/L) and hexavalent chromium (3.1 ug/L) for sample N043223-012 (MW-33-090-Q420) are discrepant, sample from both the total dissolved

chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 12 and 11 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Analytical Comments for SM 2320B:

Method Blank MB-R149231 has detect greater than 1/2 the reporting limit. Sample result for this analyte was greater than 5x the Method Blank concentration therefore reanalysis of the sample was not necessary.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043223
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043223-001A | MW-24BR-Q420 | Groundwater | 12/2/2020 1:20:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-001B | MW-24BR-Q420 | Groundwater | 12/2/2020 1:20:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-001C | MW-24BR-Q420 | Groundwater | 12/2/2020 1:20:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-001D | MW-24BR-Q420 | Groundwater | 12/2/2020 1:20:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-002A | MW-62-190-Q420 | Groundwater | 12/2/2020 2:50:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-002B | MW-62-190-Q420 | Groundwater | 12/2/2020 2:50:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-002C | MW-62-190-Q420 | Groundwater | 12/2/2020 2:50:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-002D | MW-62-190-Q420 | Groundwater | 12/2/2020 2:50:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-003A | MW-62-110-Q420 | Groundwater | 12/2/2020 3:00:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-003B | MW-62-110-Q420 | Groundwater | 12/2/2020 3:00:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-003C | MW-62-110-Q420 | Groundwater | 12/2/2020 3:00:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-003D | MW-62-110-Q420 | Groundwater | 12/2/2020 3:00:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-004A | EB-705-Q420 | Groundwater | 12/2/2020 3:45:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-005A | MW-33-150-Q420 | Groundwater | 12/2/2020 9:08:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-005B | MW-33-150-Q420 | Groundwater | 12/2/2020 9:08:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-005C | MW-33-150-Q420 | Groundwater | 12/2/2020 9:08:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-005D | MW-33-150-Q420 | Groundwater | 12/2/2020 9:08:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-005E | MW-33-150-Q420 | Groundwater | 12/2/2020 9:08:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-006A | MW-33-210-Q420 | Groundwater | 12/2/2020 9:58:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-006B | MW-33-210-Q420 | Groundwater | 12/2/2020 9:58:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-006C | MW-33-210-Q420 | Groundwater | 12/2/2020 9:58:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-006D | MW-33-210-Q420 | Groundwater | 12/2/2020 9:58:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-006E | MW-33-210-Q420 | Groundwater | 12/2/2020 9:58:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-007A | MW-67-185-Q420 | Groundwater | 12/2/2020 10:16:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-007B | MW-67-185-Q420 | Groundwater | 12/2/2020 10:16:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-007C | MW-67-185-Q420 | Groundwater | 12/2/2020 10:16:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-007D | MW-67-185-Q420 | Groundwater | 12/2/2020 10:16:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-008A | MW-67-225-Q420 | Groundwater | 12/2/2020 12:14:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-008B | MW-67-225-Q420 | Groundwater | 12/2/2020 12:14:00 PM | 12/2/2020 | 12/21/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043223
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043223-008C | MW-67-225-Q420 | Groundwater | 12/2/2020 12:14:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-008D | MW-67-225-Q420 | Groundwater | 12/2/2020 12:14:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-009A | MW-67-260-Q420 | Groundwater | 12/2/2020 11:10:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-009B | MW-67-260-Q420 | Groundwater | 12/2/2020 11:10:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-009C | MW-67-260-Q420 | Groundwater | 12/2/2020 11:10:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-009D | MW-67-260-Q420 | Groundwater | 12/2/2020 11:10:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-010A | MW-33-040-Q420 | Groundwater | 12/2/2020 12:30:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-010B | MW-33-040-Q420 | Groundwater | 12/2/2020 12:30:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-010C | MW-33-040-Q420 | Groundwater | 12/2/2020 12:30:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-010D | MW-33-040-Q420 | Groundwater | 12/2/2020 12:30:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-010E | MW-33-040-Q420 | Groundwater | 12/2/2020 12:30:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-011A | MW-33-040-EB-Q420 | Groundwater | 12/2/2020 12:00:00 PM | 12/2/2020 | 12/21/2020 |
| N043223-012A | MW-33-090-Q420 | Groundwater | 12/2/2020 11:37:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-012B | MW-33-090-Q420 | Groundwater | 12/2/2020 11:37:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-012C | MW-33-090-Q420 | Groundwater | 12/2/2020 11:37:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-012D | MW-33-090-Q420 | Groundwater | 12/2/2020 11:37:00 AM | 12/2/2020 | 12/21/2020 |
| N043223-012E | MW-33-090-Q420 | Groundwater | 12/2/2020 11:37:00 AM | 12/2/2020 | 12/21/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24BR-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 13000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-190-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 17000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-110-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 9500 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-150-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 16000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-210-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 19000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-185-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 10:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6800 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-225-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:14:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 6400 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-260-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 14000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-040-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 20000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-090-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201203C** | QC Batch: **R149092** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 10000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/3/2020 11:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043223-007BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149092**
Client ID: **ZZZZZZ** Batch ID: **R149092** TestNo: **EPA 120.1** Analysis Date: **12/3/2020** SeqNo: **4022567**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 6830.000 | 0.10 | | | | | | 6810 | 0.293 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24BR-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | PrepDate: | **12/3/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 8900 | 100 | 100 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-190-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | PrepDate: | **12/3/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 12000 | 100 | 100 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-110-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | PrepDate: | **12/3/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6200 | 100 | 100 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-150-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | | PrepDate: | **12/3/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 11000 | 100 | 100 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-210-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | PrepDate: | **12/3/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 13000 | 100 | 100 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-185-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 10:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | | PrepDate: | **12/3/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4900 | 50 | 50 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-225-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:14:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | PrepDate: | **12/3/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4300 | 50 | 50 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-260-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | PrepDate: | **12/3/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 7200 | 100 | 100 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-040-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | PrepDate: | **12/3/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 14000 | 100 | 100 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-090-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201203K** | QC Batch: **83261** | | | PrepDate: | **12/3/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6400 | 100 | 100 | | mg/L | 1 | 12/3/2020 12:49 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83261** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/3/2020** | RunNo: **149136** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83261** | TestNo: **SM2540C** | | Analysis Date: **12/3/2020** | SeqNo: **4024446** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 976.000 | 10 | 1000 | 0 | 97.6 | 80 | 120 | | | | |

| Sample ID: **MB-83261** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/3/2020** | RunNo: **149136** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83261** | TestNo: **SM2540C** | | Analysis Date: **12/3/2020** | SeqNo: **4024447** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | ND | 10 | | | | | | | | | |

| Sample ID: **N043223-010BDUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/3/2020** | RunNo: **149136** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83261** | TestNo: **SM2540C** | | Analysis Date: **12/3/2020** | SeqNo: **4024457** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filterat | 13770.000 | 100 | | | | | | 13680 | 0.656 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24BR-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/4/2020 01:43 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 08:48 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-190-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/4/2020 02:02 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 08:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-110-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/4/2020 09:28 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 08:57 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-705-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 3:45:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| **EPA 218.6** | | | | | | | |
| RunID: **NV00922-IC7_201204A** QC Batch: **R149139** PrepDate: Analyst: **RAB** | | | | | | | |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/4/2020 04:03 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-150-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 5.0 | 0.17 | 1.0 | | µg/L | 5 | 12/4/2020 02:40 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 8.8 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 09:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-210-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** QC Batch: **R149139** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 12 | 0.17 | 1.0 | | µg/L | 5 | 12/4/2020 02:59 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201203A** QC Batch: **83263** | | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 15 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 09:16 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-185-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 10:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2900 | 17 | 100 | | µg/L | 500 | 12/4/2020 08:50 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 3000 | 3.2 | 25 | | µg/L | 25 | 12/4/2020 12:58 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-225-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:14:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 3800 | 17 | 100 | | µg/L | 500 | 12/4/2020 08:59 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 4000 | 3.2 | 25 | | µg/L | 25 | 12/4/2020 01:03 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-260-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 250 | 1.7 | 10 | | µg/L | 50 | 12/4/2020 12:27 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 250 | 0.65 | 5.0 | | µg/L | 5 | 12/4/2020 01:08 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-040-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** QC Batch: **R149139** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/4/2020 03:44 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201203A** QC Batch: **83263** | | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 1.8 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 09:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-040-EB-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/4/2020 04:21 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-090-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 3.1 | 0.033 | 0.20 | | µg/L | 1 | 12/4/2020 08:40 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Chromium | 11 | 0.13 | 1.0 | | µg/L | 1 | 12/3/2020 09:39 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **MB-R149139** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **PBW** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024618**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

Sample ID: **LCS-R149139** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **LCSW** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024619**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.894 | 0.20 | 5.000 | 0 | 97.9 | 90 | 110 | | | | |

Sample ID: **N043222-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024621**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.902 | 0.20 | 1.000 | 0 | 90.2 | 90 | 110 | | | | |

Sample ID: **N043223-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024629**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.334 | 0.20 | 5.000 | 3.140 | 104 | 90 | 110 | | | | |

Sample ID: **N043223-012AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024630**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.404 | 0.20 | 5.000 | 3.140 | 105 | 90 | 110 | 8.334 | 0.838 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043223-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024631**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.171 | 0.20 | 1.000 | 0.07640 | 109 | 90 | 110 | | | | |

Sample ID: **N043223-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024634**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5551.400 | 100 | 2500 | 2896 | 106 | 90 | 110 | | | | |

Sample ID: **N043223-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024635**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 6385.250 | 100 | 2500 | 3812 | 103 | 90 | 110 | | | | |

Sample ID: **N043223-009ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024637**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 252.020 | 10 | | | | | | 251.8 | 0.0893 | 20 | |

Sample ID: **N043223-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024638**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 502.930 | 10 | 250.0 | 251.8 | 100 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043223-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024646**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.577 | 1.0 | 5.000 | 0.4265 | 103 | 90 | 110 | | | | |

Sample ID: **N043223-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024648**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.671 | 1.0 | 5.000 | 4.972 | 94.0 | 90 | 110 | | | | |

Sample ID: **N043223-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024650**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 17.217 | 1.0 | 5.000 | 12.27 | 99.0 | 90 | 110 | | | | |

Sample ID: **N043223-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024654**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.318 | 1.0 | 5.000 | 0.2950 | 100 | 90 | 110 | | | | |

Sample ID: **N043223-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024656**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.025 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043223-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024658**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.001 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N043252-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024660**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 690.575 | 10 | 250.0 | 437.9 | 101 | 90 | 110 | | | | |

Sample ID: **N043223-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024662**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.804 | 1.0 | 5.000 | 0 | 96.1 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **LCS-83263** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83263** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031485** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.782 | 1.0 | 10.00 | 0 | 97.8 | 85 | 115 | | | | |

| Sample ID: **N043223-012DMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83263** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031500** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 21.318 | 1.0 | 10.00 | 11.31 | 100 | 75 | 125 | | | | |

| Sample ID: **N043223-012DMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83263** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/3/2020** | SeqNo: **4031501** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 21.194 | 1.0 | 10.00 | 11.31 | 98.8 | 75 | 125 | 21.32 | 0.583 | 20 | |

| Sample ID: **MB-83263** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83263** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4031515** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24BR-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 45 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-190-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 57 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-110-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 83 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-150-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 60 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-210-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 58 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-185-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 10:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 80 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-225-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:14:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 160 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-260-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208C** | QC Batch: **R149231** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 2100 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 07:30 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-040-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 570 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-090-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207D** | QC Batch: **R149228** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 150 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149228** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149228** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149228** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030554** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 98.958 | 5.0 | 100.0 | 0 | 99.0 | 85 | 115 | | | | |

| Sample ID: **MB-R149228** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149228** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149228** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030555** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043223-008BBDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149228** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149228** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030563** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 156.250 | 5.0 | | | | | | 158.3 | 1.32 | 30 | |

| Sample ID: **N043223-012BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149228** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149228** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030566** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 260.417 | 5.0 | 100.0 | 147.9 | 112 | 75 | 125 | | | | |

| Sample ID: **N043223-012BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149228** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149228** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030567** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 256.250 | 5.0 | 100.0 | 147.9 | 108 | 75 | 125 | 260.4 | 1.61 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149231** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149231** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149231** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030770** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 479.167 | 5.0 | 500.0 | 2.604 | 95.3 | 85 | 115 | | | | |

| Sample ID: **MB-R149231** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149231** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149231** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030771** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 2.604 | 5.0 | | | | | | | | | |

| Sample ID: **N043203-001ADUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149231** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149231** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030773** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 989.583 | 5.0 | | | | | | 984.4 | 0.528 | 30 | |

| Sample ID: **N043203-001AMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149231** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149231** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030774** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 1505.208 | 5.0 | 500.0 | 984.4 | 104 | 75 | 125 | | | | |

| Sample ID: **N043203-001AMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149231** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149231** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030775** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 1520.833 | 5.0 | 500.0 | 984.4 | 107 | 75 | 125 | 1505 | 1.03 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-001

**Client Sample ID:** MW-24BR-Q420
**Collection Date:** 12/2/2020 1:20:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/4/2020 08:55 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 4400 | 35 | 500 | | mg/L | 1000 | 12/4/2020 08:25 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 450 | 2.0 | 25 | | mg/L | 50 | 12/5/2020 12:14 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-002

**Client Sample ID:** MW-62-190-Q420
**Collection Date:** 12/2/2020 2:50:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/4/2020 09:10 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6000 | 70 | 1000 | | mg/L | 2000 | 12/4/2020 08:39 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 710 | 4.0 | 50 | | mg/L | 100 | 12/5/2020 12:28 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-003

**Client Sample ID:** MW-62-110-Q420
**Collection Date:** 12/2/2020 3:00:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/4/2020 09:24 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2900 | 35 | 500 | | mg/L | 1000 | 12/4/2020 08:53 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 550 | 2.0 | 25 | | mg/L | 50 | 12/5/2020 12:42 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-005

**Client Sample ID:** MW-33-150-Q420
**Collection Date:** 12/2/2020 9:08:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/3/2020 03:00 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5100 | 70 | 1000 | | mg/L | 2000 | 12/4/2020 01:43 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 2.2 | 0.048 | 0.50 | | mg/L | 5 | 12/3/2020 03:00 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 840 | 4.0 | 50 | | mg/L | 100 | 12/4/2020 05:46 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-006

**Client Sample ID:** MW-33-210-Q420
**Collection Date:** 12/2/2020 9:58:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/3/2020 03:14 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6200 | 70 | 1000 | | mg/L | 2000 | 12/4/2020 01:58 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 2.8 | 0.048 | 0.50 | | mg/L | 5 | 12/3/2020 03:14 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1200 | 4.0 | 50 | | mg/L | 100 | 12/4/2020 06:01 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-007

**Client Sample ID:** MW-67-185-Q420
**Collection Date:** 12/2/2020 10:16:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | 5.7 | 0.30 | 5.0 | | mg/L | 10 | 12/4/2020 09:38 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1900 | 17 | 250 | | mg/L | 500 | 12/4/2020 09:08 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 640 | 2.0 | 25 | | mg/L | 50 | 12/5/2020 12:56 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-225-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:14:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/4/2020 09:53 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 1300 | 17 | 250 | | mg/L | 500 | 12/4/2020 05:47 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1300 | 8.0 | 100 | | mg/L | 200 | 12/4/2020 07:13 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-009

**Client Sample ID:** MW-67-260-Q420
**Collection Date:** 12/2/2020 11:10:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/4/2020 10:07 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 730 | 17 | 250 | | mg/L | 500 | 12/4/2020 09:22 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201204A** QC Batch: **R149146** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 170 | 0.40 | 5.0 | | mg/L | 10 | 12/4/2020 10:07 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-010

**Client Sample ID:** MW-33-040-Q420
**Collection Date:** 12/2/2020 12:30:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/3/2020 03:28 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5500 | 70 | 1000 | | mg/L | 2000 | 12/4/2020 02:12 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 17 | 0.19 | 2.0 | | mg/L | 20 | 12/3/2020 03:42 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 2700 | 20 | 250 | | mg/L | 500 | 12/4/2020 06:44 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-012

**Client Sample ID:** MW-33-090-Q420
**Collection Date:** 12/2/2020 11:37:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/3/2020 09:59 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2900 | 35 | 500 | | mg/L | 1000 | 12/3/2020 05:08 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 2.5 | 0.048 | 0.50 | | mg/L | 5 | 12/3/2020 09:59 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201203A** QC Batch: **R149119** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 670 | 4.0 | 50 | | mg/L | 100 | 12/3/2020 07:46 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149119_BR** | SampType: **MBLK** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028146** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149119_BR** | SampType: **LCS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028147** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.257 | 0.50 | 1.250 | 0 | 101 | 90 | 110 | | | | |

| Sample ID: **N043221-006AMS** | SampType: **MS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028168** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.492 | 2.5 | 6.250 | 0.1825 | 101 | 80 | 120 | | | | |

| Sample ID: **N043221-006AMSD** | SampType: **MSD** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028169** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.378 | 2.5 | 6.250 | 0.1825 | 99.1 | 80 | 120 | 6.492 | 1.78 | 20 | |

| Sample ID: **N043223-012BMS** | SampType: **MS** | TestCode: **300_W_BRPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4028170** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.470 | 2.5 | 6.250 | 0.4460 | 96.4 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

Sample ID: **N043223-012BMSD** SampType: **MSD** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4028171**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.428 | 2.5 | 6.250 | 0.4460 | 95.7 | 80 | 120 | 6.470 | 0.644 | 20 | |

Sample ID: **N043221-002ADUP** SampType: **DUP** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4028172**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.710 | 5.0 | | | | | | 0.7990 | 0 | 20 | |

Sample ID: **N043221-002AMS** SampType: **MS** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4028173**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 13.145 | 5.0 | 12.50 | 0.7990 | 98.8 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

Sample ID: **MB-R149146_BR** SampType: **MBLK** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **PBW** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025722**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149146_BR** SampType: **LCS** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **LCSW** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025723**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.272 | 0.50 | 1.250 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043254-002AMS** SampType: **MS** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **ZZZZZZ** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025744**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.961 | 2.5 | 6.250 | 0.6945 | 100 | 80 | 120 | | | | |

Sample ID: **N043254-002AMSD** SampType: **MSD** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **ZZZZZZ** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025745**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.873 | 2.5 | 6.250 | 0.6945 | 98.8 | 80 | 120 | 6.961 | 1.28 | 20 | |

Sample ID: **N043254-006ADUP** SampType: **DUP** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **ZZZZZZ** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025746**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.355 | 2.5 | | | | | | 1.369 | 0 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

Sample ID: **N043254-006AMS** SampType: **MS** TestCode: **300_W_BRPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **ZZZZZZ** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025747**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 7.448 | 2.5 | 6.250 | 1.369 | 97.3 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **MB-R149119_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023703** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149119_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023704** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.972 | 0.50 | 2.000 | 0 | 98.6 | 90 | 110 | | | | |

| Sample ID: **N043221-006AMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023712** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1260.380 | 100 | 400.0 | 865.9 | 98.6 | 80 | 120 | | | | |

| Sample ID: **N043221-006AMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023713** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1265.060 | 100 | 400.0 | 865.9 | 99.8 | 80 | 120 | 1260 | 0.371 | 20 | |

| Sample ID: **N043223-012BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023715** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4754.100 | 500 | 2000 | 2933 | 91.1 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043223-012BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023716** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4818.900 | 500 | 2000 | 2933 | 94.3 | 80 | 120 | 4754 | 1.35 | 20 | |

| Sample ID: **N043221-011ADUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023718** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2988.600 | 500 | | | | | | 2985 | 0.114 | 20 | |

| Sample ID: **N043221-011AMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023719** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 4955.400 | 500 | 2000 | 2985 | 98.5 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149146_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **PBW** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025682**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.148 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149146_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **LCSW** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025683**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.925 | 0.50 | 2.000 | 0 | 96.2 | 90 | 110 | | | | |

Sample ID: **N043254-001AMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **ZZZZZZ** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025691**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 638.470 | 50 | 200.0 | 438.8 | 99.8 | 80 | 120 | | | | |

Sample ID: **N043254-001AMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **ZZZZZZ** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025692**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 642.050 | 50 | 200.0 | 438.8 | 102 | 80 | 120 | 638.5 | 0.559 | 20 | |

Sample ID: **N043223-008BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149146**
Client ID: **ZZZZZZ** Batch ID: **R149146** TestNo: **EPA 300.0** Analysis Date: **12/4/2020** SeqNo: **4025694**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1298.200 | 250 | | | | | | 1275 | 1.80 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043223-008BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149146** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149146** | TestNo: **EPA 300.0** | | Analysis Date: **12/4/2020** | SeqNo: **4025695** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2277.500 | 250 | 1000 | 1275 | 100 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_FPGE**

Sample ID: **MB-R149119_F** SampType: **MBLK** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **PBW** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023654**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | | |

Sample ID: **LCS-R149119_F** SampType: **LCS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **LCSW** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023655**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.374 | 0.10 | 1.250 | 0 | 110 | 90 | 110 | | | | |

Sample ID: **N043221-006AMS** SampType: **MS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023676**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 10.010 | 0.50 | 6.250 | 3.638 | 102 | 80 | 120 | | | | |

Sample ID: **N043221-006AMSD** SampType: **MSD** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023677**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 10.130 | 0.50 | 6.250 | 3.638 | 104 | 80 | 120 | 10.01 | 1.20 | 20 | |

Sample ID: **N043223-012BMS** SampType: **MS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149119**
Client ID: **ZZZZZZ** Batch ID: **R149119** TestNo: **EPA 300.0** Analysis Date: **12/3/2020** SeqNo: **4023678**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 8.780 | 0.50 | 6.250 | 2.508 | 100 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_FPGE**

| Sample ID: **N043223-012BMSD** | SampType: **MSD** | TestCode: **300_W_FPGE** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023679** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 8.637 | 0.50 | 6.250 | 2.508 | 98.1 | 80 | 120 | 8.780 | 1.64 | 20 | |

| Sample ID: **N043221-002ADUP** | SampType: **DUP** | TestCode: **300_W_FPGE** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023680** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 7.653 | 1.0 | | | | | | 7.424 | 3.04 | 20 | |

| Sample ID: **N043221-002AMS** | SampType: **MS** | TestCode: **300_W_FPGE** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023681** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 20.894 | 1.0 | 12.50 | 7.424 | 108 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **MB-R149119_SO4** | SampType: **MBLK** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023801** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.228 | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149119_SO4** | SampType: **LCS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023802** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.980 | 0.50 | 4.000 | 0 | 99.5 | 90 | 110 | | | | |

| Sample ID: **N043221-006AMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023812** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 278.040 | 10 | 80.00 | 194.9 | 104 | 80 | 120 | | | | |

| Sample ID: **N043221-006AMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023813** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 276.284 | 10 | 80.00 | 194.9 | 102 | 80 | 120 | 278.0 | 0.634 | 20 | |

| Sample ID: **N043223-012BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023815** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1069.290 | 50 | 400.0 | 673.7 | 98.9 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043223-012BMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023816** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1080.340 | 50 | 400.0 | 673.7 | 102 | 80 | 120 | 1069 | 1.03 | 20 | |

| Sample ID: **N043221-011ADUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023818** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1340.860 | 100 | | | | | | 1347 | 0.488 | 20 | |

| Sample ID: **N043221-011AMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149119** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149119** | TestNo: **EPA 300.0** | | Analysis Date: **12/3/2020** | SeqNo: **4023819** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2146.180 | 100 | 800.0 | 1347 | 99.8 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **MB-R149146_SO4** | SampType: **MBLK** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149146** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149146** | TestNo: **EPA 300.0** | | Analysis Date: **12/4/2020** | SeqNo: **4025775** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149146_SO4** | SampType: **LCS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149146** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149146** | TestNo: **EPA 300.0** | | Analysis Date: **12/4/2020** | SeqNo: **4025776** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.922 | 0.50 | 4.000 | 0 | 98.1 | 90 | 110 | | | | |

| Sample ID: **N043254-001AMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149146** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149146** | TestNo: **EPA 300.0** | | Analysis Date: **12/4/2020** | SeqNo: **4025784** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 501.400 | 25 | 200.0 | 301.4 | 100 | 80 | 120 | | | | |

| Sample ID: **N043254-001AMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149146** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149146** | TestNo: **EPA 300.0** | | Analysis Date: **12/4/2020** | SeqNo: **4025785** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 500.410 | 25 | 200.0 | 301.4 | 99.5 | 80 | 120 | 501.4 | 0.198 | 20 | |

| Sample ID: **N043223-008BDUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149146** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149146** | TestNo: **EPA 300.0** | | Analysis Date: **12/4/2020** | SeqNo: **4025787** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1261.460 | 100 | | | | | | 1253 | 0.665 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043223-008BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149146** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149146** | TestNo: **EPA 300.0** | | Analysis Date: **12/4/2020** | SeqNo: **4025790** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 2046.020 | 100 | 800.0 | 1253 | 99.1 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-001

**Client Sample ID:** MW-24BR-Q420
**Collection Date:** 12/2/2020 1:20:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 3000 | 370 | 500 | | ug/L | 5 | 12/15/2020 08:47 PM |
| Calcium | 100000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 03:57 PM |
| Iron | 800 | 89 | 100 | | ug/L | 5 | 12/13/2020 03:57 PM |
| Magnesium | 4300 | 240 | 500 | | ug/L | 5 | 12/13/2020 03:57 PM |
| Sodium | 2700000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 11:13 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-002

**Client Sample ID:** MW-62-190-Q420
**Collection Date:** 12/2/2020 2:50:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 2900 | 370 | 500 | | ug/L | 5 | 12/15/2020 08:51 PM |
| Calcium | 290000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 04:01 PM |
| Iron | 1400 | 89 | 100 | | ug/L | 5 | 12/13/2020 04:01 PM |
| Magnesium | 18000 | 240 | 500 | | ug/L | 5 | 12/13/2020 04:01 PM |
| Sodium | 2800000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 11:21 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-003

**Client Sample ID:** MW-62-110-Q420
**Collection Date:** 12/2/2020 3:00:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1500 | 74 | 100 | | ug/L | 1 | 12/15/2020 07:12 PM |
| Calcium | 140000 | 85 | 500 | | ug/L | 1 | 12/13/2020 01:42 PM |
| Iron | 350 | 18 | 20 | | ug/L | 1 | 12/13/2020 01:42 PM |
| Magnesium | 9200 | 48 | 100 | | ug/L | 1 | 12/13/2020 01:42 PM |
| Sodium | 1600000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 11:29 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-005

**Client Sample ID:** MW-33-150-Q420
**Collection Date:** 12/2/2020 9:08:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 2000 | 370 | 500 | | ug/L | 5 | 12/15/2020 08:55 PM |
| Calcium | 450000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 04:06 PM |
| Iron | 280 | 89 | 100 | | ug/L | 5 | 12/13/2020 04:06 PM |
| Magnesium | 77000 | 240 | 500 | | ug/L | 5 | 12/13/2020 04:06 PM |
| Sodium | 2500000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 11:37 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-006

**Client Sample ID:** MW-33-210-Q420
**Collection Date:** 12/2/2020 9:58:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 2600 | 370 | 500 | | ug/L | 5 | 12/15/2020 08:59 PM |
| Calcium | 440000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 04:10 PM |
| Iron | 240 | 89 | 100 | | ug/L | 5 | 12/13/2020 04:10 PM |
| Magnesium | 69000 | 240 | 500 | | ug/L | 5 | 12/13/2020 04:10 PM |
| Sodium | 3400000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 11:40 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-007

**Client Sample ID:** MW-67-185-Q420
**Collection Date:** 12/2/2020 10:16:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | **12/5/2020** | Analyst: **DJ** | |
| Boron | 720 | 74 | 100 | | ug/L | 1 | 12/15/2020 07:17 PM |
| Calcium | 640000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 04:27 PM |
| Iron | 110 | 18 | 20 | | ug/L | 1 | 12/13/2020 02:09 PM |
| Magnesium | 160000 | 48 | 100 | | ug/L | 1 | 12/13/2020 02:09 PM |
| Sodium | 420000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 11:43 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-225-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:14:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | | PrepDate: | **12/5/2020** | Analyst: **DJ** |
| Boron | 1500 | 74 | 100 | | ug/L | 1 | 12/15/2020 07:22 PM |
| Calcium | 92000 | 85 | 500 | | ug/L | 1 | 12/13/2020 02:15 PM |
| Iron | 2300 | 18 | 20 | | ug/L | 1 | 12/13/2020 02:15 PM |
| Magnesium | 7100 | 48 | 100 | | ug/L | 1 | 12/13/2020 02:15 PM |
| Sodium | 1100000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 11:53 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-260-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | **EPA 6010B** | | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | **12/5/2020** | | Analyst: **DJ** |
| Boron | 680 | 370 | 500 | | ug/L | 5 | 12/15/2020 07:43 PM |
| Calcium | 370000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 02:18 PM |
| Iron | 180 | 89 | 100 | | ug/L | 5 | 12/13/2020 02:18 PM |
| Magnesium | ND | 240 | 500 | | ug/L | 5 | 12/13/2020 02:18 PM |
| Sodium | 1100000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 11:56 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-010

**Client Sample ID:** MW-33-040-Q420
**Collection Date:** 12/2/2020 12:30:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | **12/5/2020** | Analyst: **DJ** | |
| Boron | 4200 | 370 | 500 | | ug/L | 5 | 12/15/2020 07:48 PM |
| Calcium | 75000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 02:22 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 02:22 PM |
| Magnesium | 180000 | 240 | 500 | | ug/L | 5 | 12/13/2020 02:22 PM |
| Sodium | 3600000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 12:00 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043223
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043223-012

**Client Sample ID:** MW-33-090-Q420
**Collection Date:** 12/2/2020 11:37:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1200 | 74 | 100 | | ug/L | 1 | 12/15/2020 06:48 PM |
| Calcium | 230000 | 85 | 500 | | ug/L | 1 | 12/13/2020 01:01 PM |
| Iron | 420 | 18 | 20 | | ug/L | 1 | 12/13/2020 01:01 PM |
| Magnesium | 30000 | 48 | 100 | | ug/L | 1 | 12/13/2020 01:01 PM |
| Sodium | 1600000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 10:27 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83296** SampType: **MBLK** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **PBW** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041351**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83296** SampType: **LCS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **LCSW** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041352**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 10862.855 | 500 | 10000 | 0 | 109 | 85 | 115 | | | | |
| Iron | 107.328 | 20 | 100.0 | 0 | 107 | 85 | 115 | | | | |
| Magnesium | 11031.033 | 100 | 10000 | 0 | 110 | 85 | 115 | | | | |

Sample ID: **N043223-012DMS1** SampType: **MS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041356**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 239154.223 | 500 | 10000 | 226900 | 122 | 75 | 125 | | | | |
| Iron | 523.198 | 20 | 100.0 | 415.7 | 108 | 75 | 125 | | | | |
| Magnesium | 41639.988 | 100 | 10000 | 29850 | 118 | 75 | 125 | | | | |

Sample ID: **N043223-012DMSD1** SampType: **MSD** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041357**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 225053.754 | 500 | 10000 | 226900 | -18.7 | 75 | 125 | 239200 | 6.08 | 20 | S |
| Iron | 576.820 | 20 | 100.0 | 415.7 | 161 | 75 | 125 | 523.2 | 9.75 | 20 | S |
| Magnesium | 39235.316 | 100 | 10000 | 29850 | 93.8 | 75 | 125 | 41640 | 5.95 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **MB-83296** | SampType: **MBLK** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043022** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

| Sample ID: **LCS2-83296** | SampType: **LCS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043023** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 19690.475 | 500 | 20000 | 0 | 98.5 | 85 | 115 | | | | |

| Sample ID: **N043223-012D-MS2** | SampType: **MS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043034** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1566664.352 | 120000 | 20000 | 1572000 | -26.3 | 75 | 125 | | | | S |

| Sample ID: **N043223-012D-MSD2** | SampType: **MSD** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043035** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1557894.914 | 120000 | 20000 | 1572000 | -70.2 | 75 | 125 | 1567000 | 0.561 | 20 | S |

| Sample ID: **MB-83296** | SampType: **MBLK** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046080** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **LCS1-83296** | SampType: **LCS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046081** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4928.246 | 100 | 5000 | 0 | 98.6 | 85 | 115 | | | | |

| Sample ID: **N043223-012DMS1** | SampType: **MS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046085** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6553.636 | 100 | 5000 | 1194 | 107 | 75 | 125 | | | | |

| Sample ID: **N043223-012DMSD1** | SampType: **MS** | TestCode: **6010_WDPGE** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046086** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6337.090 | 100 | 5000 | 1194 | 103 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043223-012D-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041355**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 233786.753 | 500 | 10000 | 226900 | 68.6 | 80 | 120 | | | | S |
| Iron | 549.738 | 20 | 100.0 | 415.7 | 134 | 80 | 120 | | | | S |
| Magnesium | 41227.331 | 100 | 10000 | 29850 | 114 | 80 | 120 | | | | |

Sample ID: **N043223-012DPS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043033**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1479982.813 | 120000 | 20000 | 1572000 | -460 | 80 | 120 | | | | S |

Sample ID: **N043223-012D-PS** SampType: **PS** TestCode: **6010_WDPGE** Units: **ug/L** Prep Date: RunNo: **149447**
Client ID: **ZZZZZZ** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/15/2020** SeqNo: **4046084**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6504.886 | 100 | 5000 | 1194 | 106 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-24BR-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 1:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 0.63 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 08:48 PM |
| Manganese | 160 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 08:48 PM |
| Molybdenum | 58 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 08:48 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 08:48 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-190-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 2:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Arsenic | 3.4 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 08:53 PM |
| Manganese | 900 | 2.6 | 5.0 | | µg/L | 10 | 12/4/2020 12:35 AM |
| Molybdenum | 43 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 08:53 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 08:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-62-110-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 3:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 8.1 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 08:57 PM |
| Manganese | 210 | 1.3 | 2.5 | | µg/L | 5 | 12/4/2020 12:40 AM |
| Molybdenum | 50 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 08:57 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 08:57 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-150-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 1.3 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 09:02 PM |
| Manganese | 12 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 09:02 PM |
| Molybdenum | 41 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 09:02 PM |
| Selenium | 0.61 | 0.36 | 0.50 | | µg/L | 1 | 12/4/2020 01:55 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-210-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 9:58:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 1.2 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 09:16 PM |
| Manganese | 12 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 09:16 PM |
| Molybdenum | 20 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 09:16 PM |
| Selenium | 0.75 | 0.36 | 0.50 | | µg/L | 1 | 12/4/2020 01:45 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-185-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 10:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | | PrepDate: | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 0.74 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 09:21 PM |
| Manganese | 2.7 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 09:21 PM |
| Molybdenum | 14 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 09:21 PM |
| Selenium | 330 | 1.8 | 2.5 | | µg/L | 5 | 12/4/2020 12:54 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-225-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:14:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | | PrepDate: | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 5.0 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 09:25 PM |
| Manganese | 58 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 09:25 PM |
| Molybdenum | 58 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 09:25 PM |
| Selenium | 100 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 09:25 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-67-260-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:10:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP7_201203A** QC Batch: **83263** | | | | PrepDate: | **12/3/2020** | | Analyst: **CEI** |
| Arsenic | 1.6 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 09:30 PM |
| Manganese | 1.5 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 09:30 PM |
| Molybdenum | 24 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 09:30 PM |
| Selenium | 1.1 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 09:30 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-040-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 12:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 9.3 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 09:35 PM |
| Manganese | 16 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 09:35 PM |
| Molybdenum | 440 | 1.1 | 2.5 | | µg/L | 5 | 12/4/2020 01:17 AM |
| Selenium | 11 | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 09:35 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-33-090-Q420 |
| **Lab Order:** | N043223 | **Collection Date:** | 12/2/2020 11:37:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043223-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP7_201203A** | QC Batch: **83263** | | | PrepDate: | | **12/3/2020** | Analyst: **CEI** |
| Arsenic | 1.1 | 0.081 | 0.10 | | µg/L | 1 | 12/3/2020 09:39 PM |
| Manganese | 23 | 0.26 | 0.50 | | µg/L | 1 | 12/3/2020 09:39 PM |
| Molybdenum | 9.9 | 0.21 | 0.50 | | µg/L | 1 | 12/3/2020 09:39 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/3/2020 09:39 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **LCS-83263** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/3/2020** RunNo: **149247**
Client ID: **LCSW** Batch ID: **83263** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031590**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.240 | 0.10 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Manganese | 100.479 | 0.50 | 100.0 | 0 | 100 | 85 | 115 | | | | |
| Molybdenum | 9.787 | 0.50 | 10.00 | 0 | 97.9 | 85 | 115 | | | | |
| Selenium | 10.017 | 0.50 | 10.00 | 0 | 100 | 85 | 115 | | | | |

Sample ID: **N043223-012DMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/3/2020** RunNo: **149247**
Client ID: **ZZZZZZ** Batch ID: **83263** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031605**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.288 | 0.10 | 10.00 | 1.093 | 102 | 75 | 125 | | | | |
| Manganese | 113.936 | 0.50 | 100.0 | 22.81 | 91.1 | 75 | 125 | | | | |
| Molybdenum | 19.656 | 0.50 | 10.00 | 9.940 | 97.2 | 75 | 125 | | | | |
| Selenium | 9.825 | 0.50 | 10.00 | 0 | 98.2 | 75 | 125 | | | | |

Sample ID: **N043223-012DMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/3/2020** RunNo: **149247**
Client ID: **ZZZZZZ** Batch ID: **83263** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/3/2020** SeqNo: **4031606**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.225 | 0.10 | 10.00 | 1.093 | 101 | 75 | 125 | 11.29 | 0.556 | 20 | |
| Manganese | 113.538 | 0.50 | 100.0 | 22.81 | 90.7 | 75 | 125 | 113.9 | 0.350 | 20 | |
| Molybdenum | 19.741 | 0.50 | 10.00 | 9.940 | 98.0 | 75 | 125 | 19.66 | 0.433 | 20 | |
| Selenium | 9.408 | 0.50 | 10.00 | 0 | 94.1 | 75 | 125 | 9.825 | 4.33 | 20 | |

Sample ID: **MB-83263** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/3/2020** RunNo: **149247**
Client ID: **PBW** Batch ID: **83263** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4031620**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043223
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

| Sample ID: **MB-83263** | SampType: **MBLK** | TestCode: **6020_DIS_TP** | Units: **µg/L** | Prep Date: **12/3/2020** | RunNo: **149247** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83263** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4031620** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

N043223


ASSET LABORATORIES
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# CHAIN OF CUSTODY RECORD

Page 1 of 1

| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Jeff Boyd | | P.O.# SWA-ASSET-C9817-057 | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Field Tech | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12/2/20 | Sampled By: Nam Tay | | Global ID: | Regulatory | 5. IR number 2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/2/20 | | | Sample Temp: 5.4°C / 1.9°C 2.4°C |
| Project Number: 30035275 | | | | | Courier: Tracking No.: |

Matrix: Ground x | Sediment; Potable | Soil; NPDES | Other Solid; Surface |

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | 250 mL poly | 250 mL poly | 125 mL poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 125 mL poly | 3x40 mL VOAs | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Oxygen and Deuterium Isotopes (CFIRM), Ice | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Alkalinity, Total as CaCO3 (SM2320B) | Bromide, Sulfate, Chloride (EPA 300.0) | Fluoride (EPA 300.0) | Specific Conductance (EPA 120.1) | Total Dissolved Solids (SM92540) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 | Total Organic Carbon (SM5310C); H2SO4 | Metals Dissolved (EPA7470A FF) Hg; HNO3 | Dissolved Metals (SW 6010B); HNO3 Potassium | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 Cu, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium ( non-filter) (EPA 200.8), HNO3 | VOCs (8260) | | | | | |
| 1 | N043223-01 | MW-24BR-Q420 | 12/2/2020 | 13:20 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 2 | -02 | MW-62-190-Q420 | 12/2/2020 | 14:50 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 3 | -03 | MW-62-110-Q420 | 12/2/2020 | 15:00 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 4 | -04 | EB-705-Q420 | 12/2/2020 | 15:45 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 5 | -05 | MW-33-150-Q420 | 12/2/2020 | 9:08 | | X | X | | X | X | X | X | X | X | | | | X | X | | | | | | | | E | 5 | P | BNS | |
| 6 | -06 | MW-33-210-Q420 | 12/2/2020 | 9:58 | | X | X | | X | X | X | X | X | X | | | | X | X | | | | | | | | E | 5 | P | BNS | |
| 7 | -07 | MW-67-185-Q420 | 12/2/2020 | 10:16 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | (3) | X | E | 4 | PV | BNSH | |
| 8 | -08 | MW-67-225-Q420 | 12/2/2020 | 12:14 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | (6) | X | E | 4 | PV | BNSH | |
| 9 | -09 | MW-67-260-Q420 | 12/2/2020 | 11:10 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | (9) | X | E | 4 | PV | BNSH | |
| 10 | -10 | MW-33-040-Q420 | 12/2/2020 | 12:30 | | | X | X | X | X | X | X | X | X | | | | X | X | | | | | | | | E | 6 | P | BNS | |
| 11 | -11 | MW-33-040-EB-Q420 | 12/2/2020 | 12:00 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 12 | -12 | MW-33-090-Q420 | 12/2/2020 | 11:37 | | X | X | | X | X | X | X | X | X | | | | X | X | | | | | | | | E | 5 | P | BNS | MSMSD |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nam Tay | 12/2/20 1710 | | 12-02-20 1710 |
| | 12-2-20 7:51 | | 12-2-20 7:55PM |
| | | | |

**Turn Around Time (TAT)**

| | | |
|---|---|---|
| | A | < 24 Hrs or Same Day TAT |
| | B | = Next Workday |
| | C | = 2 Workdays |
| | D | = 3 Workdays |
| X | E | = Routine 5-7 Workdays |

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Tittle 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | N=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/2/2020 | Workorder: | N043223 |
| Rep sample Temp (Deg C): | 5.4/1.9/2.4 | IR Gun ID: | 2 |

Temp Blank: ☑ Yes ☐ No

Carrier name: ASSET

Last 4 digits of Tracking No.: NA  Packing Material Used: None

Cooling process: ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/3/2020

Reviewed By: MBC 12/03/2020

# ASSET Laboratories

## WORK ORDER Summary

*03-Dec-20*

**WorkOrder:** N043223

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/2/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043223-001A | MW-24BR-Q420 | 12/2/2020 1:20:00 PM | 12/16/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-001B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-001C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-001D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-002A | MW-62-190-Q420 | 12/2/2020 2:50:00 PM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-002B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*03-Dec-20*

**WorkOrder:** N043223

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/2/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043223-002B | MW-62-190-Q420 | 12/2/2020 2:50:00 PM | 12/16/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-002C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-002D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-003A | MW-62-110-Q420 | 12/2/2020 3:00:00 PM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-003B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-003C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-003D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*03-Dec-20*

**WorkOrder:** N043223

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/2/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043223-003D | MW-62-110-Q420 | 12/2/2020 3:00:00 PM | 12/16/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-004A | EB-705-Q420 | 12/2/2020 3:45:00 PM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-005A | MW-33-150-Q420 | 12/2/2020 9:08:00 AM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-005B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-005C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-005D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-005E | | | 12/16/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043223-006A | MW-33-210-Q420 | 12/2/2020 9:58:00 AM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-006B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*03-Dec-20*

**WorkOrder:** N043223

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/2/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043223-006B | MW-33-210-Q420 | 12/2/2020 9:58:00 AM | 12/16/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-006C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-006D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-006E | | | 12/16/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043223-007A | MW-67-185-Q420 | 12/2/2020 10:16:00 AM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-007B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*03-Dec-20*

**WorkOrder:** N043223

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/2/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043223-007B | MW-67-185-Q420 | 12/2/2020 10:16:00 AM | 12/16/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-007C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-007D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-008A | MW-67-225-Q420 | 12/2/2020 12:14:00 PM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-008B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-008C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-008D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*03-Dec-20*

**WorkOrder:** N043223

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/2/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043223-008D | MW-67-225-Q420 | 12/2/2020 12:14:00 PM | 12/16/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-009A | MW-67-260-Q420 | 12/2/2020 11:10:00 AM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-009B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-009C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-009D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-010A | MW-33-040-Q420 | 12/2/2020 12:30:00 PM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-010B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*03-Dec-20*

**WorkOrder:** N043223

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/2/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043223-010B | MW-33-040-Q420 | 12/2/2020 12:30:00 PM | 12/16/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/16/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043223-010C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☐ | WW |
| N043223-010D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043223-010E | | | 12/16/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043223-011A | MW-33-040-EB-Q420 | 12/2/2020 12:00:00 PM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043223-012A | MW-33-090-Q420 | 12/2/2020 11:37:00 AM | 12/16/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043223-012B | | | 12/16/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | LSR |
| | | | 12/16/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | LSR |
| | | | 12/16/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | LSR |
| | | | 12/16/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |
| | | | 12/16/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*03-Dec-20*

**WorkOrder:** N043223

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/2/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043223-012B | MW-33-090-Q420 | 12/2/2020 11:37:00 AM | 12/16/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | LSR |
| N043223-012C | | | 12/16/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☐ | WW |
| N043223-012D | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/16/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/16/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043223-012E | | | 12/16/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☑ | ☑ | SUB |
| N043223-013A | FOLDER | 12/16/2020 | 12/16/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/16/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/16/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/16/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

December 18, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043252

RE: PG&E Topock - PMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 03, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - PMP, 30035275
**Lab Order:** N043252

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time except for pH. pH testing is specified to be performed in the field within 15 minutes of sampling; sample was received and analyzed past the regulatory holding time.

Subcontracted Analyses:

SM 4500-NO3F was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 200.7_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043210-001C-MS1 and N043210-001C-MSD1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Sodium in QC samples N043252-001B-MS2 and N043252-001B-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for Iron ; however, the associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 200.8_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria in QC samples N043210-001C-MS and N043210-001C-MSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however,

PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - PMP, 30035275
**Lab Order:** N043252
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043252-001A | TW-03D-1220 | Groundwater | 12/3/2020 8:00:00 AM | 12/3/2020 | 12/18/2020 |
| N043252-001B | TW-03D-1220 | Groundwater | 12/3/2020 8:00:00 AM | 12/3/2020 | 12/18/2020 |
| N043252-001C | TW-03D-1220 | Groundwater | 12/3/2020 8:00:00 AM | 12/3/2020 | 12/18/2020 |
| N043252-001D | TW-03D-1220 | Groundwater | 12/3/2020 8:00:00 AM | 12/3/2020 | 12/18/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1220 |
| **Lab Order:** | N043252 | **Collection Date:** | 12/3/2020 8:00:00 AM |
| **Project:** | PG&E Topock - PMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043252-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7400 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043252-001CDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149127**
Client ID: **ZZZZZZ** Batch ID: **R149127** TestNo: **EPA 120.1** Analysis Date: **12/4/2020** SeqNo: **4024353**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 7390.000 | 0.10 | | | | | | 7370 | 0.271 | 2 | |

Sample ID: **N043262-012BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149127**
Client ID: **ZZZZZZ** Batch ID: **R149127** TestNo: **EPA 120.1** Analysis Date: **12/4/2020** SeqNo: **4024364**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 10140.000 | 0.10 | | | | | | 10120 | 0.197 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043252
**Project:** PG&E Topock - PMP, 30035275
**Lab ID:** N043252-001

**Client Sample ID:** TW-03D-1220
**Collection Date:** 12/3/2020 8:00:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **PH** | | | | | | | |
| | | | **SM4500-H+B** | | | | |
| RunID: **NV00922-WC_201204G** | QC Batch: **R149130** | | | PrepDate: | | | Analyst: **LR** |
| pH | 7.3 | 0.10 | 0.10 | H | pH Units | 1 | 12/4/2020 03:10 PM |
| Temp. at time of pH Analysis | 25 | 0.10 | 0.10 | H | °C | 1 | 12/4/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 150.1_4500H+B_W**

Sample ID: **N043252-001CDUP** SampType: **DUP** TestCode: **150.1_4500H** Units: **pH Units** Prep Date: RunNo: **149130**
Client ID: **ZZZZZZ** Batch ID: **R149130** TestNo: **SM4500-H+B** Analysis Date: **12/4/2020** SeqNo: **4024397**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| pH | 7.300 | 0.10 | | | | | | 7.270 | 0.412 | 10 | H |
| Temp. at time of pH Analysis | 25.000 | 0.10 | | | | | | 25.00 | 0 | 10 | H |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1220 |
| **Lab Order:** | N043252 | **Collection Date:** | 12/3/2020 8:00:00 AM |
| **Project:** | PG&E Topock - PMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043252-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201204L** | QC Batch: **83294** | | | PrepDate: | **12/4/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4500 | 50 | 50 | | mg/L | 1 | 12/4/2020 05:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83294** | SampType: **LCS** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/4/2020** | RunNo: **149212** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83294** | TestNo: **SM2540C** | | Analysis Date: **12/4/2020** | SeqNo: **4029972** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 975.000 | 10 | 1000 | 0 | 97.5 | 80 | 120 | | | | |

| Sample ID: **MB-83294** | SampType: **MBLK** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/4/2020** | RunNo: **149212** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83294** | TestNo: **SM2540C** | | Analysis Date: **12/4/2020** | SeqNo: **4029973** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043221-014ADUP** | SampType: **DUP** | TestCode: **160.1_2540C_** | Units: **mg/L** | Prep Date: **12/4/2020** | RunNo: **149212** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83294** | TestNo: **SM2540C** | | Analysis Date: **12/4/2020** | SeqNo: **4029978** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 13520.000 | 200 | | | | | | 13020 | 3.77 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043252
**Project:** PG&E Topock - PMP, 30035275
**Lab ID:** N043252-001

**Client Sample ID:** TW-03D-1220
**Collection Date:** 12/3/2020 8:00:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | | | **EPA 200.7** | | | | |
| RunID: **NV00922-ICP2_201204E** | QC Batch: **83278** | | | PrepDate: | | **12/4/2020** | Analyst: **DJ** |
| Calcium | 160000 | 85 | 500 | | µg/L | 1 | 12/5/2020 04:37 AM |
| Iron | ND | 18 | 20 | | µg/L | 1 | 12/5/2020 04:37 AM |
| Magnesium | 32000 | 48 | 100 | | µg/L | 1 | 12/5/2020 04:37 AM |
| Sodium | 1600000 | 9600 | 50000 | | µg/L | 100 | 12/14/2020 09:33 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

Sample ID: **MB-83278** SampType: **MBLK** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149229**
Client ID: **PBW** Batch ID: **83278** TestNo: **EPA 200.7** Analysis Date: **12/5/2020** SeqNo: **4030992**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83278** SampType: **LCS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149229**
Client ID: **LCSW** Batch ID: **83278** TestNo: **EPA 200.7** Analysis Date: **12/5/2020** SeqNo: **4030998**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 10315.551 | 500 | 10000 | 0 | 103 | 85 | 115 | | | | |
| Iron | 93.988 | 20 | 100.0 | 0 | 94.0 | 85 | 115 | | | | |
| Magnesium | 9692.606 | 100 | 10000 | 0 | 96.9 | 85 | 115 | | | | |

Sample ID: **N043210-001C-MS1** SampType: **MS** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149229**
Client ID: **ZZZZZZ** Batch ID: **83278** TestNo: **EPA 200.7** Analysis Date: **12/5/2020** SeqNo: **4031002**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 152973.199 | 500 | 10000 | 147500 | 55.1 | 75 | 125 | | | | S |
| Iron | 108.308 | 20 | 100.0 | 18.16 | 90.1 | 75 | 125 | | | | |
| Magnesium | 40932.433 | 100 | 10000 | 30030 | 109 | 75 | 125 | | | | |

Sample ID: **N043210-001C-MSD** SampType: **MSD** TestCode: **200.7_WDPG** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149229**
Client ID: **ZZZZZZ** Batch ID: **83278** TestNo: **EPA 200.7** Analysis Date: **12/5/2020** SeqNo: **4031003**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 153371.715 | 500 | 10000 | 147500 | 59.0 | 75 | 125 | 153000 | 0.260 | 20 | S |
| Iron | 145.084 | 20 | 100.0 | 18.16 | 127 | 75 | 125 | 108.3 | 29.0 | 20 | SR |
| Magnesium | 41162.538 | 100 | 10000 | 30030 | 111 | 75 | 125 | 40930 | 0.561 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out
- Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

| Sample ID: **MB-83278** | SampType: **MBLK** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83278** | TestNo: **EPA 200.7** | | Analysis Date: **12/14/2020** | SeqNo: **4042897** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | ND | 500 | | | | | | | | | |

| Sample ID: **LCS2-83278** | SampType: **LCS** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83278** | TestNo: **EPA 200.7** | | Analysis Date: **12/14/2020** | SeqNo: **4042898** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 18776.536 | 500 | 20000 | 0 | 93.9 | 85 | 115 | | | | |

| Sample ID: **N043252-001B-MS2** | SampType: **MS** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83278** | TestNo: **EPA 200.7** | | Analysis Date: **12/14/2020** | SeqNo: **4042903** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1280085.238 | 50000 | 20000 | 1562000 | -1410 | 75 | 125 | | | | S |

| Sample ID: **N043252-001B-MSD** | SampType: **MSD** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83278** | TestNo: **EPA 200.7** | | Analysis Date: **12/14/2020** | SeqNo: **4042904** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1244412.492 | 50000 | 20000 | 1562000 | -1590 | 75 | 125 | 1280000 | 2.83 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.7_WDPGEPPB**

| Sample ID: **N043210-001C-PS** | SampType: **PS** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: | RunNo: **149229** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83278** | TestNo: **EPA 200.7** | | Analysis Date: **12/5/2020** | SeqNo: **4031001** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 154035.412 | 500 | 10000 | 147500 | 65.7 | 80 | 120 | | | | S |
| Iron | 134.166 | 20 | 100.0 | 18.16 | 116 | 80 | 120 | | | | |
| Magnesium | 40627.164 | 100 | 10000 | 30030 | 106 | 80 | 120 | | | | |

| Sample ID: **N043252-001B-PS** | SampType: **PS** | TestCode: **200.7_WDPG** | Units: **µg/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83278** | TestNo: **EPA 200.7** | | Analysis Date: **12/14/2020** | SeqNo: **4042902** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1251674.558 | 50000 | 20000 | 1562000 | -1550 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1220 |
| **Lab Order:** | N043252 | **Collection Date:** | 12/3/2020 8:00:00 AM |
| **Project:** | PG&E Topock - PMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043252-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICPMS** | | | | | | | |
| **EPA 200.8** | | | | | | | |
| RunID: **NV00922-ICP8_201208B** QC Batch: **83277** PrepDate: **12/4/2020** Analyst: **CEI** | | | | | | | |
| Manganese | 17 | 0.26 | 0.50 | | µg/L | 1 | 12/8/2020 12:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8_WDISS_TPK**

| Sample ID: **MB-83277** | SampType: **MBLK** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149354** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83277** | TestNo: **EPA 200.8** | | Analysis Date: **12/8/2020** | SeqNo: **4041670** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-83277** | SampType: **LCS** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149354** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83277** | TestNo: **EPA 200.8** | | Analysis Date: **12/8/2020** | SeqNo: **4041671** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 100.126 | 0.50 | 100.0 | 0 | 100 | 85 | 115 | | | | |

| Sample ID: **N043210-001C-MS** | SampType: **MS** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149429** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83277** | TestNo: **EPA 200.8** | | Analysis Date: **12/14/2020** | SeqNo: **4047180** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 1270.133 | 12 | 100.0 | 649.8 | 620 | 75 | 125 | | | | S |

| Sample ID: **N043210-001C-MSD** | SampType: **MSD** | TestCode: **200.8_WDISS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149429** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83277** | TestNo: **EPA 200.8** | | Analysis Date: **12/14/2020** | SeqNo: **4047181** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 1278.529 | 12 | 100.0 | 649.8 | 629 | 75 | 125 | 1270 | 0.659 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8_WDISS_TPK**

Sample ID: **N043210-001C-PS** SampType: **PS** TestCode: **200.8_WDISS** Units: **µg/L** Prep Date: RunNo: **149429**
Client ID: **ZZZZZZ** Batch ID: **83277** TestNo: **EPA 200.8** Analysis Date: **12/14/2020** SeqNo: **4047179**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 1278.457 | 12 | 100.0 | 649.8 | 629 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1220 |
| **Lab Order:** | N043252 | **Collection Date:** | 12/3/2020 8:00:00 AM |
| **Project:** | PG&E Topock - PMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043252-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201204A** | QC Batch: **R149139** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 440 | 1.7 | 10 | | µg/L | 50 | 12/4/2020 04:40 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 200.8** | | | | |
| RunID: **NV00922-ICP8_201208B** | QC Batch: **83277** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | 430 | 0.65 | 5.0 | | µg/L | 5 | 12/8/2020 01:03 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8Dis_CrPGE_TPK**

| Sample ID: **MB-83277** | SampType: **MBLK** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149354** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83277** | TestNo: **EPA 200.8** | | Analysis Date: **12/8/2020** | SeqNo: **4041593** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83277** | SampType: **LCS** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149354** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83277** | TestNo: **EPA 200.8** | | Analysis Date: **12/8/2020** | SeqNo: **4041594** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.859 | 1.0 | 10.00 | 0 | 98.6 | 85 | 115 | | | | |

| Sample ID: **N043210-001C-MS** | SampType: **MS** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149354** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83277** | TestNo: **EPA 200.8** | | Analysis Date: **12/8/2020** | SeqNo: **4041601** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 462.924 | 5.0 | 50.00 | 346.6 | 233 | 75 | 125 | | | | S |

| Sample ID: **N043210-001C-MSD** | SampType: **MSD** | TestCode: **200.8Dis_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149354** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83277** | TestNo: **EPA 200.8** | | Analysis Date: **12/8/2020** | SeqNo: **4041605** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 463.799 | 5.0 | 50.00 | 346.6 | 234 | 75 | 125 | 462.9 | 0.189 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149139** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149139** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149139** | TestNo: **EPA 218.6** | | Analysis Date: **12/4/2020** | SeqNo: **4024618** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149139** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149139** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149139** | TestNo: **EPA 218.6** | | Analysis Date: **12/4/2020** | SeqNo: **4024619** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.894 | 0.20 | 5.000 | 0 | 97.9 | 90 | 110 | | | | |

| Sample ID: **N043222-002AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149139** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149139** | TestNo: **EPA 218.6** | | Analysis Date: **12/4/2020** | SeqNo: **4024621** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.902 | 0.20 | 1.000 | 0 | 90.2 | 90 | 110 | | | | |

| Sample ID: **N043223-012AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149139** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149139** | TestNo: **EPA 218.6** | | Analysis Date: **12/4/2020** | SeqNo: **4024629** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.334 | 0.20 | 5.000 | 3.140 | 104 | 90 | 110 | | | | |

| Sample ID: **N043223-012AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149139** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149139** | TestNo: **EPA 218.6** | | Analysis Date: **12/4/2020** | SeqNo: **4024630** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 8.404 | 0.20 | 5.000 | 3.140 | 105 | 90 | 110 | 8.334 | 0.838 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043223-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024631**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.171 | 0.20 | 1.000 | 0.07640 | 109 | 90 | 110 | | | | |

Sample ID: **N043223-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024634**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5551.400 | 100 | 2500 | 2896 | 106 | 90 | 110 | | | | |

Sample ID: **N043223-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024635**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 6385.250 | 100 | 2500 | 3812 | 103 | 90 | 110 | | | | |

Sample ID: **N043223-009ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024637**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 252.020 | 10 | | | | | | 242.0 | 4.04 | 20 | |

Sample ID: **N043223-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024638**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 502.930 | 10 | 250.0 | 242.0 | 104 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043223-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024646**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.577 | 1.0 | 5.000 | 0.4265 | 103 | 90 | 110 | | | | |

Sample ID: **N043223-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024648**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 9.671 | 1.0 | 5.000 | 4.972 | 94.0 | 90 | 110 | | | | |

Sample ID: **N043223-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024650**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 17.217 | 1.0 | 5.000 | 12.27 | 99.0 | 90 | 110 | | | | |

Sample ID: **N043223-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024654**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.318 | 1.0 | 5.000 | 0.2950 | 100 | 90 | 110 | | | | |

Sample ID: **N043223-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024656**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.025 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043223-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024658**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.001 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N043252-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024660**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 690.575 | 10 | 250.0 | 437.9 | 101 | 90 | 110 | | | | |

Sample ID: **N043223-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149139**
Client ID: **ZZZZZZ** Batch ID: **R149139** TestNo: **EPA 218.6** Analysis Date: **12/4/2020** SeqNo: **4024662**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.804 | 1.0 | 5.000 | 0 | 96.1 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 200.8Dis_CrPGE_TPK**

Sample ID: **N043210-001C-PS** SampType: **PS** TestCode: **200.8Dis_CrP** Units: **µg/L** Prep Date: RunNo: **149354**
Client ID: **ZZZZZZ** Batch ID: **83277** TestNo: **EPA 200.8** Analysis Date: **12/8/2020** SeqNo: **4041599**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 482.619 | 5.0 | 50.00 | 346.6 | 272 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | TW-03D-1220 |
| **Lab Order:** | N043252 | **Collection Date:** | 12/3/2020 8:00:00 AM |
| **Project:** | PG&E Topock - PMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043252-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201207C** | QC Batch: **R149227** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 160 | 1.2 | 5.0 | | mg/L | 1 | 12/7/2020 02:15 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149227** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149227** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149227** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030529** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 96.875 | 5.0 | 100.0 | 0 | 96.9 | 85 | 115 | | | | |

| Sample ID: **MB-R149227** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149227** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149227** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030530** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043221-001ADUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149227** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149227** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030532** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 27.083 | 5.0 | | | | | | 26.04 | 3.92 | 30 | |

| Sample ID: **N043221-006AMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149227** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149227** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030538** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 193.750 | 5.0 | 100.0 | 94.79 | 99.0 | 75 | 125 | | | | |

| Sample ID: **N043221-006AMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149227** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149227** | TestNo: **SM 2320 B** | | Analysis Date: **12/7/2020** | SeqNo: **4030539** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 194.792 | 5.0 | 100.0 | 94.79 | 100 | 75 | 125 | 193.8 | 0.536 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043252
**Project:** PG&E Topock - PMP, 30035275
**Lab ID:** N043252-001

**Client Sample ID:** TW-03D-1220
**Collection Date:** 12/3/2020 8:00:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207A** QC Batch: **R149185** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2000 | 17 | 250 | | mg/L | 500 | 12/7/2020 07:08 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207A** QC Batch: **R149185** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 480 | 2.0 | 25 | | mg/L | 50 | 12/7/2020 07:50 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149185_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **PBW** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028255**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.155 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149185_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **LCSW** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028256**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.934 | 0.50 | 2.000 | 0 | 96.7 | 90 | 110 | | | | |

Sample ID: **N043262-015BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028258**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 123.464 | 10 | 40.00 | 84.01 | 98.6 | 80 | 120 | | | | |

Sample ID: **N043262-015BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028259**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 123.722 | 10 | 40.00 | 84.01 | 99.3 | 80 | 120 | 123.5 | 0.209 | 20 | |

Sample ID: **N043238-001ADUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028261**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 158.470 | 10 | | | | | | 160.1 | 1.02 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **N043252-001CMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028265**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3018.700 | 250 | 1000 | 2036 | 98.3 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043252
**Project:** PG&E Topock - PMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **MB-R149185_SO4** | SampType: **MBLK** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149185** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149185** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4028361** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149185_SO4** | SampType: **LCS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149185** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149185** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4028362** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.956 | 0.50 | 4.000 | 0 | 98.9 | 90 | 110 | | | | |

| Sample ID: **N043262-015BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149185** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149185** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4028364** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 290.520 | 10 | 80.00 | 209.2 | 102 | 80 | 120 | | | | |

| Sample ID: **N043262-015BMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149185** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149185** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4028365** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 291.834 | 10 | 80.00 | 209.2 | 103 | 80 | 120 | 290.5 | 0.451 | 20 | |

| Sample ID: **N043238-001ADUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149185** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149185** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4028367** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 229.430 | 10 | | | | | | 229.1 | 0.135 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

# CHAIN OF CUSTODY RECORD

N043252

Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Page 1 of 1

| | | | |
|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement: Others ✓ |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | QA/QC: RWQCB ✓ |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Specify: RWQCB |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | P.O.# SWA-ASSET-C9817-051 |
| Submitted By: Spencer Doolittle | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 | Fax: |
| Title: Sample Tech | Sampled By: Spencer Doolittle | | Global ID: |
| Signature: SD Date: 12/3/20 | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for | | Specify State: |
| I hereby authorize ASSET Labs to perform the tests indicated below. | Signature: Date: 12/3/20 | | |
| Project Name: PG&E Topock - PMP | | | |
| Project Number: 30035275 | | | |

| Matrix | | | |
|---|---|---|---|
| Ground | x | Sediment | |
| Potable | | Soil | |
| NPDES | | Other Solid | |
| Surface | | | |

| Sample Receipt Condition | Y | N |
|---|---|---|
| 1. Chilled | ✓ | |
| 2. Headspace | | |
| 3. Container Intact | ✓ | |
| 4. Seal Present | | ✓ |
| 5. IR number 2 | | |
| 6. Method of Cooling: ICE | | |
| Sample Temp: 0.8°C | | |

Courier:

Tracking No.:

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH — 250 mL poly | | Dissolved metals (EPA 200.8) FF; HNO3, 500 mL poly — Cr, Mn — 1 L poly | Dissolved metals (EPA200.7) FF; HNO3 — Ca, Mg, Fe, Na, — 1 L poly | Dissolved metals (SW6010B/SW6020Adis) FF; HNO3 — As, Mn, Fe, Se, Mo, Ba — 1 L poly | Total metals (SW6010B); HNO3 — Fe — 500 mL poly | Anions (E300.0); Cl, SO4 — 1 liter poly | Specific Conductance (E120.1) — 1 liter poly | pH (SM4500HB) — 1 liter poly | TDS (SM2540C) — 1 liter poly | Alkalinity (Total, reported as CaCO3) (SM2320B) — 1 liter poly | TSS (SM2540) — 1 liter poly | Nitrate/Nitrite (SM4500NO3) Nitrate; H2SO4 — 125 mL poly | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043252-01 | TW-03D-1220 | 12/3/2020 | 8:00 | | X | | X | X | | | X | X | X | X | X | | X | E | 4 | P | BN | |
| 2 | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name) | Date/Time | Relinquished by (Signature and Printed Name) | Date/Time |
|---|---|---|---|
| SD Spencer Doolittle | 12/3/20 1700 | | 12-03-20 1700 |
| | 12-3-20 8:15 | | 12-3-20 8:15 PM |
| | | | |

**Turn Around Time (TAT)**

| | | |
|---|---|---|
| | A | < 24 Hrs or Same Day TAT |
| | B | = Next Workday |
| | C | = 2 Workdays |
| | D | = 3 Workdays |
| X | E | = Routine 5-7 Workdays |

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

**Terms**
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

White=Laboratory Copy

Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/3/2020 | Workorder: | N043252 |
| Rep sample Temp (Deg C): | 0.8 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☐ | No ☑ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☐ | No ☐ | NA ☑ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☑ | No ☐ | NA ☐ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments: Sample for pH received past holding time.

MBC 12/11/2020

Checklist Completed By: BHN BHdez 12/7/2020

Reviewed By: _____

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043252

**Client ID:** ARCUS02

**Project:** PG&E Topock - PMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043252-001A | TW-03D-1220 | 12/3/2020 8:00:00 AM | 12/17/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043252-001B | | | 12/17/2020 | | | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 200.7 | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 200.8 | DISSOLVED METALS BY ICPMS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 200.8 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043252-001C | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSr |
| | | | 12/17/2020 | | SM4500-H+B | pH | ☐ | ☐ | ☐ | LSr |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSr |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSr |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSr |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSr |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSr |
| N043252-001D | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043252-002A | FOLDER | 12/17/2020 | 12/17/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | LAB |
| | | | 12/17/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/17/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/17/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: SIGNED

**10-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **SM4500-NO3F** | | |
| N043252-001D / TW-03D-1220 | Groundwater | 12/3/2020 8:00:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43252A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/Nitrite by SM4500NO3F. EDD Requirement Labspec7 edata.

GSO #: 551486684

| | | Date/Time | | | Date/Time |
|---|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/9/2020 1630 | **Received by:** | | |
| **Relinquished by:** | | | **Received by:** | | |

December 22, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043262

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 03, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043262

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

SM 4500-NO3F was subcontracted to BC Labs- Bakersfield,CA.

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for some samples due to matrix interference. Samples were analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Samples were reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Method Blank MB-R149156 has detect greater than 1/2 the reporting limit for Sulfate. However, sample result was greater than 5x the Method Blank detection therefore reanalysis of the sample was not necessary.

Analytical Comments for EPA 6010B_Dissolved:

Dilution was necessary for some samples due to matrix. Samples have high TDS concentration.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043262-002DMS1, N043262-003DMS1 and N043262-003DMSD1 possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043262-002DMS1, N043262-002DMSD1, N043262-003DMS1 , N043262-003DMSD1, N043262-002DMS2, N043262-002DMSD2, N043262-003DMS2 and N043262-003DMSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for Iron ; however, the associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N043262-002DMSD, N043262-003DMS and N043262-003DMSD since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike Duplicate (MSD) is outside recovery criteria for Molybdenum in QC sample N043262-003DMSD possibly due to matrix interference. Post Spike (PS) passed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 8260B:

Some surrogate recoveries biased high for sample N043262-001. Re-analysis of sample confirms high recovery caused by matrix effect. The other surrogates were recovered within control limits.

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for MTBE. Analyte recovery on both met acceptance criteria.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043262
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043262-001A | MW-940-Q420 | Groundwater | 12/3/2020 8:34:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-001B | MW-940-Q420 | Groundwater | 12/3/2020 8:34:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-001C | MW-940-Q420 | Groundwater | 12/3/2020 8:34:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-001D | MW-940-Q420 | Groundwater | 12/3/2020 8:34:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-001E | MW-940-Q420 | Groundwater | 12/3/2020 8:34:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-002A | MW-66-165-Q420 | Groundwater | 12/3/2020 9:20:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-002B | MW-66-165-Q420 | Groundwater | 12/3/2020 9:20:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-002C | MW-66-165-Q420 | Groundwater | 12/3/2020 9:20:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-002D | MW-66-165-Q420 | Groundwater | 12/3/2020 9:20:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-002E | MW-66-165-Q420 | Groundwater | 12/3/2020 9:20:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-003A | MW-66-230-Q420 | Groundwater | 12/3/2020 8:24:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-003B | MW-66-230-Q420 | Groundwater | 12/3/2020 8:24:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-003C | MW-66-230-Q420 | Groundwater | 12/3/2020 8:24:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-003D | MW-66-230-Q420 | Groundwater | 12/3/2020 8:24:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-003E | MW-66-230-Q420 | Groundwater | 12/3/2020 8:24:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-004A | MW-74-240-Q420 | Groundwater | 12/3/2020 12:50:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-004B | MW-74-240-Q420 | Groundwater | 12/3/2020 12:50:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-004C | MW-74-240-Q420 | Groundwater | 12/3/2020 12:50:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-004D | MW-74-240-Q420 | Groundwater | 12/3/2020 12:50:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-005A | MW-72-080-Q420 | Groundwater | 12/3/2020 2:30:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-005B | MW-72-080-Q420 | Groundwater | 12/3/2020 2:30:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-005C | MW-72-080-Q420 | Groundwater | 12/3/2020 2:30:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-005D | MW-72-080-Q420 | Groundwater | 12/3/2020 2:30:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-006A | MW-72BR-200-Q420 | Groundwater | 12/3/2020 1:48:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-006B | MW-72BR-200-Q420 | Groundwater | 12/3/2020 1:48:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-006C | MW-72BR-200-Q420 | Groundwater | 12/3/2020 1:48:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-006D | MW-72BR-200-Q420 | Groundwater | 12/3/2020 1:48:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-007A | MW-73-080-Q420 | Groundwater | 12/3/2020 3:16:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-007B | MW-73-080-Q420 | Groundwater | 12/3/2020 3:16:00 PM | 12/3/2020 | 12/22/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043262
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043262-007C | MW-73-080-Q420 | Groundwater | 12/3/2020 3:16:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-007D | MW-73-080-Q420 | Groundwater | 12/3/2020 3:16:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-008A | MW-27-020-Q420 | Groundwater | 12/3/2020 11:11:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-008B | MW-27-020-Q420 | Groundwater | 12/3/2020 11:11:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-008C | MW-27-020-Q420 | Groundwater | 12/3/2020 11:11:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-008D | MW-27-020-Q420 | Groundwater | 12/3/2020 11:11:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-009A | MW-27-020-EB-Q420 | Groundwater | 12/3/2020 11:00:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-010A | MW-27-060-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-010B | MW-27-060-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-010C | MW-27-060-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-010D | MW-27-060-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-011A | MW-27-060-EB-Q420 | Groundwater | 12/3/2020 9:00:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-012A | MW-27-085-Q420 | Groundwater | 12/3/2020 10:26:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-012B | MW-27-085-Q420 | Groundwater | 12/3/2020 10:26:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-012C | MW-27-085-Q420 | Groundwater | 12/3/2020 10:26:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-012D | MW-27-085-Q420 | Groundwater | 12/3/2020 10:26:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-013A | MW-27-085-EB-Q420 | Groundwater | 12/3/2020 10:00:00 AM | 12/3/2020 | 12/22/2020 |
| N043262-014A | MW-34-055-Q420 | Groundwater | 12/3/2020 2:27:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-014B | MW-34-055-Q420 | Groundwater | 12/3/2020 2:27:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-014C | MW-34-055-Q420 | Groundwater | 12/3/2020 2:27:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-014D | MW-34-055-Q420 | Groundwater | 12/3/2020 2:27:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-014E | MW-34-055-Q420 | Groundwater | 12/3/2020 2:27:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-015A | MW-911-Q420 | Groundwater | 12/3/2020 2:37:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-015B | MW-911-Q420 | Groundwater | 12/3/2020 2:37:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-015C | MW-911-Q420 | Groundwater | 12/3/2020 2:37:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-015D | MW-911-Q420 | Groundwater | 12/3/2020 2:37:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-015E | MW-911-Q420 | Groundwater | 12/3/2020 2:37:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-016A | MW-34-055-EB-Q420 | Groundwater | 12/3/2020 2:00:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-017A | MW-34-080-Q420 | Groundwater | 12/3/2020 1:39:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-017B | MW-34-080-Q420 | Groundwater | 12/3/2020 1:39:00 PM | 12/3/2020 | 12/22/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043262
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043262-017C | MW-34-080-Q420 | Groundwater | 12/3/2020 1:39:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-017D | MW-34-080-Q420 | Groundwater | 12/3/2020 1:39:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-017E | MW-34-080-Q420 | Groundwater | 12/3/2020 1:39:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-018A | MW-34-080-EB-Q420 | Groundwater | 12/3/2020 1:10:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-019A | MW-34-100-Q420 | Groundwater | 12/3/2020 12:49:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-019B | MW-34-100-Q420 | Groundwater | 12/3/2020 12:49:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-019C | MW-34-100-Q420 | Groundwater | 12/3/2020 12:49:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-019D | MW-34-100-Q420 | Groundwater | 12/3/2020 12:49:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-019E | MW-34-100-Q420 | Groundwater | 12/3/2020 12:49:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-020A | MW-912-Q420 | Groundwater | 12/3/2020 12:59:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-020B | MW-912-Q420 | Groundwater | 12/3/2020 12:59:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-020C | MW-912-Q420 | Groundwater | 12/3/2020 12:59:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-020D | MW-912-Q420 | Groundwater | 12/3/2020 12:59:00 PM | 12/3/2020 | 12/22/2020 |
| N043262-020E | MW-912-Q420 | Groundwater | 12/3/2020 12:59:00 PM | 12/3/2020 | 12/22/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:34:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 19000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66-165-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:20:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66-230-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 19000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-74-240-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 720 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 15000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72BR-200-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 17000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-73-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 3:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 9800 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-020-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 11:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 960 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-060-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 960 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-085-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 10:26:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 10000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-055-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 900 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-015

**Client Sample ID:** MW-911-Q420
**Collection Date:** 12/3/2020 2:37:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 920 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-017

**Client Sample ID:** MW-34-080-Q420
**Collection Date:** 12/3/2020 1:39:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 7900 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-100-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:49:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 10000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-912-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:59:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 10000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043252-001CDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149127**
Client ID: **ZZZZZZ** Batch ID: **R149127** TestNo: **EPA 120.1** Analysis Date: **12/4/2020** SeqNo: **4024353**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 7390.000 | 0.10 | | | | | | 7370 | 0.271 | 2 | |

Sample ID: **N043262-012BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149127**
Client ID: **ZZZZZZ** Batch ID: **R149127** TestNo: **EPA 120.1** Analysis Date: **12/4/2020** SeqNo: **4024364**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 10140.000 | 0.10 | | | | | | 10120 | 0.197 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:34:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | PrepDate: | **12/5/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 14000 | 100 | 100 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66-165-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:20:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | PrepDate: | **12/5/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 2200 | 25 | 25 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66-230-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | PrepDate: | **12/5/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 13000 | 100 | 100 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-74-240-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | PrepDate: | **12/5/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 480 | 10 | 10 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | PrepDate: | **12/5/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 10000 | 100 | 100 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72BR-200-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | | PrepDate: | **12/5/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 9400 | 100 | 100 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-73-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 3:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | PrepDate: | **12/5/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 5800 | 100 | 100 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-020-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 11:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | PrepDate: | **12/5/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 620 | 10 | 10 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-060-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201205B** | QC Batch: **83314** | | | PrepDate: | **12/5/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 640 | 10 | 10 | | mg/L | 1 | 12/5/2020 05:02 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-085-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 10:26:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6800 | 100 | 100 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-055-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 580 | 10 | 10 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-911-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:37:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 580 | 10 | 10 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:39:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | | **12/6/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 4900 | 50 | 50 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-100-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:49:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6200 | 100 | 100 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-912-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:59:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6100 | 100 | 100 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

Sample ID: **LCS-83314** SampType: **LCS** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/5/2020** RunNo: **149223**
Client ID: **LCSW** Batch ID: **83314** TestNo: **SM2540C** Analysis Date: **12/5/2020** SeqNo: **4030489**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 989.000 | 10 | 1000 | 0 | 98.9 | 80 | 120 | | | | |

Sample ID: **MB-83314** SampType: **MBLK** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/5/2020** RunNo: **149223**
Client ID: **PBW** Batch ID: **83314** TestNo: **SM2540C** Analysis Date: **12/5/2020** SeqNo: **4030490**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

Sample ID: **N043262-001BDUP** SampType: **DUP** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/5/2020** RunNo: **149223**
Client ID: **ZZZZZZ** Batch ID: **83314** TestNo: **SM2540C** Analysis Date: **12/5/2020** SeqNo: **4030492**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 13060.000 | 100 | | | | | | 13660 | 4.49 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

Sample ID: **LCS-83315** SampType: **LCS** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/6/2020** RunNo: **149226**
Client ID: **LCSW** Batch ID: **83315** TestNo: **SM2540C** Analysis Date: **12/6/2020** SeqNo: **4030516**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 974.000 | 10 | 1000 | 0 | 97.4 | 80 | 120 | | | | |

Sample ID: **MB-83315** SampType: **MBLK** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/6/2020** RunNo: **149226**
Client ID: **PBW** Batch ID: **83315** TestNo: **SM2540C** Analysis Date: **12/6/2020** SeqNo: **4030517**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

Sample ID: **N043263-004BDUP** SampType: **DUP** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/6/2020** RunNo: **149226**
Client ID: **ZZZZZZ** Batch ID: **83315** TestNo: **SM2540C** Analysis Date: **12/6/2020** SeqNo: **4030528**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 7090.000 | 100 | | | | | | 6810 | 4.03 | 5 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:34:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 6300 | 33 | 200 | | µg/L | 1000 | 12/7/2020 10:38 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201205B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | 6500 | 6.5 | 50 | | µg/L | 50 | 12/5/2020 12:51 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66-165-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:20:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 400 | 3.3 | 20 | | µg/L | 100 | 12/7/2020 10:27 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201205B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | 390 | 0.65 | 5.0 | | µg/L | 5 | 12/5/2020 12:57 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66-230-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 6500 | 33 | 200 | | µg/L | 1000 | 12/7/2020 10:48 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201205B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | 6400 | 6.5 | 50 | | µg/L | 50 | 12/5/2020 01:26 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-74-240-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 06:33 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201205B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 02:07 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** QC Batch: **R149221** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 86 | 0.66 | 4.0 | | µg/L | 20 | 12/7/2020 12:41 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** QC Batch: **83287** | | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | 78 | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 12:17 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72BR-200-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/7/2020 04:12 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 12:22 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-007

**Client Sample ID:** MW-73-080-Q420
**Collection Date:** 12/3/2020 3:16:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** QC Batch: **R149221** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 11 | 0.17 | 1.0 | | µg/L | 5 | 12/7/2020 11:16 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201204B** QC Batch: **83287** | | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | 11 | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 12:28 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-020-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 11:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 06:52 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 12:34 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-020-EB-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 11:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| **EPA 218.6** | | | | | | | |
| RunID: **NV00922-IC7_201207A** QC Batch: **R149221** PrepDate: Analyst: **RAB** | | | | | | | |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 02:16 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-060-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 07:11 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 12:40 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-060-EB-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 02:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-085-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 10:26:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/7/2020 01:00 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 12:46 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-085-EB-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 10:00:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-013 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 02:54 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-055-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 08:07 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 12:52 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-015

**Client Sample ID:** MW-911-Q420
**Collection Date:** 12/3/2020 2:37:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** QC Batch: **R149221** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 08:26 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201204B** QC Batch: **83287** | | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 12:57 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-055-EB-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-016 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 03:13 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:39:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** QC Batch: **R149221** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 08:45 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | | **EPA 3010A** | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201204B** QC Batch: **83287** | | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 01:03 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-080-EB-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:10:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-018 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 03:33 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-100-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:49:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/7/2020 01:19 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 01:09 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-912-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:59:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207A** | QC Batch: **R149221** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/7/2020 01:38 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/5/2020 01:26 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **MB-R149221** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **PBW** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030335**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

Sample ID: **LCS-R149221** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **LCSW** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030336**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.995 | 0.20 | 5.000 | 0 | 99.9 | 90 | 110 | | | | |

Sample ID: **N043262-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030338**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.998 | 0.20 | 1.000 | 0 | 99.8 | 90 | 110 | | | | |

Sample ID: **N043262-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030340**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.027 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043262-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030342**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.013 | 0.20 | 1.000 | 0 | 101 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043262-014AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030346**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.015 | 0.20 | 1.000 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **N043262-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030348**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.033 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043262-017AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030350**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.998 | 0.20 | 1.000 | 0 | 99.8 | 90 | 110 | | | | |

Sample ID: **N043262-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030357**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 36.124 | 1.0 | 25.00 | 10.90 | 101 | 90 | 110 | | | | |

Sample ID: **N043262-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030358**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 11423.100 | 200 | 5000 | 6471 | 99.0 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043262-003AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030359**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 11404.400 | 200 | 5000 | 6471 | 98.7 | 90 | 110 | 11420 | 0.164 | 20 | |

Sample ID: **N043262-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030360**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 11359.500 | 200 | 5000 | 6341 | 100 | 90 | 110 | | | | |

Sample ID: **N043262-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030363**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 895.610 | 20 | 500.0 | 396.7 | 99.8 | 90 | 110 | | | | |

Sample ID: **N043262-002AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030364**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 896.630 | 20 | 500.0 | 396.7 | 100 | 90 | 110 | 895.6 | 0.114 | 20 | |

Sample ID: **N043262-005AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030366**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 184.972 | 4.0 | 100.0 | 85.83 | 99.1 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043262-012AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030368**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.928 | 1.0 | 5.000 | 0 | 98.6 | 90 | 110 | | | | |

Sample ID: **N043262-019AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030370**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5.050 | 1.0 | 5.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **N043262-020AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030372**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.994 | 1.0 | 5.000 | 0 | 99.9 | 90 | 110 | | | | |

Sample ID: **N043262-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030376**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.992 | 0.20 | 1.000 | 0 | 99.2 | 90 | 110 | | | | |

Sample ID: **N043262-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030378**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.997 | 0.20 | 1.000 | 0 | 99.7 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043262-013AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030380**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.031 | 0.20 | 1.000 | 0 | 103 | 90 | 110 | | | | |

Sample ID: **N043262-016AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030382**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.967 | 0.20 | 1.000 | 0 | 96.7 | 90 | 110 | | | | |

Sample ID: **N043262-018AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030384**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.992 | 0.20 | 1.000 | 0 | 99.2 | 90 | 110 | | | | |

Sample ID: **N043262-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.887 | 1.0 | 5.000 | 0 | 97.7 | 90 | 110 | | | | |

Sample ID: **N043262-007ADUP** SampType: **DUP** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149221**
Client ID: **ZZZZZZ** Batch ID: **R149221** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030389**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 10.922 | 1.0 | | | | | | 10.90 | 0.151 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83287** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149259** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83287** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4032754** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83287** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149259** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83287** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/4/2020** | SeqNo: **4032755** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.963 | 1.0 | 10.00 | 0 | 99.6 | 85 | 115 | | | | |

| Sample ID: **N043262-002DMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149350** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83287** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/5/2020** | SeqNo: **4038741** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 394.679 | 5.0 | 10.00 | 385.8 | 89.0 | 75 | 125 | | | | |

| Sample ID: **N043262-002DMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149350** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83287** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/5/2020** | SeqNo: **4038742** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 404.599 | 5.0 | 10.00 | 385.8 | 188 | 75 | 125 | 394.7 | 2.48 | 20 | S |

| Sample ID: **N043262-003DMS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149350** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83287** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/5/2020** | SeqNo: **4038748** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 6690.651 | 50 | 10.00 | 6384 | 3070 | 75 | 125 | | | | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **N043262-003DMSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149350** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83287** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/5/2020** | SeqNo: **4038749** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 6665.148 | 50 | 10.00 | 6384 | 2810 | 75 | 125 | 6691 | 0.382 | 20 | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **N043262-002D-PS** | SampType: **PS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: | RunNo: **149350** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83287** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/5/2020** | SeqNo: **4038740** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 393.022 | 5.0 | 10.00 | 385.8 | 72.5 | 80 | 120 | | | | S |

| Sample ID: **N043262-003D-PS** | SampType: **PS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: | RunNo: **149350** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83287** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/5/2020** | SeqNo: **4038745** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 6137.333 | 50 | 10.00 | 6384 | -2470 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:34:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 32 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66-165-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:20:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 120 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-66-230-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:24:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 31 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-74-240-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 200 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 46 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72BR-200-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 25 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-73-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 3:16:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 100 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-020-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 11:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 170 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-060-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 190 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-085-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 10:26:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 260 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-055-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 160 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-911-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:37:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-015 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 150 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-080-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:39:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-017 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 310 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-100-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:49:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 200 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-912-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:59:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-020 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201208D** | QC Batch: **R149233** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 210 | 1.2 | 5.0 | | mg/L | 1 | 12/8/2020 04:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149233** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149233** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149233** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030788** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 100.000 | 5.0 | 100.0 | 0 | 100 | 85 | 115 | | | | |

| Sample ID: **MB-R149233** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149233** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149233** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030789** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043262-002BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149233** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149233** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030792** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 215.625 | 5.0 | 100.0 | 120.8 | 94.8 | 75 | 125 | | | | |

| Sample ID: **N043262-002BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149233** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149233** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030793** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 214.583 | 5.0 | 100.0 | 120.8 | 93.8 | 75 | 125 | 215.6 | 0.484 | 20 | |

| Sample ID: **N043262-003BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149233** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149233** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030795** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 129.167 | 5.0 | 100.0 | 31.25 | 97.9 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **N043262-003BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149233** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149233** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030796** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 129.167 | 5.0 | 100.0 | 31.25 | 97.9 | 75 | 125 | 129.2 | 0 | 20 | |

| Sample ID: **N043262-006BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149233** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149233** | TestNo: **SM 2320 B** | | Analysis Date: **12/8/2020** | SeqNo: **4030800** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 23.958 | 5.0 | | | | | | 25.00 | 4.26 | 30 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-001

**Client Sample ID:** MW-940-Q420
**Collection Date:** 12/3/2020 8:34:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 11:20 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6300 | 70 | 1000 | | mg/L | 2000 | 12/6/2020 12:52 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1100 | 4.0 | 50 | | mg/L | 100 | 12/5/2020 08:52 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-002

**Client Sample ID:** MW-66-165-Q420
**Collection Date:** 12/3/2020 9:20:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 07:45 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 880 | 7.0 | 100 | | mg/L | 200 | 12/5/2020 06:44 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 420 | 2.0 | 25 | | mg/L | 50 | 12/5/2020 04:06 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-003

**Client Sample ID:** MW-66-230-Q420
**Collection Date:** 12/3/2020 8:24:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 07:59 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 6100 | 70 | 1000 | | mg/L | 2000 | 12/5/2020 07:26 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 1100 | 8.0 | 100 | | mg/L | 200 | 12/5/2020 04:49 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-004

**Client Sample ID:** MW-74-240-Q420
**Collection Date:** 12/3/2020 12:50:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/5/2020 11:35 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 88 | 0.70 | 10 | | mg/L | 20 | 12/5/2020 08:24 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 61 | 0.80 | 10 | | mg/L | 20 | 12/5/2020 08:24 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-005

**Client Sample ID:** MW-72-080-Q420
**Collection Date:** 12/3/2020 2:30:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 11:49 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5000 | 35 | 500 | | mg/L | 1000 | 12/6/2020 01:07 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 690 | 4.0 | 50 | | mg/L | 100 | 12/5/2020 09:35 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-006

**Client Sample ID:** MW-72BR-200-Q420
**Collection Date:** 12/3/2020 1:48:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 10:52 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 5000 | 35 | 500 | | mg/L | 1000 | 12/6/2020 01:21 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 700 | 4.0 | 50 | | mg/L | 100 | 12/5/2020 09:49 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-007

**Client Sample ID:** MW-73-080-Q420
**Collection Date:** 12/3/2020 3:16:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 12:17 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2900 | 35 | 500 | | mg/L | 1000 | 12/6/2020 01:35 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 400 | 2.0 | 25 | | mg/L | 50 | 12/5/2020 10:04 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-008

**Client Sample ID:** MW-27-020-Q420
**Collection Date:** 12/3/2020 11:11:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/5/2020 12:03 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 91 | 0.70 | 10 | | mg/L | 20 | 12/6/2020 09:03 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 220 | 0.80 | 10 | | mg/L | 20 | 12/6/2020 09:03 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-010

**Client Sample ID:** MW-27-060-Q420
**Collection Date:** 12/3/2020 9:30:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/5/2020 08:14 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 87 | 0.70 | 10 | | mg/L | 20 | 12/5/2020 05:46 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 0.66 | 0.019 | 0.20 | | mg/L | 2 | 12/5/2020 08:14 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | **EPA 300.0** | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 210 | 0.80 | 10 | | mg/L | 20 | 12/5/2020 05:46 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-012

**Client Sample ID:** MW-27-085-Q420
**Collection Date:** 12/3/2020 10:26:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 08:28 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2900 | 35 | 500 | | mg/L | 1000 | 12/5/2020 08:38 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Fluoride | 2.2 | 0.048 | 0.50 | | mg/L | 5 | 12/5/2020 08:28 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 660 | 4.0 | 50 | | mg/L | 100 | 12/5/2020 03:52 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-014

**Client Sample ID:** MW-34-055-Q420
**Collection Date:** 12/3/2020 2:27:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/5/2020 01:00 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 82 | 0.70 | 10 | | mg/L | 20 | 12/6/2020 09:46 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 210 | 0.80 | 10 | | mg/L | 20 | 12/6/2020 09:46 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-015

**Client Sample ID:** MW-911-Q420
**Collection Date:** 12/3/2020 2:37:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/5/2020 01:15 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207A** QC Batch: **R149185** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 84 | 0.70 | 10 | | mg/L | 20 | 12/7/2020 05:42 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207A** QC Batch: **R149185** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 210 | 0.80 | 10 | | mg/L | 20 | 12/7/2020 05:42 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-017

**Client Sample ID:** MW-34-080-Q420
**Collection Date:** 12/3/2020 1:39:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 01:29 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2200 | 17 | 250 | | mg/L | 500 | 12/6/2020 02:18 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 580 | 2.0 | 25 | | mg/L | 50 | 12/6/2020 10:29 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-019

**Client Sample ID:** MW-34-100-Q420
**Collection Date:** 12/3/2020 12:49:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/5/2020 01:43 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3000 | 35 | 500 | | mg/L | 1000 | 12/6/2020 02:32 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 870 | 4.0 | 50 | | mg/L | 100 | 12/6/2020 10:44 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-020

**Client Sample ID:** MW-912-Q420
**Collection Date:** 12/3/2020 12:59:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.060 | 1.0 | | mg/L | 2 | 12/5/2020 01:58 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 2800 | 35 | 500 | | mg/L | 1000 | 12/6/2020 02:47 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 840 | 4.0 | 50 | | mg/L | 100 | 12/6/2020 11:26 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149152_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025978** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149152_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025979** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.243 | 0.50 | 1.250 | 0 | 99.4 | 90 | 110 | | | | |

| Sample ID: **N043262-002BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025984** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 7.528 | 2.5 | 6.250 | 1.262 | 100 | 80 | 120 | | | | |

| Sample ID: **N043262-002BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025985** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 7.505 | 2.5 | 6.250 | 1.262 | 99.9 | 80 | 120 | 7.528 | 0.306 | 20 | |

| Sample ID: **N043262-003BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025986** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.197 | 2.5 | 6.250 | 0.5715 | 90.0 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **N043262-003BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025987** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.180 | 2.5 | 6.250 | 0.5715 | 89.7 | 80 | 120 | 6.196 | 0.275 | 20 | |

| Sample ID: **N043262-010BDUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025990** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.089 | 1.0 | | | | | | 0.09820 | 0 | 20 | |

| Sample ID: **N043262-006BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025992** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 5.849 | 2.5 | 6.250 | 0 | 93.6 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149152_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **PBW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025943**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149152_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **LCSW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025944**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.912 | 0.50 | 2.000 | 0 | 95.6 | 90 | 110 | | | | |

Sample ID: **N043262-010BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025952**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 127.070 | 10 | 40.00 | 86.93 | 100 | 80 | 120 | | | | |

Sample ID: **N043262-002BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025956**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1280.740 | 100 | 400.0 | 877.4 | 101 | 80 | 120 | | | | |

Sample ID: **N043262-002BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025957**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1280.920 | 100 | 400.0 | 877.4 | 101 | 80 | 120 | 1281 | 0.0141 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043262-010BDUP** | SampType: **DUP** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025959** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 87.536 | 10 | | | | | | 86.93 | 0.690 | 20 | |

| Sample ID: **N043262-003BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025960** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10153.000 | 1000 | 4000 | 6119 | 101 | 80 | 120 | | | | |

| Sample ID: **N043262-003BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025961** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10183.400 | 1000 | 4000 | 6119 | 102 | 80 | 120 | 10150 | 0.299 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149156_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **PBW** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026276**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149156_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **LCSW** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026277**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.941 | 0.50 | 2.000 | 0 | 97.1 | 90 | 110 | | | | |

Sample ID: **N043262-008BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026279**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 131.372 | 10 | 40.00 | 90.84 | 101 | 80 | 120 | | | | |

Sample ID: **N043262-008BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026280**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 131.716 | 10 | 40.00 | 90.84 | 102 | 80 | 120 | 131.4 | 0.262 | 20 | |

Sample ID: **N043262-014BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026282**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 81.608 | 10 | | | | | | 81.57 | 0.0466 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **N043262-014BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026283**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 122.464 | 10 | 40.00 | 81.57 | 102 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149185_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **PBW** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028255**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.155 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149185_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **LCSW** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028256**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.934 | 0.50 | 2.000 | 0 | 96.7 | 90 | 110 | | | | |

Sample ID: **N043262-015BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028258**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 123.464 | 10 | 40.00 | 84.01 | 98.6 | 80 | 120 | | | | |

Sample ID: **N043262-015BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028259**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 123.722 | 10 | 40.00 | 84.01 | 99.3 | 80 | 120 | 123.5 | 0.209 | 20 | |

Sample ID: **N043238-001ADUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028261**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 158.470 | 10 | | | | | | 160.1 | 1.02 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043252-001CMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149185** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149185** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4028265** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 3018.700 | 250 | 1000 | 2036 | 98.3 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_FPGE**

Sample ID: **MB-R149152_F** SampType: **MBLK** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **PBW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025920**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | ND | 0.10 | | | | | | | | | |

Sample ID: **LCS-R149152_F** SampType: **LCS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **LCSW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025921**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 1.341 | 0.10 | 1.250 | 0 | 107 | 90 | 110 | | | | |

Sample ID: **N043262-010BDUP** SampType: **DUP** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025926**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 0.649 | 0.20 | | | | | | 0.6604 | 1.80 | 20 | |

Sample ID: **N043262-010BMS** SampType: **MS** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025927**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 3.266 | 0.20 | 2.500 | 0.6604 | 104 | 80 | 120 | | | | |

Sample ID: **N043262-010BMSD** SampType: **MSD** TestCode: **300_W_FPGE** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025928**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Fluoride | 3.298 | 0.20 | 2.500 | 0.6604 | 105 | 80 | 120 | 3.266 | 0.963 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149152_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **PBW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026022**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149152_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **LCSW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026023**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.963 | 0.50 | 4.000 | 0 | 99.1 | 90 | 110 | | | | |

Sample ID: **N043262-002BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026032**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 629.265 | 25 | 200.0 | 423.3 | 103 | 80 | 120 | | | | |

Sample ID: **N043262-002BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026033**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 631.620 | 25 | 200.0 | 423.3 | 104 | 80 | 120 | 629.3 | 0.374 | 20 | |

Sample ID: **N043262-003BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026035**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1876.540 | 100 | 800.0 | 1064 | 102 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043262-003BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026036**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1866.720 | 100 | 800.0 | 1064 | 100 | 80 | 120 | 1877 | 0.525 | 20 | |

Sample ID: **N043262-010BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026038**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 287.496 | 10 | 80.00 | 205.5 | 103 | 80 | 120 | | | | |

Sample ID: **N043262-010BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026041**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 205.652 | 10 | | | | | | 205.5 | 0.0788 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149156_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **PBW** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026310**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.253 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149156_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **LCSW** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026311**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.913 | 0.50 | 4.000 | 0 | 97.8 | 90 | 110 | | | | |

Sample ID: **N043262-008BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026313**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 306.518 | 10 | 80.00 | 222.1 | 106 | 80 | 120 | | | | |

Sample ID: **N043262-008BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026314**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 306.646 | 10 | 80.00 | 222.1 | 106 | 80 | 120 | 306.5 | 0.0418 | 20 | |

Sample ID: **N043262-014BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026316**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 207.818 | 10 | | | | | | 208.2 | 0.195 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043262-014BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026317**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 292.056 | 10 | 80.00 | 208.2 | 105 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149185_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **PBW** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028361**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149185_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **LCSW** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028362**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.956 | 0.50 | 4.000 | 0 | 98.9 | 90 | 110 | | | | |

Sample ID: **N043262-015BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028364**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 290.520 | 10 | 80.00 | 209.2 | 102 | 80 | 120 | | | | |

Sample ID: **N043262-015BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028365**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 291.834 | 10 | 80.00 | 209.2 | 103 | 80 | 120 | 290.5 | 0.451 | 20 | |

Sample ID: **N043238-001ADUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149185**
Client ID: **ZZZZZZ** Batch ID: **R149185** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4028367**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 229.430 | 10 | | | | | | 229.1 | 0.135 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-001

**Client Sample ID:** MW-940-Q420
**Collection Date:** 12/3/2020 8:34:00 AM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP

**EPA 3010A** **EPA 6010B**

RunID: **NV00922-ICP2_201215D** QC Batch: **83297** PrepDate: **12/5/2020** Analyst: **DJ**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Boron | 2700 | 370 | 500 | | ug/L | 5 | 12/15/2020 09:12 PM |
| Calcium | 360000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 04:55 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 04:55 PM |
| Magnesium | 7100 | 240 | 500 | | ug/L | 5 | 12/13/2020 04:55 PM |
| Sodium | 3500000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 01:37 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-002

**Client Sample ID:** MW-66-165-Q420
**Collection Date:** 12/3/2020 9:20:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 780 | 74 | 100 | | ug/L | 1 | 12/15/2020 09:16 PM |
| Calcium | 210000 | 85 | 500 | | ug/L | 1 | 12/13/2020 04:59 PM |
| Iron | 200 | 18 | 20 | | ug/L | 1 | 12/13/2020 04:59 PM |
| Magnesium | 47000 | 48 | 100 | | ug/L | 1 | 12/13/2020 04:59 PM |
| Potassium | 14000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 01:40 PM |
| Sodium | 420000 | 2400 | 12000 | | ug/L | 25 | 12/14/2020 01:45 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-003

**Client Sample ID:** MW-66-230-Q420
**Collection Date:** 12/3/2020 8:24:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 3000 | 370 | 500 | | ug/L | 5 | 12/15/2020 09:48 PM |
| Calcium | 350000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 05:26 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 05:26 PM |
| Magnesium | 7100 | 240 | 500 | | ug/L | 5 | 12/13/2020 05:26 PM |
| Potassium | 68000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 02:22 PM |
| Sodium | 4000000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 02:32 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-004

**Client Sample ID:** MW-74-240-Q420
**Collection Date:** 12/3/2020 12:50:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 290 | 74 | 100 | | ug/L | 1 | 12/15/2020 10:12 PM |
| Calcium | 4200 | 85 | 500 | | ug/L | 1 | 12/13/2020 06:08 PM |
| Iron | 120 | 18 | 20 | | ug/L | 1 | 12/13/2020 06:08 PM |
| Magnesium | 560 | 48 | 100 | | ug/L | 1 | 12/13/2020 06:08 PM |
| Sodium | 170000 | 4800 | 25000 | | ug/L | 50 | 12/14/2020 03:10 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-005

**Client Sample ID:** MW-72-080-Q420
**Collection Date:** 12/3/2020 2:30:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 4400 | 370 | 500 | | ug/L | 5 | 12/17/2020 12:46 PM |
| Calcium | 300000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 06:12 PM |
| Iron | 450 | 89 | 100 | | ug/L | 5 | 12/13/2020 06:12 PM |
| Magnesium | 9900 | 240 | 500 | | ug/L | 5 | 12/13/2020 06:12 PM |
| Sodium | 3200000 | 48000 | 250000 | | ug/L | 500 | 12/14/2020 03:13 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-006

**Client Sample ID:** MW-72BR-200-Q420
**Collection Date:** 12/3/2020 1:48:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 5000 | 370 | 500 | | ug/L | 5 | 12/17/2020 12:50 PM |
| Calcium | 270000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 06:16 PM |
| Iron | ND | 89 | 100 | | ug/L | 5 | 12/13/2020 06:16 PM |
| Magnesium | 4300 | 240 | 500 | | ug/L | 5 | 12/13/2020 06:16 PM |
| Sodium | 2600000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 03:17 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-007

**Client Sample ID:** MW-73-080-Q420
**Collection Date:** 12/3/2020 3:16:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1200 | 74 | 100 | | ug/L | 1 | 12/17/2020 12:54 PM |
| Calcium | 290000 | 85 | 500 | | ug/L | 1 | 12/13/2020 06:21 PM |
| Iron | 25 | 18 | 20 | | ug/L | 1 | 12/13/2020 06:21 PM |
| Magnesium | 33000 | 48 | 100 | | ug/L | 1 | 12/13/2020 06:21 PM |
| Sodium | 1100000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 03:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-008

**Client Sample ID:** MW-27-020-Q420
**Collection Date:** 12/3/2020 11:11:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | | PrepDate: | **12/5/2020** | Analyst: **DJ** |
| Boron | ND | 74 | 100 | | ug/L | 1 | 12/17/2020 01:12 PM |
| Calcium | 73000 | 85 | 500 | | ug/L | 1 | 12/13/2020 06:26 PM |
| Iron | 100 | 18 | 20 | | ug/L | 1 | 12/13/2020 06:26 PM |
| Magnesium | 27000 | 48 | 100 | | ug/L | 1 | 12/13/2020 06:26 PM |
| Sodium | 66000 | 480 | 2500 | | ug/L | 5 | 12/14/2020 03:23 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-010

**Client Sample ID:** MW-27-060-Q420
**Collection Date:** 12/3/2020 9:30:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 100 | 74 | 100 | | ug/L | 1 | 12/17/2020 01:16 PM |
| Calcium | 78000 | 85 | 500 | | ug/L | 1 | 12/13/2020 06:30 PM |
| Iron | 350 | 18 | 20 | | ug/L | 1 | 12/13/2020 06:30 PM |
| Magnesium | 23000 | 48 | 100 | | ug/L | 1 | 12/13/2020 06:30 PM |
| Sodium | 68000 | 480 | 2500 | | ug/L | 5 | 12/14/2020 03:26 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-012

**Client Sample ID:** MW-27-085-Q420
**Collection Date:** 12/3/2020 10:26:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1100 | 74 | 100 | | ug/L | 1 | 12/17/2020 01:20 PM |
| Calcium | 180000 | 85 | 500 | | ug/L | 1 | 12/13/2020 07:02 PM |
| Iron | 100 | 18 | 20 | | ug/L | 1 | 12/13/2020 07:02 PM |
| Magnesium | 56000 | 48 | 100 | | ug/L | 1 | 12/13/2020 07:02 PM |
| Sodium | 1400000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 03:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-014

**Client Sample ID:** MW-34-055-Q420
**Collection Date:** 12/3/2020 2:27:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 190 | 74 | 100 | | ug/L | 1 | 12/17/2020 01:25 PM |
| Calcium | 67000 | 85 | 500 | | ug/L | 1 | 12/13/2020 07:07 PM |
| Iron | 33 | 18 | 20 | | ug/L | 1 | 12/13/2020 07:07 PM |
| Magnesium | 23000 | 48 | 100 | | ug/L | 1 | 12/13/2020 07:07 PM |
| Potassium | 5400 | 430 | 2500 | | ug/L | 5 | 12/14/2020 03:50 PM |
| Sodium | 92000 | 480 | 2500 | | ug/L | 5 | 12/14/2020 03:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-015

**Client Sample ID:** MW-911-Q420
**Collection Date:** 12/3/2020 2:37:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 180 | 74 | 100 | | ug/L | 1 | 12/17/2020 01:29 PM |
| Calcium | 65000 | 85 | 500 | | ug/L | 1 | 12/13/2020 07:11 PM |
| Iron | 22 | 18 | 20 | | ug/L | 1 | 12/13/2020 07:11 PM |
| Magnesium | 22000 | 48 | 100 | | ug/L | 1 | 12/13/2020 07:11 PM |
| Potassium | 5300 | 430 | 2500 | | ug/L | 5 | 12/14/2020 03:53 PM |
| Sodium | 89000 | 480 | 2500 | | ug/L | 5 | 12/14/2020 03:53 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-017

**Client Sample ID:** MW-34-080-Q420
**Collection Date:** 12/3/2020 1:39:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP

**EPA 3010A** **EPA 6010B**

RunID: **NV00922-ICP2_201217B** QC Batch: **83297** PrepDate: **12/5/2020** Analyst: **DJ**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Boron | 980 | 74 | 100 | | ug/L | 1 | 12/17/2020 01:33 PM |
| Calcium | 210000 | 85 | 500 | | ug/L | 1 | 12/13/2020 07:16 PM |
| Iron | 170 | 18 | 20 | | ug/L | 1 | 12/13/2020 07:16 PM |
| Magnesium | 93000 | 48 | 100 | | ug/L | 1 | 12/13/2020 07:16 PM |
| Potassium | 18000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 03:56 PM |
| Sodium | 1400000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 04:01 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-019

**Client Sample ID:** MW-34-100-Q420
**Collection Date:** 12/3/2020 12:49:00 PM
**Matrix:** GROUNDWATER

## DISSOLVED METALS BY ICP

**EPA 3010A** **EPA 6010B**

RunID: **NV00922-ICP2_201217B** QC Batch: **83297** PrepDate: **12/5/2020** Analyst: **DJ**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Boron | 1200 | 74 | 100 | | ug/L | 1 | 12/17/2020 01:46 PM |
| Calcium | 92000 | 85 | 500 | | ug/L | 1 | 12/13/2020 07:21 PM |
| Iron | 88 | 18 | 20 | | ug/L | 1 | 12/13/2020 07:21 PM |
| Magnesium | 25000 | 48 | 100 | | ug/L | 1 | 12/13/2020 07:21 PM |
| Potassium | 26000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 04:04 PM |
| Sodium | 2000000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 04:09 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-020

**Client Sample ID:** MW-912-Q420
**Collection Date:** 12/3/2020 12:59:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201217B** | QC Batch: **83297** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1600 | 74 | 100 | | ug/L | 1 | 12/17/2020 01:41 PM |
| Calcium | 120000 | 85 | 500 | | ug/L | 1 | 12/13/2020 07:27 PM |
| Iron | 100 | 18 | 20 | | ug/L | 1 | 12/13/2020 07:27 PM |
| Magnesium | 32000 | 48 | 100 | | ug/L | 1 | 12/13/2020 07:27 PM |
| Potassium | 28000 | 430 | 2500 | | ug/L | 5 | 12/14/2020 04:12 PM |
| Sodium | 2000000 | 12000 | 62000 | | ug/L | 125 | 12/14/2020 04:17 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83297** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **PBW** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041388**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 109.705 | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83297** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **LCSW** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041389**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 11302.421 | 500 | 10000 | 0 | 113 | 85 | 115 | | | | |
| Iron | 103.861 | 20 | 100.0 | 0 | 104 | 85 | 115 | | | | |
| Magnesium | 10441.620 | 100 | 10000 | 0 | 104 | 85 | 115 | | | | |

Sample ID: **N043262-002DMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041394**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 202910.300 | 500 | 10000 | 205400 | -24.7 | 75 | 125 | | | | S |
| Iron | 248.029 | 20 | 100.0 | 196.3 | 51.7 | 75 | 125 | | | | S |
| Magnesium | 56957.576 | 100 | 10000 | 46880 | 101 | 75 | 125 | | | | |

Sample ID: **N043262-002DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041395**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 201782.204 | 500 | 10000 | 205400 | -36.0 | 75 | 125 | 202900 | 0.558 | 20 | S |
| Iron | 272.050 | 20 | 100.0 | 196.3 | 75.7 | 75 | 125 | 248.0 | 9.24 | 20 | |
| Magnesium | 56729.779 | 100 | 10000 | 46880 | 98.5 | 75 | 125 | 56960 | 0.401 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043262-003DMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041401**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 395680.580 | 2500 | 10000 | 349900 | 458 | 75 | 125 | | | | S |
| Magnesium | 20485.806 | 500 | 10000 | 7117 | 134 | 75 | 125 | | | | S |

Sample ID: **N043262-003DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041402**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 460261.030 | 2500 | 10000 | 349900 | 1100 | 75 | 125 | 395700 | 15.1 | 20 | S |
| Magnesium | 24208.359 | 500 | 10000 | 7117 | 171 | 75 | 125 | 20490 | 16.7 | 20 | S |

Sample ID: **MB-83297** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149396**
Client ID: **PBW** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043077**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | ND | 500 | | | | | | | | | |
| Sodium | ND | 500 | | | | | | | | | |

Sample ID: **LCS2-83297** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149396**
Client ID: **LCSW** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043078**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 19118.298 | 500 | 20000 | 0 | 95.6 | 85 | 115 | | | | |
| Sodium | 18347.913 | 500 | 20000 | 0 | 91.7 | 85 | 115 | | | | |

Sample ID: **N043262-002DMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043084**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 35535.277 | 2500 | 20000 | 14500 | 105 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043262-002DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043085**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 35404.771 | 2500 | 20000 | 14500 | 105 | 75 | 125 | 35540 | 0.368 | 20 | |

Sample ID: **N043262-002DMS2** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043089**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 410007.763 | 12000 | 20000 | 419600 | -47.9 | 75 | 125 | | | | S |

Sample ID: **N043262-002DMSD2** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043090**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 416955.101 | 12000 | 20000 | 419600 | -13.2 | 75 | 125 | 410000 | 1.68 | 20 | S |

Sample ID: **N043262-003D-MS2** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043096**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 99703.415 | 2500 | 20000 | 67810 | 159 | 75 | 125 | | | | S |

Sample ID: **N043262-003D-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043097**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 100169.958 | 2500 | 20000 | 67810 | 162 | 75 | 125 | 99700 | 0.467 | 20 | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043262-003D-MS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043101** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2911117.675 | 120000 | 20000 | 4003000 | -5460 | 75 | 125 | | | | S |

| Sample ID: **N043262-003D-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043102** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 2813803.580 | 120000 | 20000 | 4003000 | -5940 | 75 | 125 | 2911000 | 3.40 | 20 | S |

| Sample ID: **MB-83297** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046112** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

| Sample ID: **LCS1-83297** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046113** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4744.333 | 100 | 5000 | 0 | 94.9 | 85 | 115 | | | | |

| Sample ID: **N043262-002D-MS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046120** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5617.290 | 100 | 5000 | 784.5 | 96.7 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043262-002D-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149447**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/15/2020** SeqNo: **4046121**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5719.360 | 100 | 5000 | 784.5 | 98.7 | 75 | 125 | 5617 | 1.80 | 20 | |

Sample ID: **N043262-003D-MS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149447**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/15/2020** SeqNo: **4046125**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8161.953 | 500 | 5000 | 3012 | 103 | 75 | 125 | | | | |

Sample ID: **N043262-003D-MSD** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149447**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/15/2020** SeqNo: **4046126**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 7440.143 | 500 | 5000 | 3012 | 88.6 | 75 | 125 | 8162 | 9.25 | 20 | |

Sample ID: **N043262-003DMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149520**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/18/2020** SeqNo: **4050627**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 467.175 | 100 | 100.0 | 0 | 467 | 75 | 125 | | | | S |

Sample ID: **N043262-003DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4051907**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Iron | 155.850 | 100 | 100.0 | 0 | 156 | 75 | 125 | 467.2 | 99.9 | 20 | SR |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **N043262-002D-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041393**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 201827.567 | 500 | 10000 | 205400 | -35.6 | 80 | 120 | | | | S |
| Iron | 259.711 | 20 | 100.0 | 196.3 | 63.4 | 80 | 120 | | | | S |
| Magnesium | 55758.204 | 100 | 10000 | 46880 | 88.8 | 80 | 120 | | | | |

Sample ID: **N043262-003D-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041400**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 389537.981 | 2500 | 10000 | 349900 | 396 | 80 | 120 | | | | S |
| Iron | 135.683 | 100 | 100.0 | 0 | 136 | 80 | 120 | | | | S |
| Magnesium | 20404.924 | 500 | 10000 | 7117 | 133 | 80 | 120 | | | | S |

Sample ID: **N043262-002D-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043083**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 38444.758 | 2500 | 20000 | 14500 | 120 | 80 | 120 | | | | |

Sample ID: **N043262-002D-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043088**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 426812.586 | 12000 | 20000 | 419600 | 36.1 | 80 | 120 | | | | S |

Sample ID: **N043262-003D-PS** SampType: **PS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: RunNo: **149396**
Client ID: **ZZZZZZ** Batch ID: **83297** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/14/2020** SeqNo: **4043095**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043262-003D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043095** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 97744.246 | 2500 | 20000 | 67810 | 150 | 80 | 120 | | | | S |

| Sample ID: **N043262-003D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043100** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 3627880.413 | 120000 | 20000 | 4003000 | -1870 | 80 | 120 | | | | S |

| Sample ID: **N043262-002D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046119** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 5509.011 | 100 | 5000 | 784.5 | 94.5 | 80 | 120 | | | | |

| Sample ID: **N043262-003D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83297** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046124** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 8310.194 | 500 | 5000 | 3012 | 106 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-940-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 8:34:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201205B** | QC Batch: **83287** | | | | PrepDate: | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 8.0 | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:40 PM |
| Manganese | 1.4 | 0.26 | 0.50 | | µg/L | 1 | 12/4/2020 10:32 PM |
| Molybdenum | 75 | 0.21 | 0.50 | | µg/L | 1 | 12/4/2020 10:32 PM |
| Selenium | 12 | 0.36 | 0.50 | | µg/L | 1 | 12/4/2020 10:32 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-002

**Client Sample ID:** MW-66-165-Q420
**Collection Date:** 12/3/2020 9:20:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 0.69 | 0.081 | 0.10 | | µg/L | 1 | 12/4/2020 10:38 PM |
| Manganese | 3.0 | 0.26 | 0.50 | | µg/L | 1 | 12/4/2020 10:38 PM |
| Molybdenum | 5.8 | 0.21 | 0.50 | | µg/L | 1 | 12/4/2020 10:38 PM |
| Selenium | 19 | 0.36 | 0.50 | | µg/L | 1 | 12/4/2020 10:38 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-003

**Client Sample ID:** MW-66-230-Q420
**Collection Date:** 12/3/2020 8:24:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 8.0 | 0.081 | 0.10 | | µg/L | 1 | 12/4/2020 11:30 PM |
| Manganese | 1.3 | 0.26 | 0.50 | | µg/L | 1 | 12/4/2020 11:30 PM |
| Molybdenum | 72 | 0.21 | 0.50 | | µg/L | 1 | 12/4/2020 11:30 PM |
| Selenium | 12 | 0.36 | 0.50 | | µg/L | 1 | 12/4/2020 11:30 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-74-240-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:50:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 9.9 | 0.081 | 0.10 | | µg/L | 1 | 12/4/2020 11:59 PM |
| Manganese | 4.3 | 0.26 | 0.50 | | µg/L | 1 | 12/4/2020 11:59 PM |
| Molybdenum | 26 | 0.21 | 0.50 | | µg/L | 1 | 12/4/2020 11:59 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/4/2020 11:59 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-005

**Client Sample ID:** MW-72-080-Q420
**Collection Date:** 12/3/2020 2:30:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 12 | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:17 AM |
| Manganese | 44 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 12:17 AM |
| Molybdenum | 76 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 12:17 AM |
| Selenium | 1.6 | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 12:17 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-72BR-200-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 1:48:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 14 | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:22 AM |
| Manganese | 120 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 12:22 AM |
| Molybdenum | 77 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 12:22 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 12:22 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-007

**Client Sample ID:** MW-73-080-Q420
**Collection Date:** 12/3/2020 3:16:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:28 AM |
| Manganese | 5.7 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 12:28 AM |
| Molybdenum | 36 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 12:28 AM |
| Selenium | 4.1 | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 12:28 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-020-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 11:11:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 0.86 | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:34 AM |
| Manganese | 12 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 12:34 AM |
| Molybdenum | 5.8 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 12:34 AM |
| Selenium | 0.54 | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 12:34 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-010

**Client Sample ID:** MW-27-060-Q420
**Collection Date:** 12/3/2020 9:30:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 9.8 | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:40 AM |
| Manganese | 280 | 1.3 | 2.5 | | µg/L | 5 | 12/5/2020 02:13 PM |
| Molybdenum | 4.6 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 12:40 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 12:40 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-27-085-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 10:26:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-012 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | | PrepDate: | **12/4/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:46 AM |
| Manganese | 78 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 12:46 AM |
| Molybdenum | 21 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 12:46 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 12:46 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-055-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 2:27:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-014 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | **12/4/2020** | | Analyst: **CEI** |
| Arsenic | 2.7 | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:52 AM |
| Manganese | 68 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 12:52 AM |
| Molybdenum | 5.2 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 12:52 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 12:52 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-015

**Client Sample ID:** MW-911-Q420
**Collection Date:** 12/3/2020 2:37:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | 2.8 | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 12:57 AM |
| Manganese | 70 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 12:57 AM |
| Molybdenum | 5.4 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 12:57 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 12:57 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-017

**Client Sample ID:** MW-34-080-Q420
**Collection Date:** 12/3/2020 1:39:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 01:03 AM |
| Manganese | 52 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 01:03 AM |
| Molybdenum | 13 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 01:03 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 01:03 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-34-100-Q420 |
| **Lab Order:** | N043262 | **Collection Date:** | 12/3/2020 12:49:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043262-019 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | | PrepDate: | **12/4/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 01:09 AM |
| Manganese | 180 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 01:09 AM |
| Molybdenum | 57 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 01:09 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 01:09 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-020

**Client Sample ID:** MW-912-Q420
**Collection Date:** 12/3/2020 12:59:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201204B** | QC Batch: **83287** | | | PrepDate: | | **12/4/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/5/2020 01:26 AM |
| Manganese | 170 | 0.26 | 0.50 | | µg/L | 1 | 12/5/2020 01:26 AM |
| Molybdenum | 60 | 0.21 | 0.50 | | µg/L | 1 | 12/5/2020 01:26 AM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/5/2020 01:26 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83287** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149259**
Client ID: **PBW** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032839**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | ND | 0.10 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-83287** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149259**
Client ID: **LCSW** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032840**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 10.535 | 0.10 | 10.00 | 0 | 105 | 85 | 115 | | | | |
| Manganese | 95.153 | 0.50 | 100.0 | 0 | 95.2 | 85 | 115 | | | | |
| Molybdenum | 9.610 | 0.50 | 10.00 | 0 | 96.1 | 85 | 115 | | | | |
| Selenium | 10.814 | 0.50 | 10.00 | 0 | 108 | 85 | 115 | | | | |

Sample ID: **N043262-002DMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149259**
Client ID: **ZZZZZZ** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032849**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.389 | 0.10 | 10.00 | 0.6879 | 107 | 75 | 125 | | | | |
| Manganese | 92.457 | 0.50 | 100.0 | 2.974 | 89.5 | 75 | 125 | | | | |
| Molybdenum | 16.528 | 0.50 | 10.00 | 5.752 | 108 | 75 | 125 | | | | |
| Selenium | 30.070 | 0.50 | 10.00 | 19.26 | 108 | 75 | 125 | | | | |

Sample ID: **N043262-002DMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149259**
Client ID: **ZZZZZZ** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032850**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.769 | 0.10 | 10.00 | 0.6879 | 111 | 75 | 125 | 11.39 | 3.28 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043262-002DMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149259**
Client ID: **ZZZZZZ** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032850**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Manganese | 92.075 | 0.50 | 100.0 | 2.974 | 89.1 | 75 | 125 | 92.46 | 0.413 | 20 | |
| Molybdenum | 16.248 | 0.50 | 10.00 | 5.752 | 105 | 75 | 125 | 16.53 | 1.71 | 20 | |
| Selenium | 30.246 | 0.50 | 10.00 | 19.26 | 110 | 75 | 125 | 30.07 | 0.584 | 20 | |

Sample ID: **N043262-003DMS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149259**
Client ID: **ZZZZZZ** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032854**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 18.126 | 0.10 | 10.00 | 8.028 | 101 | 75 | 125 | | | | |
| Manganese | 87.073 | 0.50 | 100.0 | 1.252 | 85.8 | 75 | 125 | | | | |
| Molybdenum | 84.094 | 0.50 | 10.00 | 72.15 | 119 | 75 | 125 | | | | |
| Selenium | 22.259 | 0.50 | 10.00 | 12.32 | 99.4 | 75 | 125 | | | | |

Sample ID: **N043262-003DMSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/4/2020** RunNo: **149259**
Client ID: **ZZZZZZ** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032855**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 18.207 | 0.10 | 10.00 | 8.028 | 102 | 75 | 125 | 18.13 | 0.447 | 20 | |
| Manganese | 86.300 | 0.50 | 100.0 | 1.252 | 85.0 | 75 | 125 | 87.07 | 0.892 | 20 | |
| Molybdenum | 85.173 | 0.50 | 10.00 | 72.15 | 130 | 75 | 125 | 84.09 | 1.27 | 20 | S |
| Selenium | 21.905 | 0.50 | 10.00 | 12.32 | 95.8 | 75 | 125 | 22.26 | 1.60 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043262-002D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149259**
Client ID: **ZZZZZZ** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032848**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 11.704 | 0.10 | 10.00 | 0.6879 | 110 | 80 | 120 | | | | |
| Manganese | 91.111 | 0.50 | 100.0 | 2.974 | 88.1 | 80 | 120 | | | | |
| Molybdenum | 15.962 | 0.50 | 10.00 | 5.752 | 102 | 80 | 120 | | | | |
| Selenium | 29.059 | 0.50 | 10.00 | 19.26 | 97.9 | 80 | 120 | | | | |

Sample ID: **N043262-003D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149259**
Client ID: **ZZZZZZ** Batch ID: **83287** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/4/2020** SeqNo: **4032853**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Arsenic | 18.443 | 0.10 | 10.00 | 8.028 | 104 | 80 | 120 | | | | |
| Manganese | 86.805 | 0.50 | 100.0 | 1.252 | 85.6 | 80 | 120 | | | | |
| Molybdenum | 83.562 | 0.50 | 10.00 | 72.15 | 114 | 80 | 120 | | | | |
| Selenium | 22.964 | 0.50 | 10.00 | 12.32 | 106 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-001

**Client Sample ID:** MW-940-Q420
**Collection Date:** 12/3/2020 8:34:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-001

**Client Sample ID:** MW-940-Q420
**Collection Date:** 12/3/2020 8:34:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Chloroform | 1.5 | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/8/2020 09:21 PM |
| Surr: 1,2-Dichloroethane-d4 | 130 | 0 | 72-119 | S | %REC | 1 | 12/8/2020 09:21 PM |
| Surr: 4-Bromofluorobenzene | 108 | 0 | 76-119 | | %REC | 1 | 12/8/2020 09:21 PM |
| Surr: Dibromofluoromethane | 118 | 0 | 85-115 | S | %REC | 1 | 12/8/2020 09:21 PM |
| Surr: Toluene-d8 | 116 | 0 | 81-120 | | %REC | 1 | 12/8/2020 09:21 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-002

**Client Sample ID:** MW-66-165-Q420
**Collection Date:** 12/3/2020 9:20:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-002

**Client Sample ID:** MW-66-165-Q420
**Collection Date:** 12/3/2020 9:20:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Chloroform | 1.1 | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/8/2020 08:58 PM |
| Surr: 1,2-Dichloroethane-d4 | 114 | 0 | 72-119 | | %REC | 1 | 12/8/2020 08:58 PM |
| Surr: 4-Bromofluorobenzene | 98.1 | 0 | 76-119 | | %REC | 1 | 12/8/2020 08:58 PM |
| Surr: Dibromofluoromethane | 109 | 0 | 85-115 | | %REC | 1 | 12/8/2020 08:58 PM |
| Surr: Toluene-d8 | 110 | 0 | 81-120 | | %REC | 1 | 12/8/2020 08:58 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-003

**Client Sample ID:** MW-66-230-Q420
**Collection Date:** 12/3/2020 8:24:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043262
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043262-003

**Client Sample ID:** MW-66-230-Q420
**Collection Date:** 12/3/2020 8:24:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Chloroform | 1.4 | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/8/2020 04:50 PM |
| Surr: 1,2-Dichloroethane-d4 | 116 | 0 | 72-119 | | %REC | 1 | 12/8/2020 04:50 PM |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 76-119 | | %REC | 1 | 12/8/2020 04:50 PM |
| Surr: Dibromofluoromethane | 111 | 0 | 85-115 | | %REC | 1 | 12/8/2020 04:50 PM |
| Surr: Toluene-d8 | 113 | 0 | 81-120 | | %REC | 1 | 12/8/2020 04:50 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **LCSW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031320**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.030 | 0.50 | 20.00 | 0 | 100 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.690 | 1.0 | 20.00 | 0 | 103 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.300 | 0.50 | 20.00 | 0 | 102 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.090 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.640 | 1.0 | 20.00 | 0 | 103 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.660 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.950 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.760 | 1.0 | 20.00 | 0 | 109 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.290 | 1.0 | 20.00 | 0 | 101 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.200 | 2.0 | 20.00 | 0 | 106 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.610 | 1.0 | 20.00 | 0 | 108 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.190 | 1.0 | 20.00 | 0 | 106 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.900 | 0.50 | 20.00 | 0 | 99.5 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.130 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 19.550 | 1.0 | 20.00 | 0 | 97.8 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 20.890 | 1.0 | 20.00 | 0 | 104 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.320 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.260 | 0.50 | 20.00 | 0 | 106 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 19.360 | 1.0 | 20.00 | 0 | 96.8 | 69 | 137 | | | | |
| 2-Butanone | 248.830 | 10 | 200.0 | 0 | 124 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.430 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.500 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 202.740 | 10 | 200.0 | 0 | 101 | 58 | 134 | | | | |
| Acetone | 251.810 | 10 | 200.0 | 0 | 126 | 40 | 135 | | | | |
| Acrolein | 213.400 | 20 | 200.0 | 0 | 107 | 75 | 125 | | | | |
| Acrylonitrile | 223.800 | 20 | 200.0 | 0 | 112 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **LCSW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031320**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 21.380 | 0.50 | 20.00 | 0 | 107 | 81 | 122 | | | | |
| Bromobenzene | 21.370 | 1.0 | 20.00 | 0 | 107 | 76 | 124 | | | | |
| Bromochloromethane | 20.570 | 1.0 | 20.00 | 0 | 103 | 65 | 129 | | | | |
| Bromodichloromethane | 21.220 | 0.50 | 20.00 | 0 | 106 | 76 | 121 | | | | |
| Bromoform | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 69 | 128 | | | | |
| Bromomethane | 22.800 | 1.0 | 20.00 | 0 | 114 | 53 | 141 | | | | |
| Carbon disulfide | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.500 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | | | | |
| Chlorobenzene | 20.890 | 0.50 | 20.00 | 0 | 104 | 81 | 122 | | | | |
| Chloroethane | 20.440 | 1.0 | 20.00 | 0 | 102 | 58 | 133 | | | | |
| Chloroform | 20.510 | 1.0 | 20.00 | 0 | 103 | 69 | 128 | | | | |
| Chloromethane | 18.870 | 1.0 | 20.00 | 0 | 94.4 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 21.450 | 1.0 | 20.00 | 0 | 107 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.370 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | | | | |
| Dibromochloromethane | 20.930 | 0.50 | 20.00 | 0 | 105 | 66 | 133 | | | | |
| Dibromomethane | 20.480 | 1.0 | 20.00 | 0 | 102 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 19.240 | 1.0 | 20.00 | 0 | 96.2 | 53 | 153 | | | | |
| Ethylbenzene | 20.920 | 1.0 | 20.00 | 0 | 105 | 73 | 127 | | | | |
| Freon-113 | 17.460 | 1.0 | 20.00 | 0 | 87.3 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.330 | 0.50 | 20.00 | 0 | 96.7 | 67 | 131 | | | | |
| Isopropylbenzene | 22.790 | 1.0 | 20.00 | 0 | 114 | 75 | 127 | | | | |
| m,p-Xylene | 43.290 | 1.0 | 40.00 | 0 | 108 | 76 | 128 | | | | |
| Methylene chloride | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 63 | 137 | | | | |
| MTBE | 21.660 | 1.0 | 20.00 | 0 | 108 | 65 | 123 | | | | |
| n-Butylbenzene | 22.090 | 1.0 | 20.00 | 0 | 110 | 69 | 137 | | | | |
| n-Propylbenzene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 72 | 129 | | | | |
| Naphthalene | 17.500 | 1.0 | 20.00 | 0 | 87.5 | 54 | 138 | | | | |
| o-Xylene | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.690 | 1.0 | 20.00 | 0 | 98.4 | 72 | 127 | | | | |
| Styrene | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 65 | 134 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **LCSW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031320**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 70 | 129 | | | | |
| Tetrachloroethene | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 66 | 128 | | | | |
| Toluene | 21.490 | 0.50 | 20.00 | 0 | 107 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 20.150 | 1.0 | 20.00 | 0 | 101 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.270 | 1.0 | 20.00 | 0 | 111 | 59 | 135 | | | | |
| Trichloroethene | 21.050 | 1.0 | 20.00 | 0 | 105 | 70 | 127 | | | | |
| Trichlorofluoromethane | 18.930 | 1.0 | 20.00 | 0 | 94.6 | 57 | 129 | | | | |
| Vinyl chloride | 20.140 | 0.50 | 20.00 | 0 | 101 | 50 | 134 | | | | |
| Xylenes, Total | 62.340 | 2.0 | 60.00 | 0 | 104 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.610 | | 25.00 | | 106 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 27.290 | | 25.00 | | 109 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.160 | | 25.00 | | 105 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.680 | | 25.00 | | 111 | 81 | 120 | | | | |

Sample ID: **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 0.50 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 0.50 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ND | 0.50 | | | | | | | | | |
| Dibromochloromethane | ND | 0.50 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.50 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | 0.550 | 1.0 | | | | | | | | | |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.990 | | 25.00 | | 108 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.200 | | 25.00 | | 101 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.080 | | 25.00 | | 104 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.250 | | 25.00 | | 109 | 81 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.980 | 0.50 | 20.00 | 0 | 99.9 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 22.760 | 1.0 | 20.00 | 0 | 114 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.220 | 0.50 | 20.00 | 0 | 106 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.460 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 21.110 | 1.0 | 20.00 | 0 | 106 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 21.030 | 1.0 | 20.00 | 0 | 105 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 22.950 | 1.0 | 20.00 | 0 | 115 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.050 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.810 | 1.0 | 20.00 | 0 | 109 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 21.280 | 1.0 | 20.00 | 0 | 106 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.200 | 1.0 | 20.00 | 0 | 101 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.160 | 2.0 | 20.00 | 0 | 106 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 22.410 | 1.0 | 20.00 | 0 | 112 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.150 | 1.0 | 20.00 | 0 | 106 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.530 | 0.50 | 20.00 | 0 | 103 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.090 | 1.0 | 20.00 | 0 | 100 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.260 | 1.0 | 20.00 | 0 | 101 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 21.140 | 1.0 | 20.00 | 0 | 106 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.680 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.300 | 0.50 | 20.00 | 0 | 106 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 20.710 | 1.0 | 20.00 | 0 | 104 | 69 | 137 | | | | |
| 2-Butanone | 191.200 | 10 | 200.0 | 0 | 95.6 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.780 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.320 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 214.330 | 10 | 200.0 | 0 | 107 | 58 | 134 | | | | |
| Acetone | 149.270 | 10 | 200.0 | 0 | 74.6 | 40 | 135 | | | | |
| Acrolein | 227.260 | 20 | 200.0 | 0 | 114 | 75 | 125 | | | | |
| Acrylonitrile | 233.180 | 20 | 200.0 | 0 | 117 | 75 | 125 | | | | |
| Benzene | 22.210 | 0.50 | 20.00 | 0 | 111 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 21.090 | 1.0 | 20.00 | 0 | 105 | 76 | 124 | | | | |
| Bromochloromethane | 22.160 | 1.0 | 20.00 | 0 | 111 | 65 | 129 | | | | |
| Bromodichloromethane | 21.860 | 0.50 | 20.00 | 0 | 109 | 76 | 121 | | | | |
| Bromoform | 20.920 | 1.0 | 20.00 | 0 | 105 | 69 | 128 | | | | |
| Bromomethane | 22.080 | 1.0 | 20.00 | 0 | 110 | 53 | 141 | | | | |
| Carbon disulfide | 22.010 | 1.0 | 20.00 | 0 | 110 | 75 | 125 | | | | |
| Carbon tetrachloride | 21.710 | 0.50 | 20.00 | 0 | 109 | 66 | 138 | | | | |
| Chlorobenzene | 21.510 | 0.50 | 20.00 | 0 | 108 | 81 | 122 | | | | |
| Chloroethane | 22.550 | 1.0 | 20.00 | 0 | 113 | 58 | 133 | | | | |
| Chloroform | 21.910 | 1.0 | 20.00 | 1.090 | 104 | 69 | 128 | | | | |
| Chloromethane | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 21.820 | 1.0 | 20.00 | 0 | 109 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.360 | 0.50 | 20.00 | 0 | 112 | 69 | 131 | | | | |
| Dibromochloromethane | 21.140 | 0.50 | 20.00 | 0 | 106 | 66 | 133 | | | | |
| Dibromomethane | 21.150 | 1.0 | 20.00 | 0 | 106 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 23.500 | 1.0 | 20.00 | 0 | 118 | 53 | 153 | | | | |
| Ethylbenzene | 21.630 | 1.0 | 20.00 | 0 | 108 | 73 | 127 | | | | |
| Freon-113 | 19.830 | 1.0 | 20.00 | 0 | 99.2 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.330 | 0.50 | 20.00 | 0 | 96.7 | 67 | 131 | | | | |
| Isopropylbenzene | 23.110 | 1.0 | 20.00 | 0 | 116 | 75 | 127 | | | | |
| m,p-Xylene | 46.140 | 1.0 | 40.00 | 0 | 115 | 76 | 128 | | | | |
| Methylene chloride | 21.380 | 1.0 | 20.00 | 0 | 107 | 63 | 137 | | | | |
| MTBE | 22.330 | 1.0 | 20.00 | 0 | 112 | 65 | 123 | | | | |
| n-Butylbenzene | 22.780 | 1.0 | 20.00 | 0 | 114 | 69 | 137 | | | | |
| n-Propylbenzene | 20.290 | 1.0 | 20.00 | 0 | 101 | 72 | 129 | | | | |
| Naphthalene | 21.310 | 1.0 | 20.00 | 0 | 107 | 54 | 138 | | | | |
| o-Xylene | 19.750 | 1.0 | 20.00 | 0 | 98.8 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.950 | 1.0 | 20.00 | 0 | 99.8 | 72 | 127 | | | | |
| Styrene | 20.030 | 1.0 | 20.00 | 0 | 100 | 65 | 134 | | | | |
| tert-Butylbenzene | 19.660 | 1.0 | 20.00 | 0 | 98.3 | 70 | 129 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 21.980 | 1.0 | 20.00 | 0 | 110 | 66 | 128 | | | | |
| Toluene | 22.170 | 0.50 | 20.00 | 0 | 111 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 20.720 | 1.0 | 20.00 | 0 | 104 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 23.420 | 1.0 | 20.00 | 0 | 117 | 59 | 135 | | | | |
| Trichloroethene | 22.370 | 1.0 | 20.00 | 0 | 112 | 70 | 127 | | | | |
| Trichlorofluoromethane | 21.700 | 1.0 | 20.00 | 0 | 108 | 57 | 129 | | | | |
| Vinyl chloride | 21.980 | 0.50 | 20.00 | 0 | 110 | 50 | 134 | | | | |
| Xylenes, Total | 65.890 | 2.0 | 60.00 | 0 | 110 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.190 | | 25.00 | | 109 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 28.160 | | 25.00 | | 113 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.890 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.370 | | 25.00 | | 109 | 81 | 120 | | | | |

Sample ID: **N043262-002EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.700 | 0.50 | 20.00 | 0 | 104 | 81 | 129 | 19.98 | 3.54 | 20 | |
| 1,1,1-Trichloroethane | 22.440 | 1.0 | 20.00 | 0 | 112 | 67 | 132 | 22.76 | 1.42 | 20 | |
| 1,1,2,2-Tetrachloroethane | 22.560 | 0.50 | 20.00 | 0 | 113 | 63 | 128 | 21.22 | 6.12 | 20 | |
| 1,1,2-Trichloroethane | 22.550 | 1.0 | 20.00 | 0 | 113 | 75 | 125 | 21.46 | 4.95 | 20 | |
| 1,1-Dichloroethane | 22.190 | 1.0 | 20.00 | 0 | 111 | 69 | 133 | 21.11 | 4.99 | 20 | |
| 1,1-Dichloroethene | 22.310 | 1.0 | 20.00 | 0 | 112 | 68 | 130 | 21.03 | 5.91 | 20 | |
| 1,1-Dichloropropene | 23.210 | 1.0 | 20.00 | 0 | 116 | 73 | 132 | 22.95 | 1.13 | 20 | |
| 1,2,3-Trichlorobenzene | 24.190 | 1.0 | 20.00 | 0 | 121 | 67 | 137 | 21.05 | 13.9 | 20 | |
| 1,2,3-Trichloropropane | 23.170 | 1.0 | 20.00 | 0 | 116 | 73 | 124 | 21.81 | 6.05 | 20 | |
| 1,2,4-Trichlorobenzene | 23.210 | 1.0 | 20.00 | 0 | 116 | 66 | 134 | 21.28 | 8.68 | 20 | |
| 1,2,4-Trimethylbenzene | 20.700 | 1.0 | 20.00 | 0 | 104 | 74 | 132 | 20.20 | 2.44 | 20 | |
| 1,2-Dibromo-3-chloropropane | 23.290 | 2.0 | 20.00 | 0 | 116 | 50 | 132 | 21.16 | 9.58 | 20 | |
| 1,2-Dibromoethane | 23.670 | 1.0 | 20.00 | 0 | 118 | 80 | 121 | 22.41 | 5.47 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 22.330 | 1.0 | 20.00 | 0 | 112 | 71 | 122 | 21.15 | 5.43 | 20 | |
| 1,2-Dichloroethane | 21.480 | 0.50 | 20.00 | 0 | 107 | 69 | 132 | 20.53 | 4.52 | 20 | |
| 1,2-Dichloropropane | 20.800 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | 20.09 | 3.47 | 20 | |
| 1,3,5-Trimethylbenzene | 20.960 | 1.0 | 20.00 | 0 | 105 | 74 | 131 | 20.26 | 3.40 | 20 | |
| 1,3-Dichlorobenzene | 22.560 | 1.0 | 20.00 | 0 | 113 | 75 | 124 | 21.14 | 6.50 | 20 | |
| 1,3-Dichloropropane | 22.260 | 1.0 | 20.00 | 0 | 111 | 73 | 126 | 21.68 | 2.64 | 20 | |
| 1,4-Dichlorobenzene | 21.890 | 0.50 | 20.00 | 0 | 109 | 74 | 123 | 21.30 | 2.73 | 20 | |
| 2,2-Dichloropropane | 21.260 | 1.0 | 20.00 | 0 | 106 | 69 | 137 | 20.71 | 2.62 | 20 | |
| 2-Butanone | 208.660 | 10 | 200.0 | 0 | 104 | 49 | 136 | 191.2 | 8.73 | 20 | |
| 2-Chlorotoluene | 22.970 | 1.0 | 20.00 | 0 | 115 | 73 | 126 | 21.78 | 5.32 | 20 | |
| 4-Chlorotoluene | 23.130 | 1.0 | 20.00 | 0 | 116 | 74 | 128 | 22.32 | 3.56 | 20 | |
| 4-Isopropyltoluene | 20.720 | 1.0 | 20.00 | 0 | 104 | 73 | 130 | 19.93 | 3.89 | 20 | |
| 4-Methyl-2-pentanone | 238.820 | 10 | 200.0 | 0 | 119 | 58 | 134 | 214.3 | 10.8 | 20 | |
| Acetone | 159.420 | 10 | 200.0 | 0 | 79.7 | 40 | 135 | 149.3 | 6.58 | 20 | |
| Acrolein | 239.240 | 20 | 200.0 | 0 | 120 | 75 | 125 | 227.3 | 5.14 | 20 | |
| Acrylonitrile | 245.530 | 20 | 200.0 | 0 | 123 | 75 | 125 | 233.2 | 5.16 | 20 | |
| Benzene | 22.530 | 0.50 | 20.00 | 0 | 113 | 81 | 122 | 22.21 | 1.43 | 20 | |
| Bromobenzene | 22.310 | 1.0 | 20.00 | 0 | 112 | 76 | 124 | 21.09 | 5.62 | 20 | |
| Bromochloromethane | 22.120 | 1.0 | 20.00 | 0 | 111 | 65 | 129 | 22.16 | 0.181 | 20 | |
| Bromodichloromethane | 22.370 | 0.50 | 20.00 | 0 | 112 | 76 | 121 | 21.86 | 2.31 | 20 | |
| Bromoform | 21.470 | 1.0 | 20.00 | 0 | 107 | 69 | 128 | 20.92 | 2.59 | 20 | |
| Bromomethane | 22.090 | 1.0 | 20.00 | 0 | 110 | 53 | 141 | 22.08 | 0.0453 | 20 | |
| Carbon disulfide | 21.230 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | 22.01 | 3.61 | 20 | |
| Carbon tetrachloride | 22.620 | 0.50 | 20.00 | 0 | 113 | 66 | 138 | 21.71 | 4.11 | 20 | |
| Chlorobenzene | 21.360 | 0.50 | 20.00 | 0 | 107 | 81 | 122 | 21.51 | 0.700 | 20 | |
| Chloroethane | 22.620 | 1.0 | 20.00 | 0 | 113 | 58 | 133 | 22.55 | 0.310 | 20 | |
| Chloroform | 22.260 | 1.0 | 20.00 | 1.090 | 106 | 69 | 128 | 21.91 | 1.58 | 20 | |
| Chloromethane | 20.250 | 1.0 | 20.00 | 0 | 101 | 56 | 131 | 19.93 | 1.59 | 20 | |
| cis-1,2-Dichloroethene | 22.320 | 1.0 | 20.00 | 0 | 112 | 72 | 126 | 21.82 | 2.27 | 20 | |
| cis-1,3-Dichloropropene | 23.160 | 0.50 | 20.00 | 0 | 116 | 69 | 131 | 22.36 | 3.51 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 21.120 | 0.50 | 20.00 | 0 | 106 | 66 | 133 | 21.14 | 0.0947 | 20 | |
| Dibromomethane | 23.140 | 1.0 | 20.00 | 0 | 116 | 76 | 125 | 21.15 | 8.99 | 20 | |
| Dichlorodifluoromethane | 23.190 | 1.0 | 20.00 | 0 | 116 | 53 | 153 | 23.50 | 1.33 | 20 | |
| Ethylbenzene | 21.460 | 1.0 | 20.00 | 0 | 107 | 73 | 127 | 21.63 | 0.789 | 20 | |
| Freon-113 | 20.610 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | 19.83 | 3.86 | 20 | |
| Hexachlorobutadiene | 20.350 | 0.50 | 20.00 | 0 | 102 | 67 | 131 | 19.33 | 5.14 | 20 | |
| Isopropylbenzene | 24.130 | 1.0 | 20.00 | 0 | 121 | 75 | 127 | 23.11 | 4.32 | 20 | |
| m,p-Xylene | 44.660 | 1.0 | 40.00 | 0 | 112 | 76 | 128 | 46.14 | 3.26 | 20 | |
| Methylene chloride | 21.680 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | 21.38 | 1.39 | 20 | |
| MTBE | 23.330 | 1.0 | 20.00 | 0 | 117 | 65 | 123 | 22.33 | 4.38 | 20 | |
| n-Butylbenzene | 24.110 | 1.0 | 20.00 | 0 | 121 | 69 | 137 | 22.78 | 5.67 | 20 | |
| n-Propylbenzene | 20.910 | 1.0 | 20.00 | 0 | 105 | 72 | 129 | 20.29 | 3.01 | 20 | |
| Naphthalene | 22.100 | 1.0 | 20.00 | 0 | 110 | 54 | 138 | 21.31 | 3.64 | 20 | |
| o-Xylene | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 80 | 121 | 19.75 | 0.711 | 20 | |
| sec-Butylbenzene | 21.260 | 1.0 | 20.00 | 0 | 106 | 72 | 127 | 19.95 | 6.36 | 20 | |
| Styrene | 19.150 | 1.0 | 20.00 | 0 | 95.8 | 65 | 134 | 20.03 | 4.49 | 20 | |
| tert-Butylbenzene | 20.690 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | 19.66 | 5.11 | 20 | |
| Tetrachloroethene | 22.430 | 1.0 | 20.00 | 0 | 112 | 66 | 128 | 21.98 | 2.03 | 20 | |
| Toluene | 22.650 | 0.50 | 20.00 | 0 | 113 | 77 | 122 | 22.17 | 2.14 | 20 | |
| trans-1,2-Dichloroethene | 21.580 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | 20.72 | 4.07 | 20 | |
| trans-1,3-Dichloropropene | 24.050 | 1.0 | 20.00 | 0 | 120 | 59 | 135 | 23.42 | 2.65 | 20 | |
| Trichloroethene | 22.120 | 1.0 | 20.00 | 0 | 111 | 70 | 127 | 22.37 | 1.12 | 20 | |
| Trichlorofluoromethane | 21.580 | 1.0 | 20.00 | 0 | 108 | 57 | 129 | 21.70 | 0.555 | 20 | |
| Vinyl chloride | 22.360 | 0.50 | 20.00 | 0 | 112 | 50 | 134 | 21.98 | 1.71 | 20 | |
| Xylenes, Total | 64.270 | 2.0 | 60.00 | 0 | 107 | 75 | 125 | 65.89 | 2.49 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 27.700 | | 25.00 | | 111 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 27.730 | | 25.00 | | 111 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 26.280 | | 25.00 | | 105 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 28.030 | | 25.00 | | 112 | 81 | 120 | | 0 | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.550 | 0.50 | 20.00 | 0 | 97.8 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 22.850 | 1.0 | 20.00 | 0 | 114 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.290 | 0.50 | 20.00 | 0 | 106 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 22.260 | 1.0 | 20.00 | 0 | 111 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 22.100 | 1.0 | 20.00 | 0 | 110 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 23.200 | 1.0 | 20.00 | 0 | 116 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 23.780 | 1.0 | 20.00 | 0 | 119 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 22.840 | 1.0 | 20.00 | 0 | 114 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.630 | 1.0 | 20.00 | 0 | 108 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 22.460 | 1.0 | 20.00 | 0 | 112 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.530 | 1.0 | 20.00 | 0 | 103 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.520 | 2.0 | 20.00 | 0 | 108 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 23.140 | 1.0 | 20.00 | 0 | 116 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 22.030 | 1.0 | 20.00 | 0 | 110 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.180 | 0.50 | 20.00 | 0 | 101 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.610 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.410 | 1.0 | 20.00 | 0 | 102 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 22.160 | 1.0 | 20.00 | 0 | 111 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.880 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.780 | 0.50 | 20.00 | 0 | 109 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 22.310 | 1.0 | 20.00 | 0 | 112 | 69 | 137 | | | | |
| 2-Butanone | 199.560 | 10 | 200.0 | 0 | 99.8 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.640 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.450 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 20.970 | 1.0 | 20.00 | 0 | 105 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 216.590 | 10 | 200.0 | 0 | 108 | 58 | 134 | | | | |
| Acetone | 153.920 | 10 | 200.0 | 0 | 77.0 | 40 | 135 | | | | |
| Acrolein | 239.500 | 20 | 200.0 | 0 | 120 | 75 | 125 | | | | |
| Acrylonitrile | 238.460 | 20 | 200.0 | 0 | 119 | 75 | 125 | | | | |
| Benzene | 22.040 | 0.50 | 20.00 | 0 | 110 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 21.900 | 1.0 | 20.00 | 0 | 110 | 76 | 124 | | | | |
| Bromochloromethane | 22.330 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | | | | |
| Bromodichloromethane | 21.670 | 0.50 | 20.00 | 0 | 108 | 76 | 121 | | | | |
| Bromoform | 20.290 | 1.0 | 20.00 | 0 | 101 | 69 | 128 | | | | |
| Bromomethane | 22.190 | 1.0 | 20.00 | 0 | 111 | 53 | 141 | | | | |
| Carbon disulfide | 22.780 | 1.0 | 20.00 | 0 | 114 | 75 | 125 | | | | |
| Carbon tetrachloride | 23.280 | 0.50 | 20.00 | 0 | 116 | 66 | 138 | | | | |
| Chlorobenzene | 21.120 | 0.50 | 20.00 | 0 | 106 | 81 | 122 | | | | |
| Chloroethane | 22.060 | 1.0 | 20.00 | 0 | 110 | 58 | 133 | | | | |
| Chloroform | 22.580 | 1.0 | 20.00 | 1.390 | 106 | 69 | 128 | | | | |
| Chloromethane | 20.810 | 1.0 | 20.00 | 0 | 104 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 22.030 | 1.0 | 20.00 | 0 | 110 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.500 | 0.50 | 20.00 | 0 | 112 | 69 | 131 | | | | |
| Dibromochloromethane | 21.420 | 0.50 | 20.00 | 0 | 107 | 66 | 133 | | | | |
| Dibromomethane | 21.060 | 1.0 | 20.00 | 0 | 105 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 25.000 | 1.0 | 20.00 | 0 | 125 | 53 | 153 | | | | |
| Ethylbenzene | 21.420 | 1.0 | 20.00 | 0 | 107 | 73 | 127 | | | | |
| Freon-113 | 22.060 | 1.0 | 20.00 | 0 | 110 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.150 | 0.50 | 20.00 | 0 | 101 | 67 | 131 | | | | |
| Isopropylbenzene | 23.670 | 1.0 | 20.00 | 0 | 118 | 75 | 127 | | | | |
| m,p-Xylene | 45.360 | 1.0 | 40.00 | 0 | 113 | 76 | 128 | | | | |
| Methylene chloride | 21.380 | 1.0 | 20.00 | 0.6900 | 103 | 63 | 137 | | | | |
| MTBE | 23.390 | 1.0 | 20.00 | 0 | 117 | 65 | 123 | | | | |
| n-Butylbenzene | 23.970 | 1.0 | 20.00 | 0 | 120 | 69 | 137 | | | | |
| n-Propylbenzene | 20.850 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | | | | |
| Naphthalene | 19.540 | 1.0 | 20.00 | 0 | 97.7 | 54 | 138 | | | | |
| o-Xylene | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 80 | 121 | | | | |
| sec-Butylbenzene | 21.010 | 1.0 | 20.00 | 0 | 105 | 72 | 127 | | | | |
| Styrene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 22.700 | 1.0 | 20.00 | 0 | 114 | 66 | 128 | | | | |
| Toluene | 22.270 | 0.50 | 20.00 | 0 | 111 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 22.320 | 1.0 | 20.00 | 0 | 112 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 23.830 | 1.0 | 20.00 | 0 | 119 | 59 | 135 | | | | |
| Trichloroethene | 21.620 | 1.0 | 20.00 | 0 | 108 | 70 | 127 | | | | |
| Trichlorofluoromethane | 23.390 | 1.0 | 20.00 | 0 | 117 | 57 | 129 | | | | |
| Vinyl chloride | 23.510 | 0.50 | 20.00 | 0 | 118 | 50 | 134 | | | | |
| Xylenes, Total | 64.970 | 2.0 | 60.00 | 0 | 108 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.410 | | 25.00 | | 110 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 27.530 | | 25.00 | | 110 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 27.070 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.920 | | 25.00 | | 108 | 81 | 120 | | | | |

Sample ID: **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.460 | 0.50 | 20.00 | 0 | 92.3 | 81 | 129 | 19.55 | 5.74 | 20 | |
| 1,1,1-Trichloroethane | 20.790 | 1.0 | 20.00 | 0 | 104 | 67 | 132 | 22.85 | 9.44 | 20 | |
| 1,1,2,2-Tetrachloroethane | 18.940 | 0.50 | 20.00 | 0 | 94.7 | 63 | 128 | 21.29 | 11.7 | 20 | |
| 1,1,2-Trichloroethane | 18.510 | 1.0 | 20.00 | 0 | 92.6 | 75 | 125 | 22.26 | 18.4 | 20 | |
| 1,1-Dichloroethane | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 69 | 133 | 22.10 | 12.8 | 20 | |
| 1,1-Dichloroethene | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 68 | 130 | 23.20 | 15.8 | 20 | |
| 1,1-Dichloropropene | 22.030 | 1.0 | 20.00 | 0 | 110 | 73 | 132 | 23.78 | 7.64 | 20 | |
| 1,2,3-Trichlorobenzene | 20.370 | 1.0 | 20.00 | 0 | 102 | 67 | 137 | 22.84 | 11.4 | 20 | |
| 1,2,3-Trichloropropane | 19.920 | 1.0 | 20.00 | 0 | 99.6 | 73 | 124 | 21.63 | 8.23 | 20 | |
| 1,2,4-Trichlorobenzene | 20.600 | 1.0 | 20.00 | 0 | 103 | 66 | 134 | 22.46 | 8.64 | 20 | |
| 1,2,4-Trimethylbenzene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 74 | 132 | 20.53 | 3.97 | 20 | |
| 1,2-Dibromo-3-chloropropane | 20.530 | 2.0 | 20.00 | 0 | 103 | 50 | 132 | 21.52 | 4.71 | 20 | |
| 1,2-Dibromoethane | 19.620 | 1.0 | 20.00 | 0 | 98.1 | 80 | 121 | 23.14 | 16.5 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 20.480 | 1.0 | 20.00 | 0 | 102 | 71 | 122 | 22.03 | 7.29 | 20 | |
| 1,2-Dichloroethane | 18.380 | 0.50 | 20.00 | 0 | 91.9 | 69 | 132 | 20.18 | 9.34 | 20 | |
| 1,2-Dichloropropane | 18.410 | 1.0 | 20.00 | 0 | 92.0 | 75 | 125 | 20.61 | 11.3 | 20 | |
| 1,3,5-Trimethylbenzene | 19.570 | 1.0 | 20.00 | 0 | 97.9 | 74 | 131 | 20.41 | 4.20 | 20 | |
| 1,3-Dichlorobenzene | 20.690 | 1.0 | 20.00 | 0 | 103 | 75 | 124 | 22.16 | 6.86 | 20 | |
| 1,3-Dichloropropane | 20.150 | 1.0 | 20.00 | 0 | 101 | 73 | 126 | 21.88 | 8.23 | 20 | |
| 1,4-Dichlorobenzene | 20.740 | 0.50 | 20.00 | 0 | 104 | 74 | 123 | 21.78 | 4.89 | 20 | |
| 2,2-Dichloropropane | 19.990 | 1.0 | 20.00 | 0 | 100 | 69 | 137 | 22.31 | 11.0 | 20 | |
| 2-Butanone | 163.900 | 10 | 200.0 | 0 | 82.0 | 49 | 136 | 199.6 | 19.6 | 20 | |
| 2-Chlorotoluene | 21.420 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | 21.64 | 1.02 | 20 | |
| 4-Chlorotoluene | 21.600 | 1.0 | 20.00 | 0 | 108 | 74 | 128 | 22.45 | 3.86 | 20 | |
| 4-Isopropyltoluene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 73 | 130 | 20.97 | 5.94 | 20 | |
| 4-Methyl-2-pentanone | 184.530 | 10 | 200.0 | 0 | 92.3 | 58 | 134 | 216.6 | 16.0 | 20 | |
| Acetone | 126.780 | 10 | 200.0 | 0 | 63.4 | 40 | 135 | 153.9 | 19.3 | 20 | |
| Acrolein | 203.180 | 20 | 200.0 | 0 | 102 | 75 | 125 | 239.5 | 16.4 | 20 | |
| Acrylonitrile | 198.820 | 20 | 200.0 | 0 | 99.4 | 75 | 125 | 238.5 | 18.1 | 20 | |
| Benzene | 20.200 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 22.04 | 8.71 | 20 | |
| Bromobenzene | 20.520 | 1.0 | 20.00 | 0 | 103 | 76 | 124 | 21.90 | 6.51 | 20 | |
| Bromochloromethane | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 65 | 129 | 22.33 | 13.7 | 20 | |
| Bromodichloromethane | 19.510 | 0.50 | 20.00 | 0 | 97.6 | 76 | 121 | 21.67 | 10.5 | 20 | |
| Bromoform | 18.660 | 1.0 | 20.00 | 0 | 93.3 | 69 | 128 | 20.29 | 8.37 | 20 | |
| Bromomethane | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 53 | 141 | 22.19 | 12.3 | 20 | |
| Carbon disulfide | 20.150 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 22.78 | 12.3 | 20 | |
| Carbon tetrachloride | 20.630 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | 23.28 | 12.1 | 20 | |
| Chlorobenzene | 19.730 | 0.50 | 20.00 | 0 | 98.6 | 81 | 122 | 21.12 | 6.81 | 20 | |
| Chloroethane | 20.070 | 1.0 | 20.00 | 0 | 100 | 58 | 133 | 22.06 | 9.45 | 20 | |
| Chloroform | 19.980 | 1.0 | 20.00 | 1.390 | 93.0 | 69 | 128 | 22.58 | 12.2 | 20 | |
| Chloromethane | 18.200 | 1.0 | 20.00 | 0 | 91.0 | 56 | 131 | 20.81 | 13.4 | 20 | |
| cis-1,2-Dichloroethene | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 72 | 126 | 22.03 | 14.8 | 20 | |
| cis-1,3-Dichloropropene | 20.050 | 0.50 | 20.00 | 0 | 100 | 69 | 131 | 22.50 | 11.5 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043262
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.200 | 0.50 | 20.00 | 0 | 96.0 | 66 | 133 | 21.42 | 10.9 | 20 | |
| Dibromomethane | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 76 | 125 | 21.06 | 10.3 | 20 | |
| Dichlorodifluoromethane | 22.150 | 1.0 | 20.00 | 0 | 111 | 53 | 153 | 25.00 | 12.1 | 20 | |
| Ethylbenzene | 20.760 | 1.0 | 20.00 | 0 | 104 | 73 | 127 | 21.42 | 3.13 | 20 | |
| Freon-113 | 20.020 | 1.0 | 20.00 | 0 | 100 | 75 | 125 | 22.06 | 9.70 | 20 | |
| Hexachlorobutadiene | 18.050 | 0.50 | 20.00 | 0 | 90.3 | 67 | 131 | 20.15 | 11.0 | 20 | |
| Isopropylbenzene | 23.170 | 1.0 | 20.00 | 0 | 116 | 75 | 127 | 23.67 | 2.13 | 20 | |
| m,p-Xylene | 42.120 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | 45.36 | 7.41 | 20 | |
| Methylene chloride | 18.450 | 1.0 | 20.00 | 0.6900 | 88.8 | 63 | 137 | 21.38 | 14.7 | 20 | |
| MTBE | 19.110 | 1.0 | 20.00 | 0 | 95.6 | 65 | 123 | 23.39 | 20.1 | 20 | R |
| n-Butylbenzene | 23.410 | 1.0 | 20.00 | 0 | 117 | 69 | 137 | 23.97 | 2.36 | 20 | |
| n-Propylbenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 72 | 129 | 20.85 | 2.62 | 20 | |
| Naphthalene | 18.650 | 1.0 | 20.00 | 0 | 93.3 | 54 | 138 | 19.54 | 4.66 | 20 | |
| o-Xylene | 18.100 | 1.0 | 20.00 | 0 | 90.5 | 80 | 121 | 19.61 | 8.01 | 20 | |
| sec-Butylbenzene | 20.240 | 1.0 | 20.00 | 0 | 101 | 72 | 127 | 21.01 | 3.73 | 20 | |
| Styrene | 18.230 | 1.0 | 20.00 | 0 | 91.2 | 65 | 134 | 19.89 | 8.71 | 20 | |
| tert-Butylbenzene | 20.040 | 1.0 | 20.00 | 0 | 100 | 70 | 129 | 20.31 | 1.34 | 20 | |
| Tetrachloroethene | 21.060 | 1.0 | 20.00 | 0 | 105 | 66 | 128 | 22.70 | 7.50 | 20 | |
| Toluene | 20.320 | 0.50 | 20.00 | 0 | 102 | 77 | 122 | 22.27 | 9.16 | 20 | |
| trans-1,2-Dichloroethene | 19.410 | 1.0 | 20.00 | 0 | 97.0 | 63 | 137 | 22.32 | 13.9 | 20 | |
| trans-1,3-Dichloropropene | 20.890 | 1.0 | 20.00 | 0 | 104 | 59 | 135 | 23.83 | 13.1 | 20 | |
| Trichloroethene | 19.510 | 1.0 | 20.00 | 0 | 97.6 | 70 | 127 | 21.62 | 10.3 | 20 | |
| Trichlorofluoromethane | 21.160 | 1.0 | 20.00 | 0 | 106 | 57 | 129 | 23.39 | 10.0 | 20 | |
| Vinyl chloride | 21.570 | 0.50 | 20.00 | 0 | 108 | 50 | 134 | 23.51 | 8.61 | 20 | |
| Xylenes, Total | 60.220 | 2.0 | 60.00 | 0 | 100 | 75 | 125 | 64.97 | 7.59 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 23.940 | | 25.00 | | 95.8 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 25.720 | | 25.00 | | 103 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 23.020 | | 25.00 | | 92.1 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.230 | | 25.00 | | 101 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

N043262

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD


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P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


Page 1 of 4

| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Matt Trimmer | | P.O.# SWA-ASSET-C9817-057 | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Sampler | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12-3-20 | Sampled By: Nara Tey | | Global ID: | Regulatory | 5. IR number 2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: | Date: 12/3/20 | | | Sample Temp: 3.5°C / 1.6°C / 1.5°C / 3.3°C / 2.9°C / 5.4°C |
| Project Number: 30035275 | | | | | Courier: ASSET Tracking No.: |

Matrix: Ground x | Sediment | Potable | Soil | NPDES | Other Solid | Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | 250 mL poly | 250 mL poly | 250 mL poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 1 liter poly | 125 mL poly | 3x40 mL VOAs | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 500 mL poly | 3x40 mL VOAs | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Oxygen and Deuterium Isotopes (CFIRM), Ice | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Alkalinity, Total as CaCO3 (SM2320B) | Bromide, Sulfate, Chloride (EPA 300.0) | Fluoride (EPA 300.0) | Specific Conductance (EPA 120.1) | Total Dissolved Solids (SM92540) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 | Total Organic Carbon (SM5310C); H2SO4 | Metals Dissolved (EPA7470A FF) Hg; HNO3 | Dissolved Metals (SW 6010B); HNO3 Potassium | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 Cu, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 | VOCs (8260) | | | | |
| 1 | | ~~MW-67-185-Q420~~ | ~~12/2/2020~~ | ~~10:16~~ | | | | | | | | | | | | | | | | | | | | | | X | E | 3 | PV | BNSH | ② |
| 2 | | ~~MW-67-225-Q420~~ | ~~12/2/2020~~ | ~~12:14~~ | | | | | | | | | | | | | | | | | | | | | | X | E | 3 | PV | BNSH | ② |
| 3 | | ~~MW-67-260-Q420~~ | ~~12/2/2020~~ | ~~11:13~~ | | | | | | | | | | | | | | | | | | | | | | X | E | 3 | PV | BNSH | ② |
| 4 | N043262-01 | MW-940-Q420 | 12/3/2020 | ~~9:24~~ | X34 | X | | | X | X | | X | X | X | | | | | X | X | | | | | | X | E | 7 | PV | BNSH | |
| 5 | -02 | MW-66-165-Q420 | 12/3/2020 | 9:20 | | X | | | X | X | | X | X | X | | | | | X | X | | | | | | X | E | 13 | PV | BNSH | MSMSD |
| 6 | -03 | MW-66-230-Q420 | 12/3/2020 | 8:24 | | X | | | X | X | | X | X | X | | | | | X | X | | | | | | X | E | 13 | PV | BNSH | MSMSD |
| 7 | -04 | MW-74-240-Q420 | 12/3/2020 | 12:50 | | X | | | X | X | | X | X | X | | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 8 | -05 | MW-72-080-Q420 | 12/3/2020 | ~~13:48~~ | 1430 | X | | | X | X | | X | X | X | | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 9 | -06 | MW-72BR-200-Q420 | 12/3/2020 | ~~14:39~~ | 1348 | X | | | X | X | | X | X | X | | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 10 | -07 | MW-73-080-Q420 | 12/3/2020 | 15:18 | | X | | | X | X | | X | X | X | | | | | X | X | | | | | | | E | 4 | P | BNS | |
| 11 | -08 | MW-27-020-Q420 | 12/3/2020 | 11:11 | | | | X | X | X | | X | X | X | | | | | X | X | | | | | | | E | 5 | P | B | |
| 12 | -09 | MW-27-020-EB-Q420 | 12/3/2020 | 11:00 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nara Tey | 12/3/20 1735 | | 12-3-20 1735 |
| | 12-3-20 8:15PM | | 12-3-20 8:15PM |
| | | | |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

| Preservatives: | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

| Container Type: | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

Contact us:
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# CHAIN OF CUSTODY RECORD



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | | QA/QC | | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | | RTNE | | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com daniel.moore@critigen.com | Address: | Geotracker | | RWQCB | ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com P.O.# SWA-ASSET-C9817-057 | Labspec | | CalTrans | | 2. Headspace |
| Submitted By: Matt Trachtenberg | | Phone: 949-727-1400, ext 200 Fax: | Others | ✓ | LEVEL III | | 3. Container Intact ✓ |
| Title: Sampler | Phone: 916-786-3302 Fax: | | Specify: RWQCB | | LEVEL IV | | 4. Seal Present ✓ |
| Signature: Date: 12-3-20 | Sampled By: Nam Tay | | Global ID: | | Regulatory | | 5. IR number 2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | | Specify State: | | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: Date: 12/3/20 | Matrix: Ground x Sediment; Potable Soil; NPDES Other Solid; Surface | | | | | Sample Temp: 3.9°C / 1.1°C / 1.5°C / 3.3°C / 2.9°C |
| Project Number: 30035275 | | | | | | | Courier: 5,4°C |
| | | | | | | | Tracking No.: ASSET |

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH 250 mL poly | Oxygen and Deuterium Isotopes (CFIRM), Ice 250 mL poly | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH [illegible] mL poly | Alkalinity, Total as CaCO3 (SM2320B) 1 liter poly | Bromide, Sulfate, Chloride (EPA 300.0) 1 liter poly | Fluoride (EPA 300.0) 1 liter poly | Specific Conductance (EPA 120.1) 1 liter poly | Total Dissolved Solids (SM92540) 1 liter poly | Nitrate/Nitrite (SM4500ND3) Nitrate; H2SO4 125 mL poly | Total Organic Carbon (SM5310C); H2SO4 3x40 mL VOAs | Metals Dissolved (EPA7470A FF) Hg; HNO3 500 mL poly | Dissolved Metals (SW 6010B); HNO3 Potassium 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni 500 mL poly | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn 500 mL poly | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na 500 mL poly | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se 500 mL poly | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 500 mL poly | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043262-10 | MW-27-060-Q420 | 12/3/2020 | 9:30 | | | | X | X | X | X | X | X | X | | | | X | X | | | | | | | E | 5 | P | BNS | |
| 2 | -11 | MW-27-060-EB-Q420 | 12/3/2020 | 9:00 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |
| 3 | -12 | MW-27-085-Q420 | 12/3/2020 | 10:26 | | | | X | X | X | X | X | X | X | | | | X | X | | | | | | | E | 5 | P | BNS | |
| 4 | -13 | MW-27-085-EB-Q420 | 12/3/2020 | 10:00 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |
| 5 | -14 | MW-34-055-Q420 | 12/3/2020 | 14:27 | | | X | X | X | X | | X | X | X | | | X | X | X | | | | | | | E | 6 | P | BNS | |
| 6 | -15 | MW-911-Q420 | 12/3/2020 | 14:37 | | | X | X | X | X | | X | X | X | | | X | X | X | | | | | | | E | 6 | P | BNS | |
| 7 | -16 | MW-34-055-EB-Q420 | 12/3/2020 | 14:00 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |
| 8 | -17 | MW-34-080-Q420 | 12/3/2020 | 13:39 | | | X | X | X | X | | X | X | X | | | X | X | X | | | | | | | E | 6 | P | BNS | |
| 9 | -18 | MW-34-080-EB-Q420 | 12/3/2020 | 13:10 | | X | | | | | | | | | | | | | | | | | | | | E | 1 | P | BNS | |
| 10 | -19 | MW-34-100-Q420 | 12/3/2020 | 12:49 | | X | X | | X | X | | X | X | X | | | X | X | X | | | | | | | E | 5 | P | BNS | |
| 11 | -20 | MW-912-Q420 | 12/3/2020 | 12:59 | | X | X | | X | X | | X | X | X | | | X | X | X | | | | | | | E | 5 | P | BNS | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nam Tay | 12/3/20 1755 | | 12-3-20 1735 |
| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
| | 12-3-20 8:15 | | 12-3-20 8:15 |
| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Terms**
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B (NH4)2SO4/NH4OH | | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/3/2020 | Workorder: | N043262 |
| Rep sample Temp (Deg C): | 3.9/1.1/1.5/3.3/2.9/5.4 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | NA ☐ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/7/2020

Reviewed By: MBC 12/14/2020

# ASSET Laboratories

## WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-001A | MW-940-Q420 | 12/3/2020 8:34:00 AM | 12/15/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-001B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-001C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-001D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-001E | | | 12/15/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N043262-002A | MW-66-165-Q420 | 12/3/2020 9:20:00 AM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043262-002B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | WW |



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# WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-002B | MW-66-165-Q420 | 12/3/2020 9:20:00 AM | 12/15/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | WW |
| N043262-002C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☑ | SUB |
| N043262-002D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043262-002E | | | 12/15/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043262-003A | MW-66-230-Q420 | 12/3/2020 8:24:00 AM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☑ | ☐ | WW |
| N043262-003B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☑ | ☐ | WW |
| N043262-003C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☑ | ☑ | SUB |



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ELAP Cert 2676 | NV Cert NV00922
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# WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-003D | MW-66-230-Q420 | 12/3/2020 8:24:00 AM | 12/15/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☑ | ☐ | WW |
| N043262-003E | | | 12/15/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☑ | ☐ | VW |
| N043262-004A | MW-74-240-Q420 | 12/3/2020 12:50:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-004B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-004C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-004D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |



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# WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-005A | MW-72-080-Q420 | 12/3/2020 2:30:00 PM | 12/15/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-005B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-005C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-005D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-006A | MW-72BR-200-Q420 | 12/3/2020 1:48:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-006B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |



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# ASSET Laboratories

## WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-006B | MW-72BR-200-Q420 | 12/3/2020 1:48:00 PM | 12/15/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-006C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-006D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-007A | MW-73-080-Q420 | 12/3/2020 3:16:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-007B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-007C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-007D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |



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## WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-007D | MW-73-080-Q420 | 12/3/2020 3:16:00 PM | 12/15/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-008A | MW-27-020-Q420 | 12/3/2020 11:11:00 AM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-008B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-008C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-008D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-009A | MW-27-020-EB-Q420 | 12/3/2020 11:00:00 AM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-010A | MW-27-060-Q420 | 12/3/2020 9:30:00 AM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-010B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |



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## WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-010B | MW-27-060-Q420 | 12/3/2020 9:30:00 AM | 12/15/2020 | Groundwater | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-010C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-010D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-011A | MW-27-060-EB-Q420 | 12/3/2020 9:00:00 AM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-012A | MW-27-085-Q420 | 12/3/2020 10:26:00 AM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-012B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |



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# WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-012B | MW-27-085-Q420 | 12/3/2020 10:26:00 AM | 12/15/2020 | Groundwater | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-012C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-012D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-013A | MW-27-085-EB-Q420 | 12/3/2020 10:00:00 AM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-014A | MW-34-055-Q420 | 12/3/2020 2:27:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-014B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-014C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-014D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |



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## WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-014D | MW-34-055-Q420 | 12/3/2020 2:27:00 PM | 12/15/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-014E | | | 12/15/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043262-015A | MW-911-Q420 | 12/3/2020 2:37:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-015B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-015C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-015D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-015E | | | 12/15/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043262-016A | MW-34-055-EB-Q420 | 12/3/2020 2:00:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-017A | MW-34-080-Q420 | 12/3/2020 1:39:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-017B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |



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# WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-017B | MW-34-080-Q420 | 12/3/2020 1:39:00 PM | 12/15/2020 | Groundwater | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-017C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-017D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-017E | | | 12/15/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043262-018A | MW-34-080-EB-Q420 | 12/3/2020 1:10:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-019A | MW-34-100-Q420 | 12/3/2020 12:49:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-019B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |



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## WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-019B | MW-34-100-Q420 | 12/3/2020 12:49:00 PM | 12/15/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-019C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-019D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-019E | | | 12/15/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☑ | ☐ | ☑ | SUB |
| N043262-020A | MW-912-Q420 | 12/3/2020 12:59:00 PM | 12/15/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043262-020B | | | 12/15/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | WW |
| N043262-020C | | | 12/15/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043262-020D | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |



ASSET LABORATORIES
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EPA ID CA01638
NEVADA | P:702.307.2659 F:702.307.2691
3151 W. Post Rd., Las Vegas, NV 89118
ELAP Cert 2676 | NV Cert NV00922
ORELAP/NELAP Cert 4046

# ASSET Laboratories

## WORK ORDER Summary

*22-Dec-20*

**WorkOrder:** N043262

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043262-020D | MW-912-Q420 | 12/3/2020 12:59:00 PM | 12/15/2020 | Groundwater | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/15/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043262-020E | | | 12/15/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043262-021A | FOLDER | 12/15/2020 | 12/15/2020 | | EDD | RWQCB | ☐ | ☐ | ☐ | LAB |
| | | | 12/15/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/15/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/15/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/17/2020 | | | QA Review | ☐ | ☐ | ☐ | LAB |



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ORELAP/NELAP Cert 4046

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Nara Tep

**10-Dec-20**

| Sample ID | Matrix | Date Collected | Bottle Type | Requested Tests | | |
|---|---|---|---|---|---|---|
| | | | | SM4500-NO3F | | |
| N043262-001C / MW-940-Q420 | Groundwater | 12/3/2020 8:34:00 AM | 8OZP | 1 | | |
| N043262-002C / MW-66-165-Q420 | Groundwater | 12/3/2020 9:20:00 AM | 8OZP | 1 | (MS/MSD) | |
| N043262-003C / MW-66-230-Q420 | Groundwater | 12/3/2020 8:24:00 AM | 8OZP | 1 | (MS/MSD) | |
| N043262-004C / MW-74-240-Q420 | Groundwater | 12/3/2020 12:50:00 PM | 8OZP | 1 | | |
| N043262-005C / MW-72-080-Q420 | Groundwater | 12/3/2020 2:30:00 PM | 8OZP | 1 | | |
| N043262-006C / MW-72BR-200-Q420 | Groundwater | 12/3/2020 1:48:00 PM | 8OZP | 1 | | |
| N043262-007C / MW-73-080-Q420 | Groundwater | 12/3/2020 3:16:00 PM | 8OZP | 1 | | |
| N043262-008C / MW-27-020-Q420 | Groundwater | 12/3/2020 11:11:00 AM | 8OZP | 1 | | |
| N043262-010C / MW-27-060-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 8OZP | 1 | | |
| N043262-012C / MW-27-085-Q420 | Groundwater | 12/3/2020 10:26:00 AM | 8OZP | 1 | | |
| N043262-014C / MW-34-055-Q420 | Groundwater | 12/3/2020 2:27:00 PM | 8OZP | 1 | | |
| N043262-015C / MW-911-Q420 | Groundwater | 12/3/2020 2:37:00 PM | 8OZP | 1 | | |
| N043262-017C / MW-34-080-Q420 | Groundwater | 12/3/2020 1:39:00 PM | 8OZP | 1 | | |
| N043262-019C / MW-34-100-Q420 | Groundwater | 12/3/2020 12:49:00 PM | 8OZP | 1 | | |
| N043262-020C / MW-912-Q420 | Groundwater | 12/3/2020 12:59:00 PM | 8OZP | 1 | | |

Please run MS/MSD on samples N043262-002C / MW-66-165-Q420 and N043262-003C/ MW-66-230-Q420

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43262B Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by:Standard TAT.

Please analyze for Nitrate/Nitrite by SM4500NO3F. EDD Requirement Labspec7 edata.

GSO #: 5514866845

| | | Date/Time | | Date/Time |
|---|---|---|---|---|
| **Relinquished by:** | YLJ | 12/9/2020 1630 | **Received by:** | |
| **Relinquished by:** | | | **Received by:** | |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: Nara Tep

**07-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043262-014E / MW-34-055-Q420 | Groundwater | 12/3/2020 2:27:00 PM | 8OZP | 1 | | |
| N043262-015E / MW-911-Q420 | Groundwater | 12/3/2020 2:37:00 PM | 8OZP | 1 | | |
| N043262-017E / MW-34-080-Q420 | Groundwater | 12/3/2020 1:39:00 PM | 8OZP | 1 | | |
| N043262-019E / MW-34-100-Q420 | Groundwater | 12/3/2020 12:49:00 PM | 8OZP | 1 | | |
| N043262-020E / MW-912-Q420 | Groundwater | 12/3/2020 12:59:00 PM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43262A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium by CF-IRMS. EDD Requirement Labspec7 edata.

Fedex #: 772289919056

| | Date/Time | | Date/Time |
|---|---|---|---|
| **Relinquished by:** YRJ | 12/7/2020 1600 | **Received by:** | |
| **Relinquished by:** | | **Received by:** | |

December 23, 2020

Dan Bush
ARCADIS U.S., Inc. - California
1410 Rocky Ridge Dr #330
Roseville, CA 95661

TEL: (916) 786-3302
FAX:

Workorder No.: N043263

RE: PG&E Topock - GMP, 30035275

Attention: Dan Bush

Enclosed are the results for sample(s) received on December 03, 2020 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,

Nancy Sibucao
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.

# CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS:

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

Subcontracted Analyses:

SM 4500-NO3F was subcontracted to BC Labs- Bakersfield,CA.

Oxygen/Deuterium was subcontracted to ISOTECH- Champaign, IL.

Analytical Comments for EPA 218.6:

Dilution was necessary for sample N043263-006 due to matrix interference. Sample was analyzed at lower dilution however matrix spike recovery and/or retention time criteria were not met indicating possible matrix interference. Sample was reported at dilution that meets matrix spike recovery limit and the detected peak within retention time window.

Because the results for total dissolved chromium (9.4 ug/L) and hexavalent chromium (6.0 ug/L) for sample N043263-005 (MW-69-195-Q420) are discrepant, sample re-analysis and Matrix Spike protocol were performed and result confirmed initial analysis.

Analytical Comments for EPA 300.0:

Dilution was necessary due to precipitation of samples upon the addition of eluent.

Method Blank MB-R149156 has detect greater than 1/2 the reporting limit for Sulfate. However, samples results were greater than 5x the Method Blank detection therefore reanalysis of the samples was not necessary.

Analytical Comments for EPA 6010B_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N043223-012DMSD1, N043223-012D-MS2 and N043223-012D-MSD2 since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6020_Dissolved:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Barium and Silver in QC samples N043263-001D-MS and N043263-001D-MSD possibly due to matrix interference. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N043263-001D-MS and N043263-001D-MS since the analyte concentration in the sample is disproportionate to the spike level. Post Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Because the results for total dissolved chromium (9.4 ug/L) and hexavalent chromium (6.0 ug/L) for sample N043263-005 (MW-69-195-Q420) are discrepant, sample from both the total dissolved chromium and hexavalent chromium containers were redigested and analyzed for total dissolved chromium. The results from the redigested samples were 8.5 and 6.8 ug/L, respectively. Since these data confirmed the original result for total dissolved chromium, the original result is reported.

Analytical Comments for EPA 8260B:

RPD for Matrix Spike (MS) and Matrix Spike Duplicate (MSD) is outside criteria for MTBE. Analyte recovery on both met acceptance criteria.

Some surrogate recoveries biased high for sample N043263-012, however, sample result was none-detect (ND) therefore, reanalysis of the sample was not necessary.

Analytical Comments for SM 2320B:

Analysis on sample N043263-006(PGE-07BR-Q420) was done on the water layer as the 4.5 pH end point cannot be reached when sample was homogenized. Please see attached correspondence to the client and Corrective Action Report 4471.

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043263
**Contract No:**

## Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043263-001A | MW-26-Q420 | Groundwater | 12/3/2020 9:56:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-001B | MW-26-Q420 | Groundwater | 12/3/2020 9:56:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-001C | MW-26-Q420 | Groundwater | 12/3/2020 9:56:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-001D | MW-26-Q420 | Groundwater | 12/3/2020 9:56:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-001E | MW-26-Q420 | Groundwater | 12/3/2020 9:56:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-002A | MW-909-Q420 | Groundwater | 12/3/2020 10:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-002B | MW-909-Q420 | Groundwater | 12/3/2020 10:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-002C | MW-909-Q420 | Groundwater | 12/3/2020 10:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-002D | MW-909-Q420 | Groundwater | 12/3/2020 10:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-002E | MW-909-Q420 | Groundwater | 12/3/2020 10:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-003A | MW-51-Q420 | Groundwater | 12/3/2020 9:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-003B | MW-51-Q420 | Groundwater | 12/3/2020 9:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-003C | MW-51-Q420 | Groundwater | 12/3/2020 9:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-003D | MW-51-Q420 | Groundwater | 12/3/2020 9:06:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-004A | MW-916-Q420 | Groundwater | 12/3/2020 9:16:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-004B | MW-916-Q420 | Groundwater | 12/3/2020 9:16:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-004C | MW-916-Q420 | Groundwater | 12/3/2020 9:16:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-004D | MW-916-Q420 | Groundwater | 12/3/2020 9:16:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-005A | MW-69-195-Q420 | Groundwater | 12/3/2020 12:20:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-005B | MW-69-195-Q420 | Groundwater | 12/3/2020 12:20:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-005C | MW-69-195-Q420 | Groundwater | 12/3/2020 12:20:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-005D | MW-69-195-Q420 | Groundwater | 12/3/2020 12:20:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-006A | PGE-07BR-Q420 | Groundwater | 12/3/2020 4:00:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-006B | PGE-07BR-Q420 | Groundwater | 12/3/2020 4:00:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-006C | PGE-07BR-Q420 | Groundwater | 12/3/2020 4:00:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-007A | MW-939-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-007B | MW-939-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-007C | MW-939-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-007D | MW-939-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/23/2020 |

**CLIENT:** ARCADIS U.S., Inc. - California
**Project:** PG&E Topock - GMP, 30035275
**Lab Order:** N043263
**Contract No:**

# Work Order Sample Summary

| Lab Sample ID | Client Sample ID | Matrix | Collection Date | Date Received | Date Reported |
|---|---|---|---|---|---|
| N043263-007E | MW-939-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-008A | EB-706-Q420 | Groundwater | 12/3/2020 3:30:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-009A | EB-707-Q420 | Groundwater | 12/3/2020 4:44:00 PM | 12/3/2020 | 12/23/2020 |
| N043263-010A | MW-65-160-Q420 | Groundwater | 12/3/2020 10:28:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-010B | MW-65-160-Q420 | Groundwater | 12/3/2020 10:28:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-010C | MW-65-160-Q420 | Groundwater | 12/3/2020 10:28:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-010D | MW-65-160-Q420 | Groundwater | 12/3/2020 10:28:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-011A | MW-65-225-Q420 | Groundwater | 12/3/2020 11:08:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-011B | MW-65-225-Q420 | Groundwater | 12/3/2020 11:08:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-011C | MW-65-225-Q420 | Groundwater | 12/3/2020 11:08:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-011D | MW-65-225-Q420 | Groundwater | 12/3/2020 11:08:00 AM | 12/3/2020 | 12/23/2020 |
| N043263-012A | Trip Blank | Water | 12/3/2020 7:00:00 AM | 12/3/2020 | 12/23/2020 |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-26-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:56:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3500 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-909-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3500 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-51-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 11000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-916-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204D** | QC Batch: **R149127** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 11000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-69-195-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 12:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204E** | QC Batch: **R149128** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 2500 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-006

**Client Sample ID:** PGE-07BR-Q420
**Collection Date:** 12/3/2020 4:00:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204E** | QC Batch: **R149128** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 18000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204E** | QC Batch: **R149128** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 3600 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-160-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204E** | QC Batch: **R149128** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 4000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-225-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 11:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **SPECIFIC CONDUCTANCE** | | | | | | | |
| | | | **EPA 120.1** | | | | |
| RunID: **NV00922-WC_201204E** | QC Batch: **R149128** | | | PrepDate: | | | Analyst: **LR** |
| Specific Conductance | 10000 | 0.10 | 0.10 | | umhos/cm | 1 | 12/4/2020 01:50 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043252-001CDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149127**
Client ID: **ZZZZZZ** Batch ID: **R149127** TestNo: **EPA 120.1** Analysis Date: **12/4/2020** SeqNo: **4024353**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 7390.000 | 0.10 | | | | | | 7370 | 0.271 | 2 | |

Sample ID: **N043262-012BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149127**
Client ID: **ZZZZZZ** Batch ID: **R149127** TestNo: **EPA 120.1** Analysis Date: **12/4/2020** SeqNo: **4024364**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 10140.000 | 0.10 | | | | | | 10120 | 0.197 | 2 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 120.1_WPGE**

Sample ID: **N043263-005BDUP** SampType: **DUP** TestCode: **120.1_WPGE** Units: **umhos/cm** Prep Date: RunNo: **149128**
Client ID: **ZZZZZZ** Batch ID: **R149128** TestNo: **EPA 120.1** Analysis Date: **12/4/2020** SeqNo: **4024376**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Specific Conductance | 2440.000 | 0.10 | | | | | | 2460 | 0.816 | 2 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-26-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:56:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 2200 | 25 | 25 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-909-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 2200 | 25 | 25 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-51-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6500 | 100 | 100 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-916-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201206B** | QC Batch: **83315** | | | PrepDate: | **12/6/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6800 | 100 | 100 | | mg/L | 1 | 12/6/2020 01:20 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-69-195-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 12:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 1500 | 17 | 17 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PGE-07BR-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 4:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 10000 | 100 | 100 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | | **12/8/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 2200 | 25 | 25 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-160-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | **12/8/2020** | | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 2600 | 33 | 33 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-225-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 11:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **TOTAL FILTERABLE RESIDUE** | | | | | | | |
| | | | **SM2540C** | | | | |
| RunID: **NV00922-WC_201208G** | QC Batch: **83365** | | | PrepDate: | | **12/8/2020** | Analyst: **LR** |
| Total Dissolved Solids (Residue, Filterable) | 6600 | 100 | 100 | | mg/L | 1 | 12/8/2020 12:46 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

| Sample ID: **LCS-83315** | SampType: **LCS** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/6/2020** | RunNo: **149226** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83315** | TestNo: **SM2540C** | | Analysis Date: **12/6/2020** | SeqNo: **4030516** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 974.000 | 10 | 1000 | 0 | 97.4 | 80 | 120 | | | | |

| Sample ID: **MB-83315** | SampType: **MBLK** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/6/2020** | RunNo: **149226** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83315** | TestNo: **SM2540C** | | Analysis Date: **12/6/2020** | SeqNo: **4030517** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

| Sample ID: **N043263-004BDUP** | SampType: **DUP** | TestCode: **160.1_2540C** | Units: **mg/L** | Prep Date: **12/6/2020** | RunNo: **149226** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83315** | TestNo: **SM2540C** | | Analysis Date: **12/6/2020** | SeqNo: **4030528** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 7090.000 | 100 | | | | | | 6810 | 4.03 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 160.1_2540C_W**

Sample ID: **LCS-83365** SampType: **LCS** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/8/2020** RunNo: **149285**
Client ID: **LCSW** Batch ID: **83365** TestNo: **SM2540C** Analysis Date: **12/8/2020** SeqNo: **4033721**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 977.000 | 10 | 1000 | 0 | 97.7 | 80 | 120 | | | | |

Sample ID: **MB-83365** SampType: **MBLK** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/8/2020** RunNo: **149285**
Client ID: **PBW** Batch ID: **83365** TestNo: **SM2540C** Analysis Date: **12/8/2020** SeqNo: **4033722**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | ND | 10 | | | | | | | | | |

Sample ID: **N043263-006BDUP** SampType: **DUP** TestCode: **160.1_2540C** Units: **mg/L** Prep Date: **12/8/2020** RunNo: **149285**
Client ID: **ZZZZZZ** Batch ID: **83365** TestNo: **SM2540C** Analysis Date: **12/8/2020** SeqNo: **4033726**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (Residue, Filtera | 10400.000 | 100 | | | | | | 10490 | 0.862 | 5 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-26-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:56:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2200 | 17 | 100 | | µg/L | 500 | 12/6/2020 10:06 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 2200 | 3.2 | 25 | | µg/L | 25 | 12/11/2020 01:09 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-909-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 2200 | 17 | 100 | | µg/L | 500 | 12/6/2020 11:22 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 2500 | 3.2 | 25 | | µg/L | 25 | 12/11/2020 02:43 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-51-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 3300 | 17 | 100 | | µg/L | 500 | 12/6/2020 10:16 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 3500 | 3.2 | 25 | | µg/L | 25 | 12/11/2020 03:18 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-916-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 3300 | 17 | 100 | | µg/L | 500 | 12/6/2020 11:41 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 3700 | 3.2 | 25 | | µg/L | 25 | 12/11/2020 03:35 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-69-195-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 12:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201207B** QC Batch: **R149222** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 6.0 | 0.033 | 0.20 | | µg/L | 1 | 12/7/2020 09:05 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** QC Batch: **83357** | | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 9.4 | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 03:41 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PGE-07BR-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 4:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** QC Batch: **R149191** | | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.17 | 1.0 | | µg/L | 5 | 12/6/2020 12:00 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | | **EPA 3010A** | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** QC Batch: **83357** | | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | ND | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 04:28 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 410 | 1.7 | 10 | | µg/L | 50 | 12/6/2020 02:41 PM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 420 | 0.65 | 5.0 | | µg/L | 5 | 12/11/2020 04:51 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-706-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 3:30:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-008 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/6/2020 01:25 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | EB-707-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 4:44:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-009 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | ND | 0.033 | 0.20 | | µg/L | 1 | 12/6/2020 01:44 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-160-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 210 | 1.7 | 10 | | µg/L | 50 | 12/6/2020 09:47 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 240 | 0.65 | 5.0 | | µg/L | 5 | 12/11/2020 05:08 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-225-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 11:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **HEXAVALENT CHROMIUM BY IC** | | | | | | | |
| | | | **EPA 218.6** | | | | |
| RunID: **NV00922-IC7_201206A** | QC Batch: **R149191** | | | PrepDate: | | | Analyst: **RAB** |
| Hexavalent Chromium | 360 | 1.7 | 10 | | µg/L | 50 | 12/6/2020 09:57 AM |
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Chromium | 350 | 0.65 | 5.0 | | µg/L | 5 | 12/11/2020 05:43 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **MB-R149191** | SampType: **MBLK** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149191** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149191** | TestNo: **EPA 218.6** | | Analysis Date: **12/6/2020** | SeqNo: **4028496** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-R149191** | SampType: **LCS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149191** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149191** | TestNo: **EPA 218.6** | | Analysis Date: **12/6/2020** | SeqNo: **4028497** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.936 | 0.20 | 5.000 | 0 | 98.7 | 90 | 110 | | | | |

| Sample ID: **N043263-001AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149191** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149191** | TestNo: **EPA 218.6** | | Analysis Date: **12/6/2020** | SeqNo: **4028506** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4729.600 | 100 | 2500 | 2225 | 100 | 90 | 110 | | | | |

| Sample ID: **N043263-001AMSD** | SampType: **MSD** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149191** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149191** | TestNo: **EPA 218.6** | | Analysis Date: **12/6/2020** | SeqNo: **4028507** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4733.250 | 100 | 2500 | 2225 | 100 | 90 | 110 | 4730 | 0.0771 | 20 | |

| Sample ID: **N043263-003ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149191** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149191** | TestNo: **EPA 218.6** | | Analysis Date: **12/6/2020** | SeqNo: **4028508** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 3325.950 | 100 | | | | | | 3288 | 1.15 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043263-003AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028509**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5801.650 | 100 | 2500 | 3288 | 101 | 90 | 110 | | | | |

Sample ID: **N043263-002AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028511**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4704.000 | 100 | 2500 | 2182 | 101 | 90 | 110 | | | | |

Sample ID: **N043263-004AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028513**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 5839.150 | 100 | 2500 | 3304 | 101 | 90 | 110 | | | | |

Sample ID: **N043263-006AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028515**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.828 | 1.0 | 5.000 | 0 | 96.6 | 90 | 110 | | | | |

Sample ID: **N043263-010AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028518**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 468.410 | 10 | 250.0 | 213.3 | 102 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **N043263-011AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028519**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 609.405 | 10 | 250.0 | 355.4 | 102 | 90 | 110 | | | | |

Sample ID: **N043263-008AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028521**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.004 | 0.20 | 1.000 | 0 | 100 | 90 | 110 | | | | |

Sample ID: **N043263-009AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028523**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.997 | 0.20 | 1.000 | 0 | 99.7 | 90 | 110 | | | | |

Sample ID: **N043263-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028529**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 664.365 | 10 | 250.0 | 411.1 | 101 | 90 | 110 | | | | |

Sample ID: **N043222-015AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149191**
Client ID: **ZZZZZZ** Batch ID: **R149191** TestNo: **EPA 218.6** Analysis Date: **12/6/2020** SeqNo: **4028532**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 0.975 | 0.20 | 1.000 | 0 | 97.5 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

Sample ID: **LCS-R149222** SampType: **LCS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149222**
Client ID: **LCSW** Batch ID: **R149222** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030398**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 4.986 | 0.20 | 5.000 | 0 | 99.7 | 90 | 110 | | | | |

Sample ID: **MB-R149222** SampType: **MBLK** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149222**
Client ID: **PBW** Batch ID: **R149222** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030399**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | ND | 0.20 | | | | | | | | | |

Sample ID: **N043303-001AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149222**
Client ID: **ZZZZZZ** Batch ID: **R149222** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030401**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.471 | 0.20 | 1.000 | 1.451 | 102 | 90 | 110 | | | | |

Sample ID: **N043303-001AMSD** SampType: **MSD** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149222**
Client ID: **ZZZZZZ** Batch ID: **R149222** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030402**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 2.497 | 0.20 | 1.000 | 1.451 | 105 | 90 | 110 | 2.471 | 1.03 | 20 | |

Sample ID: **N043318-007AMS** SampType: **MS** TestCode: **218.6_WPGE** Units: **µg/L** Prep Date: RunNo: **149222**
Client ID: **ZZZZZZ** Batch ID: **R149222** TestNo: **EPA 218.6** Analysis Date: **12/7/2020** SeqNo: **4030417**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 972.400 | 20 | 500.0 | 513.3 | 91.8 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 218.6_WPGE**

| Sample ID: **N043318-008ADUP** | SampType: **DUP** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149222** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149222** | TestNo: **EPA 218.6** | | Analysis Date: **12/7/2020** | SeqNo: **4030421** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 1.814 | 0.20 | | | | | | 1.993 | 9.38 | 20 | |

| Sample ID: **N043263-005AMS** | SampType: **MS** | TestCode: **218.6_WPGE** | Units: **µg/L** | Prep Date: | RunNo: **149222** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149222** | TestNo: **EPA 218.6** | | Analysis Date: **12/7/2020** | SeqNo: **4030424** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hexavalent Chromium | 11.346 | 0.20 | 5.000 | 6.019 | 107 | 90 | 110 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

| Sample ID: **MB-83357** | SampType: **MBLK** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/8/2020** | RunNo: **149388** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83357** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/11/2020** | SeqNo: **4041846** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | ND | 1.0 | | | | | | | | | |

| Sample ID: **LCS-83357** | SampType: **LCS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/8/2020** | RunNo: **149388** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83357** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/11/2020** | SeqNo: **4041847** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 9.919 | 1.0 | 10.00 | 0 | 99.2 | 85 | 115 | | | | |

| Sample ID: **N043263-001D-MS** | SampType: **MS** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/8/2020** | RunNo: **149388** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83357** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/11/2020** | SeqNo: **4041859** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 2387.389 | 25 | 10.00 | 2175 | 2120 | 75 | 125 | | | | S |

| Sample ID: **N043263-001D-MSD** | SampType: **MSD** | TestCode: **6020DIS_CrP** | Units: **µg/L** | Prep Date: **12/8/2020** | RunNo: **149388** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83357** | TestNo: **EPA 6020** | **EPA 3010A** | Analysis Date: **12/11/2020** | SeqNo: **4041862** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 2376.049 | 25 | 10.00 | 2175 | 2010 | 75 | 125 | 2387 | 0.476 | 20 | S |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020DIS_CrPGE_TPK**

Sample ID: **N043263-001D-PS** SampType: **PS** TestCode: **6020DIS_CrP** Units: **µg/L** Prep Date: RunNo: **149388**
Client ID: **ZZZZZZ** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041854**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chromium | 2268.848 | 25 | 10.00 | 2175 | 935 | 80 | 120 | | | | S |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-26-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:56:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 130 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-909-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 140 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-51-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 100 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-916-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 100 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-69-195-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 12:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-005 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 190 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PGE-07BR-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 4:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 17 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-939-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:30:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-007 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 110 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-160-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 130 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-225-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 11:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ALKALINITY, SPECIATED** | | | | | | | |
| | | | **SM 2320 B** | | | | |
| RunID: **NV00922-WC_201209H** | QC Batch: **R149309** | | | PrepDate: | | | Analyst: **LR** |
| Alkalinity, Total (As CaCO3) | 88 | 1.2 | 5.0 | | mg/L | 1 | 12/9/2020 09:15 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 2320_W_SP**

| Sample ID: **LCS-R149309** | SampType: **LCS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035692** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 97.917 | 5.0 | 100.0 | 0 | 97.9 | 85 | 115 | | | | |

| Sample ID: **MB-R149309** | SampType: **MBLK** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035693** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | ND | 5.0 | | | | | | | | | |

| Sample ID: **N043263-001BDUP** | SampType: **DUP** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035695** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 137.500 | 5.0 | | | | | | 133.3 | 3.08 | 30 | |

| Sample ID: **N043348-013BMS** | SampType: **MS** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035712** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 200.000 | 5.0 | 100.0 | 98.96 | 101 | 75 | 125 | | | | |

| Sample ID: **N043348-013BMSD** | SampType: **MSD** | TestCode: **2320_W_SP** | Units: **mg/L** | Prep Date: | RunNo: **149309** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149309** | TestNo: **SM 2320 B** | | Analysis Date: **12/9/2020** | SeqNo: **4035713** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Alkalinity, Total (As CaCO3) | 200.000 | 5.0 | 100.0 | 98.96 | 101 | 75 | 125 | 200.0 | 0 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-001

**Client Sample ID:** MW-26-Q420
**Collection Date:** 12/3/2020 9:56:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 02:12 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 770 | 7.0 | 100 | | mg/L | 200 | 12/6/2020 03:01 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 470 | 2.0 | 25 | | mg/L | 50 | 12/6/2020 11:41 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-002

**Client Sample ID:** MW-909-Q420
**Collection Date:** 12/3/2020 10:06:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 02:26 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 760 | 7.0 | 100 | | mg/L | 200 | 12/6/2020 03:15 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 460 | 2.0 | 25 | | mg/L | 50 | 12/6/2020 11:55 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-003

**Client Sample ID:** MW-51-Q420
**Collection Date:** 12/3/2020 9:06:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 02:40 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3100 | 35 | 500 | | mg/L | 1000 | 12/6/2020 03:30 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 720 | 4.0 | 50 | | mg/L | 100 | 12/6/2020 12:09 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-004

**Client Sample ID:** MW-916-Q420
**Collection Date:** 12/3/2020 9:16:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 02:55 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3100 | 35 | 500 | | mg/L | 1000 | 12/6/2020 03:44 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 720 | 4.0 | 50 | | mg/L | 100 | 12/6/2020 12:24 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-005

**Client Sample ID:** MW-69-195-Q420
**Collection Date:** 12/3/2020 12:20:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201205A** QC Batch: **R149152** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/5/2020 03:09 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 410 | 3.5 | 50 | | mg/L | 100 | 12/6/2020 12:38 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201206A** QC Batch: **R149156** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 430 | 4.0 | 50 | | mg/L | 100 | 12/6/2020 12:38 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-006

**Client Sample ID:** PGE-07BR-Q420
**Collection Date:** 12/3/2020 4:00:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.30 | 5.0 | | mg/L | 10 | 12/7/2020 12:06 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 7400 | 70 | 1000 | | mg/L | 2000 | 12/8/2020 12:23 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 410 | 2.0 | 25 | | mg/L | 50 | 12/7/2020 08:20 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-007

**Client Sample ID:** MW-939-Q420
**Collection Date:** 12/3/2020 9:30:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 12:21 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 870 | 7.0 | 100 | | mg/L | 200 | 12/7/2020 07:51 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 420 | 2.0 | 25 | | mg/L | 50 | 12/7/2020 07:23 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-010

**Client Sample ID:** MW-65-160-Q420
**Collection Date:** 12/3/2020 10:28:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 05:28 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 990 | 7.0 | 100 | | mg/L | 200 | 12/9/2020 04:58 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201208B** QC Batch: **R149252** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 540 | 2.0 | 25 | | mg/L | 50 | 12/9/2020 05:12 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-011

**Client Sample ID:** MW-65-225-Q420
**Collection Date:** 12/3/2020 11:08:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Bromide | ND | 0.15 | 2.5 | | mg/L | 5 | 12/7/2020 01:25 PM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Chloride | 3200 | 35 | 500 | | mg/L | 1000 | 12/8/2020 12:52 AM |
| **ANIONS BY ION CHROMATOGRAPHY** | | | | | | | |
| | | | **EPA 300.0** | | | | |
| RunID: **NV00922-IC8_201207B** QC Batch: **R149217** | | | | PrepDate: | | | Analyst: **RAB** |
| Sulfate | 690 | 4.0 | 50 | | mg/L | 100 | 12/7/2020 09:17 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **MB-R149152_BR** | SampType: **MBLK** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025978** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

| Sample ID: **LCS-R149152_BR** | SampType: **LCS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025979** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.243 | 0.50 | 1.250 | 0 | 99.4 | 90 | 110 | | | | |

| Sample ID: **N043262-002BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025984** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 7.528 | 2.5 | 6.250 | 1.262 | 100 | 80 | 120 | | | | |

| Sample ID: **N043262-002BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025985** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 7.505 | 2.5 | 6.250 | 1.262 | 99.9 | 80 | 120 | 7.528 | 0.306 | 20 | |

| Sample ID: **N043262-003BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025986** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.197 | 2.5 | 6.250 | 0.5715 | 90.0 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **N043262-003BMSD** | SampType: **MSD** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025987** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.180 | 2.5 | 6.250 | 0.5715 | 89.7 | 80 | 120 | 6.196 | 0.275 | 20 | |

| Sample ID: **N043262-010BDUP** | SampType: **DUP** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025990** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.089 | 1.0 | | | | | | 0.09820 | 0 | 20 | |

| Sample ID: **N043262-006BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149152** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149152** | TestNo: **EPA 300.0** | | Analysis Date: **12/5/2020** | SeqNo: **4025992** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 5.849 | 2.5 | 6.250 | 0 | 93.6 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

Sample ID: **LCS-R149217_BR** SampType: **LCS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **LCSW** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030232**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 1.277 | 0.50 | 1.250 | 0 | 102 | 90 | 110 | | | | |

Sample ID: **MB-R149217_BR** SampType: **MBLK** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **PBW** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030235**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | ND | 0.50 | | | | | | | | | |

Sample ID: **N043305-010BDUP** SampType: **DUP** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030244**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 0.268 | 2.5 | | | | | | 0.2840 | 0 | 20 | |

Sample ID: **N043305-007BMS** SampType: **MS** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030254**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.560 | 2.5 | 6.250 | 0.3250 | 99.8 | 80 | 120 | | | | |

Sample ID: **N043305-007BMSD** SampType: **MSD** TestCode: **300_W_BRP** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030255**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 6.423 | 2.5 | 6.250 | 0.3250 | 97.6 | 80 | 120 | 6.560 | 2.12 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_BRPGE**

| Sample ID: **N043263-010BMS** | SampType: **MS** | TestCode: **300_W_BRP** | Units: **mg/L** | Prep Date: | RunNo: **149217** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149217** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4030259** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromide | 8.251 | 2.5 | 6.250 | 1.982 | 100 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149152_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **PBW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025943**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149152_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **LCSW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025944**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.912 | 0.50 | 2.000 | 0 | 95.6 | 90 | 110 | | | | |

Sample ID: **N043262-010BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025952**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 127.070 | 10 | 40.00 | 86.93 | 100 | 80 | 120 | | | | |

Sample ID: **N043262-002BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025956**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1280.740 | 100 | 400.0 | 877.4 | 101 | 80 | 120 | | | | |

Sample ID: **N043262-002BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025957**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1280.920 | 100 | 400.0 | 877.4 | 101 | 80 | 120 | 1281 | 0.0141 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **N043262-010BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025959**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 87.536 | 10 | | | | | | 86.93 | 0.690 | 20 | |

Sample ID: **N043262-003BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025960**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10153.000 | 1000 | 4000 | 6119 | 101 | 80 | 120 | | | | |

Sample ID: **N043262-003BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4025961**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 10183.400 | 1000 | 4000 | 6119 | 102 | 80 | 120 | 10150 | 0.299 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **MB-R149156_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **PBW** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026276**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149156_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **LCSW** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026277**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.941 | 0.50 | 2.000 | 0 | 97.1 | 90 | 110 | | | | |

Sample ID: **N043262-008BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026279**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 131.372 | 10 | 40.00 | 90.84 | 101 | 80 | 120 | | | | |

Sample ID: **N043262-008BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026280**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 131.716 | 10 | 40.00 | 90.84 | 102 | 80 | 120 | 131.4 | 0.262 | 20 | |

Sample ID: **N043262-014BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026282**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 81.608 | 10 | | | | | | 81.57 | 0.0466 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043262-014BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149156** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149156** | TestNo: **EPA 300.0** | | Analysis Date: **12/6/2020** | SeqNo: **4026283** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 122.464 | 10 | 40.00 | 81.57 | 102 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **LCS-R149217_CL** SampType: **LCS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **LCSW** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030191**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1.930 | 0.50 | 2.000 | 0 | 96.5 | 90 | 110 | | | | |

Sample ID: **MB-R149217_CL** SampType: **MBLK** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **PBW** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030194**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | ND | 0.50 | | | | | | | | | |

Sample ID: **N043305-007BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030200**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 258.205 | 25 | | | | | | 258.6 | 0.145 | 20 | |

Sample ID: **N043305-007BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030201**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 361.010 | 25 | 100.0 | 258.6 | 102 | 80 | 120 | | | | |

Sample ID: **N043305-007BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030202**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 359.905 | 25 | 100.0 | 258.6 | 101 | 80 | 120 | 361.0 | 0.307 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **N043263-007BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149217** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149217** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4030204** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1279.180 | 100 | 400.0 | 871.2 | 102 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

| Sample ID: **LCS-R149252_CL** | SampType: **LCS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031786** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2.085 | 0.50 | 2.000 | 0 | 104 | 90 | 110 | | | | |

| Sample ID: **MB-R149252_CL** | SampType: **MBLK** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031789** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 0.150 | 0.50 | | | | | | | | | |

| Sample ID: **N043348-013BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031793** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1196.880 | 100 | 400.0 | 785.1 | 103 | 80 | 120 | | | | |

| Sample ID: **N043348-013BMSD** | SampType: **MSD** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031794** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 1177.160 | 100 | 400.0 | 785.1 | 98.0 | 80 | 120 | 1197 | 1.66 | 20 | |

| Sample ID: **N043348-016BMS** | SampType: **MS** | TestCode: **300_W_CLPG** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031796** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 615.460 | 50 | 200.0 | 404.0 | 106 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_CLPGE**

Sample ID: **N043348-016BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **ZZZZZZ** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031797**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 604.010 | 50 | 200.0 | 404.0 | 100 | 80 | 120 | 615.5 | 1.88 | 20 | |

Sample ID: **N043348-020BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **ZZZZZZ** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031799**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2902.400 | 250 | 1000 | 1904 | 99.9 | 80 | 120 | | | | |

Sample ID: **N043348-020BMSD** SampType: **MSD** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **ZZZZZZ** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031802**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 2924.950 | 250 | 1000 | 1904 | 102 | 80 | 120 | 2902 | 0.774 | 20 | |

Sample ID: **N043348-003BDUP** SampType: **DUP** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **ZZZZZZ** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031804**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 84.960 | 10 | | | | | | 87.08 | 2.46 | 20 | |

Sample ID: **N043348-003BMS** SampType: **MS** TestCode: **300_W_CLPG** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **ZZZZZZ** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031805**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Chloride | 125.264 | 10 | 40.00 | 87.08 | 95.5 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149152_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **PBW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026022**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149152_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **LCSW** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026023**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.963 | 0.50 | 4.000 | 0 | 99.1 | 90 | 110 | | | | |

Sample ID: **N043262-002BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026032**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 629.265 | 25 | 200.0 | 423.3 | 103 | 80 | 120 | | | | |

Sample ID: **N043262-002BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026033**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 631.620 | 25 | 200.0 | 423.3 | 104 | 80 | 120 | 629.3 | 0.374 | 20 | |

Sample ID: **N043262-003BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026035**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1876.540 | 100 | 800.0 | 1064 | 102 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **N043262-003BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026036**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 1866.720 | 100 | 800.0 | 1064 | 100 | 80 | 120 | 1877 | 0.525 | 20 | |

Sample ID: **N043262-010BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026038**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 287.496 | 10 | 80.00 | 205.5 | 103 | 80 | 120 | | | | |

Sample ID: **N043262-010BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149152**
Client ID: **ZZZZZZ** Batch ID: **R149152** TestNo: **EPA 300.0** Analysis Date: **12/5/2020** SeqNo: **4026041**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 205.652 | 10 | | | | | | 205.5 | 0.0788 | 20 | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **MB-R149156_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **PBW** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026310**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.253 | 0.50 | | | | | | | | | |

Sample ID: **LCS-R149156_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **LCSW** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026311**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.913 | 0.50 | 4.000 | 0 | 97.8 | 90 | 110 | | | | |

Sample ID: **N043262-008BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026313**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 306.518 | 10 | 80.00 | 222.1 | 106 | 80 | 120 | | | | |

Sample ID: **N043262-008BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026314**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 306.646 | 10 | 80.00 | 222.1 | 106 | 80 | 120 | 306.5 | 0.0418 | 20 | |

Sample ID: **N043262-014BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149156**
Client ID: **ZZZZZZ** Batch ID: **R149156** TestNo: **EPA 300.0** Analysis Date: **12/6/2020** SeqNo: **4026316**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 207.818 | 10 | | | | | | 208.2 | 0.195 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043262-014BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149156** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149156** | TestNo: **EPA 300.0** | | Analysis Date: **12/6/2020** | SeqNo: **4026317** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 292.056 | 10 | 80.00 | 208.2 | 105 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **LCS-R149217_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **LCSW** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030272**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 4.022 | 0.50 | 4.000 | 0 | 101 | 90 | 110 | | | | |

Sample ID: **MB-R149217_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **PBW** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030275**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | ND | 0.50 | | | | | | | | | |

Sample ID: **N043305-007BDUP** SampType: **DUP** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030281**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 246.280 | 25 | | | | | | 245.4 | 0.344 | 20 | |

Sample ID: **N043305-007BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030282**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 448.890 | 25 | 200.0 | 245.4 | 102 | 80 | 120 | | | | |

Sample ID: **N043305-007BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149217**
Client ID: **ZZZZZZ** Batch ID: **R149217** TestNo: **EPA 300.0** Analysis Date: **12/7/2020** SeqNo: **4030283**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 448.650 | 25 | 200.0 | 245.4 | 102 | 80 | 120 | 448.9 | 0.0535 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043263-007BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149217** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149217** | TestNo: **EPA 300.0** | | Analysis Date: **12/7/2020** | SeqNo: **4030285** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 618.990 | 25 | 200.0 | 420.1 | 99.4 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

Sample ID: **LCS-R149252_SO4** SampType: **LCS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **LCSW** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031870**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 3.978 | 0.50 | 4.000 | 0 | 99.5 | 90 | 110 | | | | |

Sample ID: **MB-R149252_SO4** SampType: **MBLK** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **PBW** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031873**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 0.224 | 0.50 | | | | | | | | | |

Sample ID: **N043348-013BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **ZZZZZZ** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031875**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 304.764 | 10 | 80.00 | 218.8 | 107 | 80 | 120 | | | | |

Sample ID: **N043348-013BMSD** SampType: **MSD** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **ZZZZZZ** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031876**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 305.024 | 10 | 80.00 | 218.8 | 108 | 80 | 120 | 304.8 | 0.0853 | 20 | |

Sample ID: **N043348-016BMS** SampType: **MS** TestCode: **300_W_SO4P** Units: **mg/L** Prep Date: RunNo: **149252**
Client ID: **ZZZZZZ** Batch ID: **R149252** TestNo: **EPA 300.0** Analysis Date: **12/8/2020** SeqNo: **4031878**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 308.058 | 10 | 80.00 | 222.7 | 107 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 300_W_SO4PGE**

| Sample ID: **N043348-016BMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031879** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 307.372 | 10 | 80.00 | 222.7 | 106 | 80 | 120 | 308.1 | 0.223 | 20 | |

| Sample ID: **N043348-020BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031883** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 973.380 | 50 | 400.0 | 572.1 | 100 | 80 | 120 | | | | |

| Sample ID: **N043348-020BMSD** | SampType: **MSD** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031884** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 968.380 | 50 | 400.0 | 572.1 | 99.1 | 80 | 120 | 973.4 | 0.515 | 20 | |

| Sample ID: **N043348-003BDUP** | SampType: **DUP** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031888** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 202.732 | 10 | | | | | | 202.8 | 0.0454 | 20 | |

| Sample ID: **N043348-003BMS** | SampType: **MS** | TestCode: **300_W_SO4P** | Units: **mg/L** | Prep Date: | RunNo: **149252** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **R149252** | TestNo: **EPA 300.0** | | Analysis Date: **12/8/2020** | SeqNo: **4031889** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sulfate | 285.218 | 10 | 80.00 | 202.8 | 103 | 80 | 120 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-001

**Client Sample ID:** MW-26-Q420
**Collection Date:** 12/3/2020 9:56:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1100 | 74 | 100 | | ug/L | 1 | 12/15/2020 07:51 PM |
| Calcium | 120000 | 85 | 500 | | ug/L | 1 | 12/13/2020 02:28 PM |
| Iron | 84 | 18 | 20 | | ug/L | 1 | 12/13/2020 02:28 PM |
| Magnesium | 40000 | 48 | 100 | | ug/L | 1 | 12/13/2020 02:28 PM |
| Potassium | 9000 | 850 | 5000 | | ug/L | 10 | 12/14/2020 12:03 PM |
| Sodium | 470000 | 4800 | 25000 | | ug/L | 50 | 12/14/2020 12:55 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-002

**Client Sample ID:** MW-909-Q420
**Collection Date:** 12/3/2020 10:06:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1100 | 74 | 100 | | ug/L | 1 | 12/15/2020 07:56 PM |
| Calcium | 130000 | 85 | 500 | | ug/L | 1 | 12/13/2020 02:33 PM |
| Iron | 74 | 18 | 20 | | ug/L | 1 | 12/13/2020 02:33 PM |
| Magnesium | 41000 | 48 | 100 | | ug/L | 1 | 12/13/2020 02:33 PM |
| Potassium | 9600 | 850 | 5000 | | ug/L | 10 | 12/14/2020 12:06 PM |
| Sodium | 500000 | 4800 | 25000 | | ug/L | 50 | 12/14/2020 12:58 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-003

**Client Sample ID:** MW-51-Q420
**Collection Date:** 12/3/2020 9:06:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1500 | 74 | 100 | | ug/L | 1 | 12/15/2020 08:01 PM |
| Calcium | 190000 | 85 | 500 | | ug/L | 1 | 12/13/2020 02:39 PM |
| Iron | 81 | 18 | 20 | | ug/L | 1 | 12/13/2020 02:39 PM |
| Magnesium | 21000 | 48 | 100 | | ug/L | 1 | 12/13/2020 02:39 PM |
| Sodium | 2000000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 01:01 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-004

**Client Sample ID:** MW-916-Q420
**Collection Date:** 12/3/2020 9:16:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1600 | 74 | 100 | | ug/L | 1 | 12/15/2020 08:07 PM |
| Calcium | 200000 | 85 | 500 | | ug/L | 1 | 12/13/2020 02:45 PM |
| Iron | 23 | 18 | 20 | | ug/L | 1 | 12/13/2020 02:45 PM |
| Magnesium | 21000 | 48 | 100 | | ug/L | 1 | 12/13/2020 02:45 PM |
| Sodium | 2000000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 01:04 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-005

**Client Sample ID:** MW-69-195-Q420
**Collection Date:** 12/3/2020 12:20:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1100 | 74 | 100 | | ug/L | 1 | 12/15/2020 08:12 PM |
| Calcium | 79000 | 85 | 500 | | ug/L | 1 | 12/13/2020 03:26 PM |
| Iron | 490 | 18 | 20 | | ug/L | 1 | 12/13/2020 03:26 PM |
| Magnesium | 12000 | 48 | 100 | | ug/L | 1 | 12/13/2020 03:26 PM |
| Sodium | 360000 | 4800 | 25000 | | ug/L | 50 | 12/14/2020 01:07 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-006

**Client Sample ID:** PGE-07BR-Q420
**Collection Date:** 12/3/2020 4:00:00 PM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 2900 | 370 | 500 | | ug/L | 5 | 12/15/2020 08:17 PM |
| Calcium | 430000 | 420 | 2500 | | ug/L | 5 | 12/13/2020 03:32 PM |
| Iron | 140 | 89 | 100 | | ug/L | 5 | 12/13/2020 03:32 PM |
| Magnesium | 16000 | 240 | 500 | | ug/L | 5 | 12/13/2020 03:32 PM |
| Sodium | 4000000 | 24000 | 120000 | | ug/L | 250 | 12/14/2020 01:11 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-007

**Client Sample ID:** MW-939-Q420
**Collection Date:** 12/3/2020 9:30:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6010B** | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | | PrepDate: | **12/5/2020** | Analyst: **DJ** |
| Boron | 900 | 74 | 100 | | ug/L | 1 | 12/15/2020 08:21 PM |
| Calcium | 190000 | 85 | 500 | | ug/L | 1 | 12/13/2020 03:36 PM |
| Iron | 160 | 18 | 20 | | ug/L | 1 | 12/13/2020 03:36 PM |
| Magnesium | 48000 | 48 | 100 | | ug/L | 1 | 12/13/2020 03:36 PM |
| Sodium | 390000 | 4800 | 25000 | | ug/L | 50 | 12/14/2020 01:14 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-010

**Client Sample ID:** MW-65-160-Q420
**Collection Date:** 12/3/2020 10:28:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | | **12/5/2020** | Analyst: **DJ** |
| Boron | 1100 | 74 | 100 | | ug/L | 1 | 12/15/2020 08:25 PM |
| Calcium | 280000 | 85 | 500 | | ug/L | 1 | 12/13/2020 03:42 PM |
| Iron | 620 | 18 | 20 | | ug/L | 1 | 12/13/2020 03:42 PM |
| Magnesium | 50000 | 48 | 100 | | ug/L | 1 | 12/13/2020 03:42 PM |
| Sodium | 460000 | 4800 | 25000 | | ug/L | 50 | 12/14/2020 01:17 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-011

**Client Sample ID:** MW-65-225-Q420
**Collection Date:** 12/3/2020 11:08:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6010B** | | | |
| RunID: **NV00922-ICP2_201215D** | QC Batch: **83296** | | | PrepDate: | **12/5/2020** | | Analyst: **DJ** |
| Boron | 1700 | 74 | 100 | | ug/L | 1 | 12/15/2020 08:37 PM |
| Calcium | 270000 | 85 | 500 | | ug/L | 1 | 12/13/2020 03:47 PM |
| Iron | 98 | 18 | 20 | | ug/L | 1 | 12/13/2020 03:47 PM |
| Magnesium | 21000 | 48 | 100 | | ug/L | 1 | 12/13/2020 03:47 PM |
| Sodium | 1800000 | 9600 | 50000 | | ug/L | 100 | 12/14/2020 01:27 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| H | Holding times for preparation or analysis exceeded |
| S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out |
| E | Value above quantitation range |
| ND | Not Detected at the Reporting Limit |
| | Results are wet unless otherwise specified |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

Sample ID: **MB-83296** SampType: **MBLK** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **PBW** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041351**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | ND | 500 | | | | | | | | | |
| Iron | ND | 20 | | | | | | | | | |
| Magnesium | ND | 100 | | | | | | | | | |

Sample ID: **LCS1-83296** SampType: **LCS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **LCSW** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041352**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 10862.855 | 500 | 10000 | 0 | 109 | 85 | 115 | | | | |
| Iron | 107.328 | 20 | 100.0 | 0 | 107 | 85 | 115 | | | | |
| Magnesium | 11031.033 | 100 | 10000 | 0 | 110 | 85 | 115 | | | | |

Sample ID: **N043223-012DMS1** SampType: **MS** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041356**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 239154.223 | 500 | 10000 | 226900 | 122 | 75 | 125 | | | | |
| Iron | 523.198 | 20 | 100.0 | 415.7 | 108 | 75 | 125 | | | | |
| Magnesium | 41639.988 | 100 | 10000 | 29850 | 118 | 75 | 125 | | | | |

Sample ID: **N043223-012DMSD1** SampType: **MSD** TestCode: **6010_WDPG** Units: **ug/L** Prep Date: **12/5/2020** RunNo: **149381**
Client ID: **ZZZZZZ** Batch ID: **83296** TestNo: **EPA 6010B** **EPA 3010A** Analysis Date: **12/13/2020** SeqNo: **4041357**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 225053.754 | 500 | 10000 | 226900 | -18.7 | 75 | 125 | 239200 | 6.08 | 20 | S |
| Iron | 576.820 | 20 | 100.0 | 415.7 | 161 | 75 | 125 | 523.2 | 9.75 | 20 | S |
| Magnesium | 39235.316 | 100 | 10000 | 29850 | 93.8 | 75 | 125 | 41640 | 5.95 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **MB-83296** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043022** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | ND | 500 | | | | | | | | | |
| Sodium | ND | 500 | | | | | | | | | |

| Sample ID: **LCS2-83296** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043023** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 20498.704 | 500 | 20000 | 0 | 102 | 85 | 115 | | | | |
| Sodium | 19690.475 | 500 | 20000 | 0 | 98.5 | 85 | 115 | | | | |

| Sample ID: **N043223-012D-MS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043031** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 41988.308 | 5000 | 20000 | 15910 | 130 | 75 | 125 | | | | S |

| Sample ID: **N043223-012D-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043032** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 41951.554 | 5000 | 20000 | 15910 | 130 | 75 | 125 | 41990 | 0.0876 | 20 | S |

| Sample ID: **N043223-012D-MS2** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043034** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1566664.352 | 120000 | 20000 | 1572000 | -26.3 | 75 | 125 | | | | S |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043223-012D-MSD** | SampType: **MSD** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043035** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1557894.914 | 120000 | 20000 | 1572000 | -70.2 | 75 | 125 | 1567000 | 0.561 | 20 | S |

| Sample ID: **MB-83296** | SampType: **MBLK** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046080** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | ND | 100 | | | | | | | | | |

| Sample ID: **LCS1-83296** | SampType: **LCS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046081** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 4928.246 | 100 | 5000 | 0 | 98.6 | 85 | 115 | | | | |

| Sample ID: **N043223-012DMS1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046085** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6553.636 | 100 | 5000 | 1194 | 107 | 75 | 125 | | | | |

| Sample ID: **N043223-012DMSD1** | SampType: **MS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: **12/5/2020** | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046086** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6337.090 | 100 | 5000 | 1194 | 103 | 75 | 125 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6010_WDPGEPPB**

| Sample ID: **N043223-012D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149381** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/13/2020** | SeqNo: **4041355** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Calcium | 233786.753 | 500 | 10000 | 226900 | 68.6 | 80 | 120 | | | | S |
| Iron | 549.738 | 20 | 100.0 | 415.7 | 134 | 80 | 120 | | | | S |
| Magnesium | 41227.331 | 100 | 10000 | 29850 | 114 | 80 | 120 | | | | |

| Sample ID: **N043223-012DPS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043030** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Potassium | 41320.095 | 5000 | 20000 | 15910 | 127 | 80 | 120 | | | | S |

| Sample ID: **N043223-012DPS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149396** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/14/2020** | SeqNo: **4043033** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Sodium | 1479982.813 | 120000 | 20000 | 1572000 | -460 | 80 | 120 | | | | S |

| Sample ID: **N043223-012D-PS** | SampType: **PS** | TestCode: **6010_WDPG** | Units: **ug/L** | Prep Date: | RunNo: **149447** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83296** | TestNo: **EPA 6010B** | **EPA 3010A** | Analysis Date: **12/15/2020** | SeqNo: **4046084** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Boron | 6504.886 | 100 | 5000 | 1194 | 106 | 80 | 120 | | | | |

**Qualifiers:**

| | | | | | |
|---|---|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range | H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit | R | RPD outside accepted recovery limits | S | Spike/Surrogate outside of limits due to matrix interference |
| DO | Surrogate Diluted Out | | Calculations are based on raw values | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-001

**Client Sample ID:** MW-26-Q420
**Collection Date:** 12/3/2020 9:56:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Arsenic | 0.74 | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Barium | 33 | 0.15 | 1.0 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Molybdenum | 33 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Selenium | 31 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Vanadium | 7.5 | 0.28 | 1.0 | | µg/L | 1 | 12/11/2020 12:58 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/11/2020 12:58 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-002

**Client Sample ID:** MW-909-Q420
**Collection Date:** 12/3/2020 10:06:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Antimony | ND | 0.16 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Arsenic | 0.88 | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Barium | 33 | 0.15 | 1.0 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Molybdenum | 32 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Selenium | 31 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Vanadium | 7.9 | 0.28 | 1.0 | | µg/L | 1 | 12/11/2020 02:32 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/11/2020 02:32 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-003

**Client Sample ID:** MW-51-Q420
**Collection Date:** 12/3/2020 9:06:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201217A** | QC Batch: **83357** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Antimony | 1.3 | 0.16 | 0.50 | | µg/L | 1 | 12/17/2020 04:43 PM |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Barium | 43 | 0.15 | 1.0 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Molybdenum | 40 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Selenium | 33 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Vanadium | 1.9 | 0.28 | 1.0 | | µg/L | 1 | 12/11/2020 03:06 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/11/2020 03:06 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-004

**Client Sample ID:** MW-916-Q420
**Collection Date:** 12/3/2020 9:16:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201217A** | QC Batch: **83357** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Antimony | 1.3 | 0.16 | 0.50 | | µg/L | 1 | 12/17/2020 04:48 PM |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Barium | 43 | 0.15 | 1.0 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Beryllium | ND | 0.042 | 0.50 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Cadmium | ND | 0.053 | 0.50 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Cobalt | ND | 0.042 | 0.50 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Copper | ND | 0.55 | 1.0 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Lead | ND | 0.13 | 1.0 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Manganese | ND | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Molybdenum | 40 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Nickel | ND | 0.26 | 1.0 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Selenium | 32 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Silver | ND | 0.23 | 0.50 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Thallium | ND | 0.19 | 0.50 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Vanadium | 1.8 | 0.28 | 1.0 | | µg/L | 1 | 12/11/2020 03:24 PM |
| Zinc | ND | 2.3 | 10 | | µg/L | 1 | 12/11/2020 03:24 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-69-195-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 12:20:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-005 | | |

**DISSOLVED METALS BY ICP-MS**

**EPA 3010A** **EPA 6020**

RunID: **NV00922-ICP8_201211A** QC Batch: **83357** PrepDate: **12/8/2020** Analyst: **CEI**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Arsenic | 1.7 | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 03:41 PM |
| Manganese | 23 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 03:41 PM |
| Molybdenum | 70 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 03:41 PM |
| Selenium | 6.0 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 03:41 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | PGE-07BR-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 4:00:00 PM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-006 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| **EPA 3010A** | | | **EPA 6020** | | | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | PrepDate: | **12/8/2020** | | Analyst: **CEI** |
| Manganese | 320 | 1.3 | 2.5 | | µg/L | 5 | 12/11/2020 04:33 PM |
| Molybdenum | 8.1 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 04:28 PM |
| Selenium | ND | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 04:28 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-007

**Client Sample ID:** MW-939-Q420
**Collection Date:** 12/3/2020 9:30:00 AM
**Matrix:** GROUNDWATER

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | **EPA 6020** | | | |
| RunID: **NV00922-ICP8_201217A** | QC Batch: **83357** | | | PrepDate: | | **12/8/2020** | Analyst: **CEI** |
| Arsenic | 0.42 | 0.081 | 0.10 | | µg/L | 1 | 12/17/2020 05:53 PM |
| Manganese | 3.1 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 04:45 PM |
| Molybdenum | 5.5 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 04:45 PM |
| Selenium | 19 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 04:45 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-160-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:28:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-010 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | | PrepDate: | **12/8/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 05:02 PM |
| Manganese | 51 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 05:02 PM |
| Molybdenum | 27 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 05:02 PM |
| Selenium | 9.0 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 05:02 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-65-225-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 11:08:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-011 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED METALS BY ICP-MS** | | | | | | | |
| | **EPA 3010A** | | | | **EPA 6020** | | |
| RunID: **NV00922-ICP8_201211A** | QC Batch: **83357** | | | | PrepDate: | **12/8/2020** | Analyst: **CEI** |
| Arsenic | ND | 0.081 | 0.10 | | µg/L | 1 | 12/11/2020 05:37 PM |
| Manganese | 26 | 0.26 | 0.50 | | µg/L | 1 | 12/11/2020 05:37 PM |
| Molybdenum | 32 | 0.21 | 0.50 | | µg/L | 1 | 12/11/2020 05:37 PM |
| Selenium | 5.2 | 0.36 | 0.50 | | µg/L | 1 | 12/11/2020 05:37 PM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **MB-83357** SampType: **MBLK** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **PBW** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041949**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | ND | 0.50 | | | | | | | | | |
| Arsenic | ND | 0.10 | | | | | | | | | |
| Barium | ND | 1.0 | | | | | | | | | |
| Beryllium | ND | 0.50 | | | | | | | | | |
| Cadmium | ND | 0.50 | | | | | | | | | |
| Cobalt | ND | 0.50 | | | | | | | | | |
| Copper | ND | 1.0 | | | | | | | | | |
| Lead | ND | 1.0 | | | | | | | | | |
| Manganese | ND | 0.50 | | | | | | | | | |
| Molybdenum | ND | 0.50 | | | | | | | | | |
| Nickel | ND | 1.0 | | | | | | | | | |
| Selenium | ND | 0.50 | | | | | | | | | |
| Silver | ND | 0.50 | | | | | | | | | |
| Thallium | ND | 0.50 | | | | | | | | | |
| Vanadium | 0.287 | 1.0 | | | | | | | | | |
| Zinc | ND | 10 | | | | | | | | | |

Sample ID: **LCS-83357** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **LCSW** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041950**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.632 | 0.50 | 10.00 | 0 | 106 | 85 | 115 | | | | |
| Arsenic | 10.179 | 0.10 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Barium | 10.714 | 1.0 | 10.00 | 0 | 107 | 85 | 115 | | | | |
| Beryllium | 9.895 | 0.50 | 10.00 | 0 | 99.0 | 85 | 115 | | | | |
| Cadmium | 10.225 | 0.50 | 10.00 | 0 | 102 | 85 | 115 | | | | |
| Cobalt | 9.860 | 0.50 | 10.00 | 0 | 98.6 | 85 | 115 | | | | |
| Copper | 9.580 | 1.0 | 10.00 | 0 | 95.8 | 85 | 115 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **LCS-83357** SampType: **LCS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **LCSW** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041950**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lead | 9.463 | 1.0 | 10.00 | 0 | 94.6 | 85 | 115 | | | | |
| Manganese | 98.541 | 0.50 | 100.0 | 0 | 98.5 | 85 | 115 | | | | |
| Molybdenum | 9.693 | 0.50 | 10.00 | 0 | 96.9 | 85 | 115 | | | | |
| Nickel | 9.525 | 1.0 | 10.00 | 0 | 95.2 | 85 | 115 | | | | |
| Selenium | 9.521 | 0.50 | 10.00 | 0 | 95.2 | 85 | 115 | | | | |
| Silver | 10.140 | 0.50 | 10.00 | 0 | 101 | 85 | 115 | | | | |
| Thallium | 9.728 | 0.50 | 10.00 | 0 | 97.3 | 85 | 115 | | | | |
| Vanadium | 10.013 | 1.0 | 10.00 | 0 | 100 | 85 | 115 | | | | |
| Zinc | 96.991 | 10 | 100.0 | 0 | 97.0 | 85 | 115 | | | | |

Sample ID: **N043263-001D-MS** SampType: **MS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **ZZZZZZ** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041960**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.553 | 0.50 | 10.00 | 0.1863 | 104 | 75 | 125 | | | | |
| Arsenic | 11.026 | 0.10 | 10.00 | 0.7351 | 103 | 75 | 125 | | | | |
| Barium | 45.126 | 1.0 | 10.00 | 32.50 | 126 | 75 | 125 | | | | S |
| Beryllium | 8.916 | 0.50 | 10.00 | 0 | 89.2 | 75 | 125 | | | | |
| Cadmium | 9.755 | 0.50 | 10.00 | 0 | 97.5 | 75 | 125 | | | | |
| Cobalt | 8.751 | 0.50 | 10.00 | 0.06318 | 86.9 | 75 | 125 | | | | |
| Copper | 8.290 | 1.0 | 10.00 | 0 | 82.9 | 75 | 125 | | | | |
| Lead | 9.598 | 1.0 | 10.00 | 0 | 96.0 | 75 | 125 | | | | |
| Manganese | 91.514 | 0.50 | 100.0 | 0 | 91.5 | 75 | 125 | | | | |
| Molybdenum | 42.614 | 0.50 | 10.00 | 32.75 | 98.7 | 75 | 125 | | | | |
| Nickel | 9.543 | 1.0 | 10.00 | 0 | 95.4 | 75 | 125 | | | | |
| Selenium | 39.960 | 0.50 | 10.00 | 31.02 | 89.4 | 75 | 125 | | | | |
| Silver | 7.260 | 0.50 | 10.00 | 0 | 72.6 | 75 | 125 | | | | S |
| Thallium | 8.929 | 0.50 | 10.00 | 0 | 89.3 | 75 | 125 | | | | |
| Vanadium | 17.419 | 1.0 | 10.00 | 7.532 | 98.9 | 75 | 125 | | | | |
| Zinc | 94.623 | 10 | 100.0 | 0 | 94.6 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043263-001D-MSD** SampType: **MSD** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: **12/8/2020** RunNo: **149388**
Client ID: **ZZZZZZ** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041963**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.718 | 0.50 | 10.00 | 0.1863 | 105 | 75 | 125 | 10.55 | 1.55 | 20 | |
| Arsenic | 11.345 | 0.10 | 10.00 | 0.7351 | 106 | 75 | 125 | 11.03 | 2.85 | 20 | |
| Barium | 44.689 | 1.0 | 10.00 | 32.50 | 122 | 75 | 125 | 45.13 | 0.973 | 20 | |
| Beryllium | 8.881 | 0.50 | 10.00 | 0 | 88.8 | 75 | 125 | 8.916 | 0.390 | 20 | |
| Cadmium | 9.623 | 0.50 | 10.00 | 0 | 96.2 | 75 | 125 | 9.755 | 1.36 | 20 | |
| Cobalt | 8.791 | 0.50 | 10.00 | 0.06318 | 87.3 | 75 | 125 | 8.751 | 0.455 | 20 | |
| Copper | 8.333 | 1.0 | 10.00 | 0 | 83.3 | 75 | 125 | 8.290 | 0.520 | 20 | |
| Lead | 9.535 | 1.0 | 10.00 | 0 | 95.4 | 75 | 125 | 9.598 | 0.651 | 20 | |
| Manganese | 91.711 | 0.50 | 100.0 | 0 | 91.7 | 75 | 125 | 91.51 | 0.216 | 20 | |
| Molybdenum | 41.513 | 0.50 | 10.00 | 32.75 | 87.7 | 75 | 125 | 42.61 | 2.62 | 20 | |
| Nickel | 9.479 | 1.0 | 10.00 | 0 | 94.8 | 75 | 125 | 9.543 | 0.667 | 20 | |
| Selenium | 39.723 | 0.50 | 10.00 | 31.02 | 87.0 | 75 | 125 | 39.96 | 0.596 | 20 | |
| Silver | 7.243 | 0.50 | 10.00 | 0 | 72.4 | 75 | 125 | 7.260 | 0.232 | 20 | S |
| Thallium | 8.835 | 0.50 | 10.00 | 0 | 88.4 | 75 | 125 | 8.929 | 1.05 | 20 | |
| Vanadium | 17.817 | 1.0 | 10.00 | 7.532 | 103 | 75 | 125 | 17.42 | 2.26 | 20 | |
| Zinc | 94.741 | 10 | 100.0 | 0 | 94.7 | 75 | 125 | 94.62 | 0.125 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 6020_DIS_TPK**

Sample ID: **N043263-001D-PS** SampType: **PS** TestCode: **6020_DIS_TP** Units: **µg/L** Prep Date: RunNo: **149388**
Client ID: **ZZZZZZ** Batch ID: **83357** TestNo: **EPA 6020** **EPA 3010A** Analysis Date: **12/11/2020** SeqNo: **4041955**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Antimony | 10.602 | 0.50 | 10.00 | 0.1863 | 104 | 80 | 120 | | | | |
| Arsenic | 11.116 | 0.10 | 10.00 | 0.7351 | 104 | 80 | 120 | | | | |
| Barium | 44.421 | 1.0 | 10.00 | 32.50 | 119 | 80 | 120 | | | | |
| Beryllium | 8.697 | 0.50 | 10.00 | 0 | 87.0 | 80 | 120 | | | | |
| Cadmium | 9.418 | 0.50 | 10.00 | 0 | 94.2 | 80 | 120 | | | | |
| Cobalt | 8.805 | 0.50 | 10.00 | 0.06318 | 87.4 | 80 | 120 | | | | |
| Copper | 8.346 | 1.0 | 10.00 | 0 | 83.5 | 80 | 120 | | | | |
| Lead | 9.628 | 1.0 | 10.00 | 0 | 96.3 | 80 | 120 | | | | |
| Manganese | 91.870 | 0.50 | 100.0 | 0 | 91.9 | 80 | 120 | | | | |
| Molybdenum | 41.797 | 0.50 | 10.00 | 32.75 | 90.5 | 80 | 120 | | | | |
| Nickel | 9.475 | 1.0 | 10.00 | 0 | 94.7 | 80 | 120 | | | | |
| Selenium | 38.548 | 0.50 | 10.00 | 31.02 | 75.3 | 80 | 120 | | | | S |
| Silver | 7.173 | 0.50 | 10.00 | 0 | 71.7 | 80 | 120 | | | | S |
| Thallium | 8.859 | 0.50 | 10.00 | 0 | 88.6 | 80 | 120 | | | | |
| Vanadium | 17.518 | 1.0 | 10.00 | 7.532 | 99.9 | 80 | 120 | | | | |
| Zinc | 95.112 | 10 | 100.0 | 0 | 95.1 | 80 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**ASSET Laboratories**

# ANALYTICAL RESULTS

**Print Date:** *23-Dec-20*

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-26-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:56:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-001 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201205B** | QC Batch: **83286** | | | PrepDate: | | **12/4/2020** | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/5/2020 10:00 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**ASSET Laboratories**

# ANALYTICAL RESULTS

**Print Date:** *23-Dec-20*

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-909-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 10:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-002 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201205B** | QC Batch: **83286** | | | PrepDate: | | **12/4/2020** | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/5/2020 10:07 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**ASSET Laboratories**

# ANALYTICAL RESULTS

**Print Date:** *23-Dec-20*

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-51-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:06:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-003 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| **EPA 7470A** | | | | | | | |
| RunID: **NV00922-AA2_201205B** QC Batch: **83286** PrepDate: **12/4/2020** Analyst: **DJ** | | | | | | | |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/5/2020 10:17 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

| | | | |
|---|---|---|---|
| **CLIENT:** | ARCADIS U.S., Inc. - California | **Client Sample ID:** | MW-916-Q420 |
| **Lab Order:** | N043263 | **Collection Date:** | 12/3/2020 9:16:00 AM |
| **Project:** | PG&E Topock - GMP, 30035275 | **Matrix:** | GROUNDWATER |
| **Lab ID:** | N043263-004 | | |

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| **DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE** | | | | | | | |
| | | | **EPA 7470A** | | | | |
| RunID: **NV00922-AA2_201205B** | QC Batch: **83286** | | | PrepDate: | | **12/4/2020** | Analyst: **DJ** |
| Mercury | ND | 0.13 | 0.20 | | µg/L | 1 | 12/5/2020 10:20 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 7470_W_DISSPGE**

| Sample ID: **MB-83286** | SampType: **MBLK** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149145** |
|---|---|---|---|---|---|
| Client ID: **PBW** | Batch ID: **83286** | TestNo: **EPA 7470A** | | Analysis Date: **12/5/2020** | SeqNo: **4025145** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | ND | 0.20 | | | | | | | | | |

| Sample ID: **LCS-83286** | SampType: **LCS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149145** |
|---|---|---|---|---|---|
| Client ID: **LCSW** | Batch ID: **83286** | TestNo: **EPA 7470A** | | Analysis Date: **12/5/2020** | SeqNo: **4025146** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.110 | 0.20 | 5.000 | 0 | 102 | 85 | 115 | | | | |

| Sample ID: **N043254-001D-MS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149145** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83286** | TestNo: **EPA 7470A** | | Analysis Date: **12/5/2020** | SeqNo: **4025150** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.030 | 0.20 | 5.000 | 0 | 101 | 75 | 125 | | | | |

| Sample ID: **N043254-001D-MSD** | SampType: **MSD** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149145** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83286** | TestNo: **EPA 7470A** | | Analysis Date: **12/5/2020** | SeqNo: **4025151** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.210 | 0.20 | 5.000 | 0 | 104 | 75 | 125 | 5.030 | 3.52 | 20 | |

| Sample ID: **N043263-001D-MS** | SampType: **MS** | TestCode: **7470_W_DIS** | Units: **µg/L** | Prep Date: **12/4/2020** | RunNo: **149145** |
|---|---|---|---|---|---|
| Client ID: **ZZZZZZ** | Batch ID: **83286** | TestNo: **EPA 7470A** | | Analysis Date: **12/5/2020** | SeqNo: **4025165** |

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | 5.240 | 0.20 | 5.000 | 0 | 105 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-007

**Client Sample ID:** MW-939-Q420
**Collection Date:** 12/3/2020 9:30:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201214A** QC Batch: **P20VW129** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |

**Qualifiers:**

| | | | |
|---|---|---|---|
| B | Analyte detected in the associated Method Blank | E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded | ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference | | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out | | |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-007

**Client Sample ID:** MW-939-Q420
**Collection Date:** 12/3/2020 9:30:00 AM
**Matrix:** GROUNDWATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201214A** QC Batch: **P20VW129** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Chloroform | 1.0 | 0.38 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/15/2020 03:19 AM |
| Surr: 1,2-Dichloroethane-d4 | 110 | 0 | 72-119 | | %REC | 1 | 12/15/2020 03:19 AM |
| Surr: 4-Bromofluorobenzene | 98.9 | 0 | 76-119 | | %REC | 1 | 12/15/2020 03:19 AM |
| Surr: Dibromofluoromethane | 110 | 0 | 85-115 | | %REC | 1 | 12/15/2020 03:19 AM |
| Surr: Toluene-d8 | 109 | 0 | 81-120 | | %REC | 1 | 12/15/2020 03:19 AM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-012

**Client Sample ID:** Trip Blank
**Collection Date:** 12/3/2020 7:00:00 AM
**Matrix:** WATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.25 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,1,1-Trichloroethane | ND | 0.20 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,1,2,2-Tetrachloroethane | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,1,2-Trichloroethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,1-Dichloroethane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,1-Dichloroethene | ND | 0.17 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,1-Dichloropropene | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2,3-Trichlorobenzene | ND | 0.37 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2,3-Trichloropropane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2,4-Trichlorobenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2,4-Trimethylbenzene | ND | 0.060 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2-Dibromo-3-chloropropane | ND | 0.32 | 2.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2-Dibromoethane | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2-Dichlorobenzene | ND | 0.089 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2-Dichloroethane | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,2-Dichloropropane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,3,5-Trimethylbenzene | ND | 0.051 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,3-Dichlorobenzene | ND | 0.081 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,3-Dichloropropane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 1,4-Dichlorobenzene | ND | 0.080 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 2,2-Dichloropropane | ND | 0.22 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 2-Butanone | ND | 4.7 | 10 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 2-Chlorotoluene | ND | 0.090 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 4-Chlorotoluene | ND | 0.065 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 4-Isopropyltoluene | ND | 0.085 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| 4-Methyl-2-pentanone | ND | 0.83 | 10 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Acetone | ND | 4.6 | 10 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Acrolein | ND | 2.2 | 20 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Acrylonitrile | ND | 2.6 | 20 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Benzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Bromobenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Bromochloromethane | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Bromodichloromethane | ND | 0.20 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Bromoform | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Bromomethane | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Carbon disulfide | ND | 0.19 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- S Spike/Surrogate outside of limits due to matrix interference
- Results are wet unless otherwise specified
- DO Surrogate Diluted Out

**CLIENT:** ARCADIS U.S., Inc. - California
**Lab Order:** N043263
**Project:** PG&E Topock - GMP, 30035275
**Lab ID:** N043263-012

**Client Sample ID:** Trip Blank
**Collection Date:** 12/3/2020 7:00:00 AM
**Matrix:** WATER

## VOLATILE ORGANIC COMPOUNDS BY GC/MS

**EPA 8260B**

RunID: **NV00922-MS5_201208A** QC Batch: **P20VW126** PrepDate: Analyst: **HG**

| Analyses | Result | MDL | PQL | Qual | Units | DF | Date Analyzed |
|---|---|---|---|---|---|---|---|
| Carbon tetrachloride | ND | 0.33 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Chlorobenzene | ND | 0.11 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Chloroethane | ND | 0.69 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Chloroform | ND | 0.38 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Chloromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| cis-1,2-Dichloroethene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| cis-1,3-Dichloropropene | ND | 0.16 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Dibromochloromethane | ND | 0.23 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Dibromomethane | ND | 0.13 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Dichlorodifluoromethane | ND | 0.16 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Ethylbenzene | ND | 0.11 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Freon-113 | ND | 0.28 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Hexachlorobutadiene | ND | 0.30 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Isopropylbenzene | ND | 0.092 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| m,p-Xylene | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Methylene chloride | ND | 0.43 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| MTBE | ND | 0.44 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| n-Butylbenzene | ND | 0.093 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| n-Propylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Naphthalene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| o-Xylene | ND | 0.087 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| sec-Butylbenzene | ND | 0.076 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Styrene | ND | 0.41 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| tert-Butylbenzene | ND | 0.10 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Tetrachloroethene | ND | 0.25 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Toluene | ND | 0.13 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| trans-1,2-Dichloroethene | ND | 0.27 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| trans-1,3-Dichloropropene | ND | 0.12 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Trichloroethene | ND | 0.26 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Trichlorofluoromethane | ND | 0.23 | 1.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Vinyl chloride | ND | 0.19 | 0.50 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Xylenes, Total | ND | 1.5 | 2.0 | | ug/L | 1 | 12/8/2020 08:13 PM |
| Surr: 1,2-Dichloroethane-d4 | 121 | 0 | 72-119 | S | %REC | 1 | 12/8/2020 08:13 PM |
| Surr: 4-Bromofluorobenzene | 104 | 0 | 76-119 | | %REC | 1 | 12/8/2020 08:13 PM |
| Surr: Dibromofluoromethane | 116 | 0 | 85-115 | S | %REC | 1 | 12/8/2020 08:13 PM |
| Surr: Toluene-d8 | 113 | 0 | 81-120 | | %REC | 1 | 12/8/2020 08:13 PM |

**Qualifiers:**

| | |
|---|---|
| B | Analyte detected in the associated Method Blank |
| E | Value above quantitation range |
| H | Holding times for preparation or analysis exceeded |
| ND | Not Detected at the Reporting Limit |
| S | Spike/Surrogate outside of limits due to matrix interference |
| | Results are wet unless otherwise specified |
| DO | Surrogate Diluted Out |

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **LCSW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031320**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.030 | 0.50 | 20.00 | 0 | 100 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.690 | 1.0 | 20.00 | 0 | 103 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.300 | 0.50 | 20.00 | 0 | 102 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.090 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 20.640 | 1.0 | 20.00 | 0 | 103 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.660 | 1.0 | 20.00 | 0 | 103 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 20.950 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.760 | 1.0 | 20.00 | 0 | 109 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.290 | 1.0 | 20.00 | 0 | 101 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.200 | 2.0 | 20.00 | 0 | 106 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 21.610 | 1.0 | 20.00 | 0 | 108 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.190 | 1.0 | 20.00 | 0 | 106 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 19.900 | 0.50 | 20.00 | 0 | 99.5 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.130 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 19.550 | 1.0 | 20.00 | 0 | 97.8 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 20.890 | 1.0 | 20.00 | 0 | 104 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.320 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.260 | 0.50 | 20.00 | 0 | 106 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 19.360 | 1.0 | 20.00 | 0 | 96.8 | 69 | 137 | | | | |
| 2-Butanone | 248.830 | 10 | 200.0 | 0 | 124 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.430 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.500 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 202.740 | 10 | 200.0 | 0 | 101 | 58 | 134 | | | | |
| Acetone | 251.810 | 10 | 200.0 | 0 | 126 | 40 | 135 | | | | |
| Acrolein | 213.400 | 20 | 200.0 | 0 | 107 | 75 | 125 | | | | |
| Acrylonitrile | 223.800 | 20 | 200.0 | 0 | 112 | 75 | 125 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **LCSW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031320**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Benzene | 21.380 | 0.50 | 20.00 | 0 | 107 | 81 | 122 | | | | |
| Bromobenzene | 21.370 | 1.0 | 20.00 | 0 | 107 | 76 | 124 | | | | |
| Bromochloromethane | 20.570 | 1.0 | 20.00 | 0 | 103 | 65 | 129 | | | | |
| Bromodichloromethane | 21.220 | 0.50 | 20.00 | 0 | 106 | 76 | 121 | | | | |
| Bromoform | 19.840 | 1.0 | 20.00 | 0 | 99.2 | 69 | 128 | | | | |
| Bromomethane | 22.800 | 1.0 | 20.00 | 0 | 114 | 53 | 141 | | | | |
| Carbon disulfide | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.500 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | | | | |
| Chlorobenzene | 20.890 | 0.50 | 20.00 | 0 | 104 | 81 | 122 | | | | |
| Chloroethane | 20.440 | 1.0 | 20.00 | 0 | 102 | 58 | 133 | | | | |
| Chloroform | 20.510 | 1.0 | 20.00 | 0 | 103 | 69 | 128 | | | | |
| Chloromethane | 18.870 | 1.0 | 20.00 | 0 | 94.4 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 21.450 | 1.0 | 20.00 | 0 | 107 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.370 | 0.50 | 20.00 | 0 | 107 | 69 | 131 | | | | |
| Dibromochloromethane | 20.930 | 0.50 | 20.00 | 0 | 105 | 66 | 133 | | | | |
| Dibromomethane | 20.480 | 1.0 | 20.00 | 0 | 102 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 19.240 | 1.0 | 20.00 | 0 | 96.2 | 53 | 153 | | | | |
| Ethylbenzene | 20.920 | 1.0 | 20.00 | 0 | 105 | 73 | 127 | | | | |
| Freon-113 | 17.460 | 1.0 | 20.00 | 0 | 87.3 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.330 | 0.50 | 20.00 | 0 | 96.7 | 67 | 131 | | | | |
| Isopropylbenzene | 22.790 | 1.0 | 20.00 | 0 | 114 | 75 | 127 | | | | |
| m,p-Xylene | 43.290 | 1.0 | 40.00 | 0 | 108 | 76 | 128 | | | | |
| Methylene chloride | 19.970 | 1.0 | 20.00 | 0 | 99.8 | 63 | 137 | | | | |
| MTBE | 21.660 | 1.0 | 20.00 | 0 | 108 | 65 | 123 | | | | |
| n-Butylbenzene | 22.090 | 1.0 | 20.00 | 0 | 110 | 69 | 137 | | | | |
| n-Propylbenzene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 72 | 129 | | | | |
| Naphthalene | 17.500 | 1.0 | 20.00 | 0 | 87.5 | 54 | 138 | | | | |
| o-Xylene | 19.050 | 1.0 | 20.00 | 0 | 95.2 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.690 | 1.0 | 20.00 | 0 | 98.4 | 72 | 127 | | | | |
| Styrene | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 65 | 134 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **LCSW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031320**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| tert-Butylbenzene | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 70 | 129 | | | | |
| Tetrachloroethene | 19.980 | 1.0 | 20.00 | 0 | 99.9 | 66 | 128 | | | | |
| Toluene | 21.490 | 0.50 | 20.00 | 0 | 107 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 20.150 | 1.0 | 20.00 | 0 | 101 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.270 | 1.0 | 20.00 | 0 | 111 | 59 | 135 | | | | |
| Trichloroethene | 21.050 | 1.0 | 20.00 | 0 | 105 | 70 | 127 | | | | |
| Trichlorofluoromethane | 18.930 | 1.0 | 20.00 | 0 | 94.6 | 57 | 129 | | | | |
| Vinyl chloride | 20.140 | 0.50 | 20.00 | 0 | 101 | 50 | 134 | | | | |
| Xylenes, Total | 62.340 | 2.0 | 60.00 | 0 | 104 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.610 | | 25.00 | | 106 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 27.290 | | 25.00 | | 109 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.160 | | 25.00 | | 105 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.680 | | 25.00 | | 111 | 81 | 120 | | | | |

Sample ID: **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- E Value above quantitation range
- R RPD outside accepted recovery limits
- Calculations are based on raw values
- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 0.50 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 0.50 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201208MB2** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **PBW** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031322**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| cis-1,3-Dichloropropene | ND | 0.50 | | | | | | | | | |
| Dibromochloromethane | ND | 0.50 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.50 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | 0.550 | 1.0 | | | | | | | | | |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 26.990 | | 25.00 | | 108 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.200 | | 25.00 | | 101 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.080 | | 25.00 | | 104 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.250 | | 25.00 | | 109 | 81 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.980 | 0.50 | 20.00 | 0 | 99.9 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 22.760 | 1.0 | 20.00 | 0 | 114 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.220 | 0.50 | 20.00 | 0 | 106 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.460 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 21.110 | 1.0 | 20.00 | 0 | 106 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 21.030 | 1.0 | 20.00 | 0 | 105 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 22.950 | 1.0 | 20.00 | 0 | 115 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.050 | 1.0 | 20.00 | 0 | 105 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.810 | 1.0 | 20.00 | 0 | 109 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 21.280 | 1.0 | 20.00 | 0 | 106 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.200 | 1.0 | 20.00 | 0 | 101 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.160 | 2.0 | 20.00 | 0 | 106 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 22.410 | 1.0 | 20.00 | 0 | 112 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 21.150 | 1.0 | 20.00 | 0 | 106 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.530 | 0.50 | 20.00 | 0 | 103 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.090 | 1.0 | 20.00 | 0 | 100 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.260 | 1.0 | 20.00 | 0 | 101 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 21.140 | 1.0 | 20.00 | 0 | 106 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.680 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.300 | 0.50 | 20.00 | 0 | 106 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 20.710 | 1.0 | 20.00 | 0 | 104 | 69 | 137 | | | | |
| 2-Butanone | 191.200 | 10 | 200.0 | 0 | 95.6 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.780 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.320 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 214.330 | 10 | 200.0 | 0 | 107 | 58 | 134 | | | | |
| Acetone | 149.270 | 10 | 200.0 | 0 | 74.6 | 40 | 135 | | | | |
| Acrolein | 227.260 | 20 | 200.0 | 0 | 114 | 75 | 125 | | | | |
| Acrylonitrile | 233.180 | 20 | 200.0 | 0 | 117 | 75 | 125 | | | | |
| Benzene | 22.210 | 0.50 | 20.00 | 0 | 111 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 21.090 | 1.0 | 20.00 | 0 | 105 | 76 | 124 | | | | |
| Bromochloromethane | 22.160 | 1.0 | 20.00 | 0 | 111 | 65 | 129 | | | | |
| Bromodichloromethane | 21.860 | 0.50 | 20.00 | 0 | 109 | 76 | 121 | | | | |
| Bromoform | 20.920 | 1.0 | 20.00 | 0 | 105 | 69 | 128 | | | | |
| Bromomethane | 22.080 | 1.0 | 20.00 | 0 | 110 | 53 | 141 | | | | |
| Carbon disulfide | 22.010 | 1.0 | 20.00 | 0 | 110 | 75 | 125 | | | | |
| Carbon tetrachloride | 21.710 | 0.50 | 20.00 | 0 | 109 | 66 | 138 | | | | |
| Chlorobenzene | 21.510 | 0.50 | 20.00 | 0 | 108 | 81 | 122 | | | | |
| Chloroethane | 22.550 | 1.0 | 20.00 | 0 | 113 | 58 | 133 | | | | |
| Chloroform | 21.910 | 1.0 | 20.00 | 1.090 | 104 | 69 | 128 | | | | |
| Chloromethane | 19.930 | 1.0 | 20.00 | 0 | 99.7 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 21.820 | 1.0 | 20.00 | 0 | 109 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.360 | 0.50 | 20.00 | 0 | 112 | 69 | 131 | | | | |
| Dibromochloromethane | 21.140 | 0.50 | 20.00 | 0 | 106 | 66 | 133 | | | | |
| Dibromomethane | 21.150 | 1.0 | 20.00 | 0 | 106 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 23.500 | 1.0 | 20.00 | 0 | 118 | 53 | 153 | | | | |
| Ethylbenzene | 21.630 | 1.0 | 20.00 | 0 | 108 | 73 | 127 | | | | |
| Freon-113 | 19.830 | 1.0 | 20.00 | 0 | 99.2 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.330 | 0.50 | 20.00 | 0 | 96.7 | 67 | 131 | | | | |
| Isopropylbenzene | 23.110 | 1.0 | 20.00 | 0 | 116 | 75 | 127 | | | | |
| m,p-Xylene | 46.140 | 1.0 | 40.00 | 0 | 115 | 76 | 128 | | | | |
| Methylene chloride | 21.380 | 1.0 | 20.00 | 0 | 107 | 63 | 137 | | | | |
| MTBE | 22.330 | 1.0 | 20.00 | 0 | 112 | 65 | 123 | | | | |
| n-Butylbenzene | 22.780 | 1.0 | 20.00 | 0 | 114 | 69 | 137 | | | | |
| n-Propylbenzene | 20.290 | 1.0 | 20.00 | 0 | 101 | 72 | 129 | | | | |
| Naphthalene | 21.310 | 1.0 | 20.00 | 0 | 107 | 54 | 138 | | | | |
| o-Xylene | 19.750 | 1.0 | 20.00 | 0 | 98.8 | 80 | 121 | | | | |
| sec-Butylbenzene | 19.950 | 1.0 | 20.00 | 0 | 99.8 | 72 | 127 | | | | |
| Styrene | 20.030 | 1.0 | 20.00 | 0 | 100 | 65 | 134 | | | | |
| tert-Butylbenzene | 19.660 | 1.0 | 20.00 | 0 | 98.3 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031326**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 21.980 | 1.0 | 20.00 | 0 | 110 | 66 | 128 | | | | |
| Toluene | 22.170 | 0.50 | 20.00 | 0 | 111 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 20.720 | 1.0 | 20.00 | 0 | 104 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 23.420 | 1.0 | 20.00 | 0 | 117 | 59 | 135 | | | | |
| Trichloroethene | 22.370 | 1.0 | 20.00 | 0 | 112 | 70 | 127 | | | | |
| Trichlorofluoromethane | 21.700 | 1.0 | 20.00 | 0 | 108 | 57 | 129 | | | | |
| Vinyl chloride | 21.980 | 0.50 | 20.00 | 0 | 110 | 50 | 134 | | | | |
| Xylenes, Total | 65.890 | 2.0 | 60.00 | 0 | 110 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.190 | | 25.00 | | 109 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 28.160 | | 25.00 | | 113 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.890 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.370 | | 25.00 | | 109 | 81 | 120 | | | | |

Sample ID: **N043262-002EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.700 | 0.50 | 20.00 | 0 | 104 | 81 | 129 | 19.98 | 3.54 | 20 | |
| 1,1,1-Trichloroethane | 22.440 | 1.0 | 20.00 | 0 | 112 | 67 | 132 | 22.76 | 1.42 | 20 | |
| 1,1,2,2-Tetrachloroethane | 22.560 | 0.50 | 20.00 | 0 | 113 | 63 | 128 | 21.22 | 6.12 | 20 | |
| 1,1,2-Trichloroethane | 22.550 | 1.0 | 20.00 | 0 | 113 | 75 | 125 | 21.46 | 4.95 | 20 | |
| 1,1-Dichloroethane | 22.190 | 1.0 | 20.00 | 0 | 111 | 69 | 133 | 21.11 | 4.99 | 20 | |
| 1,1-Dichloroethene | 22.310 | 1.0 | 20.00 | 0 | 112 | 68 | 130 | 21.03 | 5.91 | 20 | |
| 1,1-Dichloropropene | 23.210 | 1.0 | 20.00 | 0 | 116 | 73 | 132 | 22.95 | 1.13 | 20 | |
| 1,2,3-Trichlorobenzene | 24.190 | 1.0 | 20.00 | 0 | 121 | 67 | 137 | 21.05 | 13.9 | 20 | |
| 1,2,3-Trichloropropane | 23.170 | 1.0 | 20.00 | 0 | 116 | 73 | 124 | 21.81 | 6.05 | 20 | |
| 1,2,4-Trichlorobenzene | 23.210 | 1.0 | 20.00 | 0 | 116 | 66 | 134 | 21.28 | 8.68 | 20 | |
| 1,2,4-Trimethylbenzene | 20.700 | 1.0 | 20.00 | 0 | 104 | 74 | 132 | 20.20 | 2.44 | 20 | |
| 1,2-Dibromo-3-chloropropane | 23.290 | 2.0 | 20.00 | 0 | 116 | 50 | 132 | 21.16 | 9.58 | 20 | |
| 1,2-Dibromoethane | 23.670 | 1.0 | 20.00 | 0 | 118 | 80 | 121 | 22.41 | 5.47 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 22.330 | 1.0 | 20.00 | 0 | 112 | 71 | 122 | 21.15 | 5.43 | 20 | |
| 1,2-Dichloroethane | 21.480 | 0.50 | 20.00 | 0 | 107 | 69 | 132 | 20.53 | 4.52 | 20 | |
| 1,2-Dichloropropane | 20.800 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | 20.09 | 3.47 | 20 | |
| 1,3,5-Trimethylbenzene | 20.960 | 1.0 | 20.00 | 0 | 105 | 74 | 131 | 20.26 | 3.40 | 20 | |
| 1,3-Dichlorobenzene | 22.560 | 1.0 | 20.00 | 0 | 113 | 75 | 124 | 21.14 | 6.50 | 20 | |
| 1,3-Dichloropropane | 22.260 | 1.0 | 20.00 | 0 | 111 | 73 | 126 | 21.68 | 2.64 | 20 | |
| 1,4-Dichlorobenzene | 21.890 | 0.50 | 20.00 | 0 | 109 | 74 | 123 | 21.30 | 2.73 | 20 | |
| 2,2-Dichloropropane | 21.260 | 1.0 | 20.00 | 0 | 106 | 69 | 137 | 20.71 | 2.62 | 20 | |
| 2-Butanone | 208.660 | 10 | 200.0 | 0 | 104 | 49 | 136 | 191.2 | 8.73 | 20 | |
| 2-Chlorotoluene | 22.970 | 1.0 | 20.00 | 0 | 115 | 73 | 126 | 21.78 | 5.32 | 20 | |
| 4-Chlorotoluene | 23.130 | 1.0 | 20.00 | 0 | 116 | 74 | 128 | 22.32 | 3.56 | 20 | |
| 4-Isopropyltoluene | 20.720 | 1.0 | 20.00 | 0 | 104 | 73 | 130 | 19.93 | 3.89 | 20 | |
| 4-Methyl-2-pentanone | 238.820 | 10 | 200.0 | 0 | 119 | 58 | 134 | 214.3 | 10.8 | 20 | |
| Acetone | 159.420 | 10 | 200.0 | 0 | 79.7 | 40 | 135 | 149.3 | 6.58 | 20 | |
| Acrolein | 239.240 | 20 | 200.0 | 0 | 120 | 75 | 125 | 227.3 | 5.14 | 20 | |
| Acrylonitrile | 245.530 | 20 | 200.0 | 0 | 123 | 75 | 125 | 233.2 | 5.16 | 20 | |
| Benzene | 22.530 | 0.50 | 20.00 | 0 | 113 | 81 | 122 | 22.21 | 1.43 | 20 | |
| Bromobenzene | 22.310 | 1.0 | 20.00 | 0 | 112 | 76 | 124 | 21.09 | 5.62 | 20 | |
| Bromochloromethane | 22.120 | 1.0 | 20.00 | 0 | 111 | 65 | 129 | 22.16 | 0.181 | 20 | |
| Bromodichloromethane | 22.370 | 0.50 | 20.00 | 0 | 112 | 76 | 121 | 21.86 | 2.31 | 20 | |
| Bromoform | 21.470 | 1.0 | 20.00 | 0 | 107 | 69 | 128 | 20.92 | 2.59 | 20 | |
| Bromomethane | 22.090 | 1.0 | 20.00 | 0 | 110 | 53 | 141 | 22.08 | 0.0453 | 20 | |
| Carbon disulfide | 21.230 | 1.0 | 20.00 | 0 | 106 | 75 | 125 | 22.01 | 3.61 | 20 | |
| Carbon tetrachloride | 22.620 | 0.50 | 20.00 | 0 | 113 | 66 | 138 | 21.71 | 4.11 | 20 | |
| Chlorobenzene | 21.360 | 0.50 | 20.00 | 0 | 107 | 81 | 122 | 21.51 | 0.700 | 20 | |
| Chloroethane | 22.620 | 1.0 | 20.00 | 0 | 113 | 58 | 133 | 22.55 | 0.310 | 20 | |
| Chloroform | 22.260 | 1.0 | 20.00 | 1.090 | 106 | 69 | 128 | 21.91 | 1.58 | 20 | |
| Chloromethane | 20.250 | 1.0 | 20.00 | 0 | 101 | 56 | 131 | 19.93 | 1.59 | 20 | |
| cis-1,2-Dichloroethene | 22.320 | 1.0 | 20.00 | 0 | 112 | 72 | 126 | 21.82 | 2.27 | 20 | |
| cis-1,3-Dichloropropene | 23.160 | 0.50 | 20.00 | 0 | 116 | 69 | 131 | 22.36 | 3.51 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-002EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031327**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 21.120 | 0.50 | 20.00 | 0 | 106 | 66 | 133 | 21.14 | 0.0947 | 20 | |
| Dibromomethane | 23.140 | 1.0 | 20.00 | 0 | 116 | 76 | 125 | 21.15 | 8.99 | 20 | |
| Dichlorodifluoromethane | 23.190 | 1.0 | 20.00 | 0 | 116 | 53 | 153 | 23.50 | 1.33 | 20 | |
| Ethylbenzene | 21.460 | 1.0 | 20.00 | 0 | 107 | 73 | 127 | 21.63 | 0.789 | 20 | |
| Freon-113 | 20.610 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | 19.83 | 3.86 | 20 | |
| Hexachlorobutadiene | 20.350 | 0.50 | 20.00 | 0 | 102 | 67 | 131 | 19.33 | 5.14 | 20 | |
| Isopropylbenzene | 24.130 | 1.0 | 20.00 | 0 | 121 | 75 | 127 | 23.11 | 4.32 | 20 | |
| m,p-Xylene | 44.660 | 1.0 | 40.00 | 0 | 112 | 76 | 128 | 46.14 | 3.26 | 20 | |
| Methylene chloride | 21.680 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | 21.38 | 1.39 | 20 | |
| MTBE | 23.330 | 1.0 | 20.00 | 0 | 117 | 65 | 123 | 22.33 | 4.38 | 20 | |
| n-Butylbenzene | 24.110 | 1.0 | 20.00 | 0 | 121 | 69 | 137 | 22.78 | 5.67 | 20 | |
| n-Propylbenzene | 20.910 | 1.0 | 20.00 | 0 | 105 | 72 | 129 | 20.29 | 3.01 | 20 | |
| Naphthalene | 22.100 | 1.0 | 20.00 | 0 | 110 | 54 | 138 | 21.31 | 3.64 | 20 | |
| o-Xylene | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 80 | 121 | 19.75 | 0.711 | 20 | |
| sec-Butylbenzene | 21.260 | 1.0 | 20.00 | 0 | 106 | 72 | 127 | 19.95 | 6.36 | 20 | |
| Styrene | 19.150 | 1.0 | 20.00 | 0 | 95.8 | 65 | 134 | 20.03 | 4.49 | 20 | |
| tert-Butylbenzene | 20.690 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | 19.66 | 5.11 | 20 | |
| Tetrachloroethene | 22.430 | 1.0 | 20.00 | 0 | 112 | 66 | 128 | 21.98 | 2.03 | 20 | |
| Toluene | 22.650 | 0.50 | 20.00 | 0 | 113 | 77 | 122 | 22.17 | 2.14 | 20 | |
| trans-1,2-Dichloroethene | 21.580 | 1.0 | 20.00 | 0 | 108 | 63 | 137 | 20.72 | 4.07 | 20 | |
| trans-1,3-Dichloropropene | 24.050 | 1.0 | 20.00 | 0 | 120 | 59 | 135 | 23.42 | 2.65 | 20 | |
| Trichloroethene | 22.120 | 1.0 | 20.00 | 0 | 111 | 70 | 127 | 22.37 | 1.12 | 20 | |
| Trichlorofluoromethane | 21.580 | 1.0 | 20.00 | 0 | 108 | 57 | 129 | 21.70 | 0.555 | 20 | |
| Vinyl chloride | 22.360 | 0.50 | 20.00 | 0 | 112 | 50 | 134 | 21.98 | 1.71 | 20 | |
| Xylenes, Total | 64.270 | 2.0 | 60.00 | 0 | 107 | 75 | 125 | 65.89 | 2.49 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 27.700 | | 25.00 | | 111 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 27.730 | | 25.00 | | 111 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 26.280 | | 25.00 | | 105 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 28.030 | | 25.00 | | 112 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 19.550 | 0.50 | 20.00 | 0 | 97.8 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 22.850 | 1.0 | 20.00 | 0 | 114 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 21.290 | 0.50 | 20.00 | 0 | 106 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 22.260 | 1.0 | 20.00 | 0 | 111 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 22.100 | 1.0 | 20.00 | 0 | 110 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 23.200 | 1.0 | 20.00 | 0 | 116 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 23.780 | 1.0 | 20.00 | 0 | 119 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 22.840 | 1.0 | 20.00 | 0 | 114 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 21.630 | 1.0 | 20.00 | 0 | 108 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 22.460 | 1.0 | 20.00 | 0 | 112 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.530 | 1.0 | 20.00 | 0 | 103 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 21.520 | 2.0 | 20.00 | 0 | 108 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 23.140 | 1.0 | 20.00 | 0 | 116 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 22.030 | 1.0 | 20.00 | 0 | 110 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 20.180 | 0.50 | 20.00 | 0 | 101 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.610 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.410 | 1.0 | 20.00 | 0 | 102 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 22.160 | 1.0 | 20.00 | 0 | 111 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.880 | 1.0 | 20.00 | 0 | 109 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 21.780 | 0.50 | 20.00 | 0 | 109 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 22.310 | 1.0 | 20.00 | 0 | 112 | 69 | 137 | | | | |
| 2-Butanone | 199.560 | 10 | 200.0 | 0 | 99.8 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.640 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.450 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 20.970 | 1.0 | 20.00 | 0 | 105 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 216.590 | 10 | 200.0 | 0 | 108 | 58 | 134 | | | | |
| Acetone | 153.920 | 10 | 200.0 | 0 | 77.0 | 40 | 135 | | | | |
| Acrolein | 239.500 | 20 | 200.0 | 0 | 120 | 75 | 125 | | | | |
| Acrylonitrile | 238.460 | 20 | 200.0 | 0 | 119 | 75 | 125 | | | | |
| Benzene | 22.040 | 0.50 | 20.00 | 0 | 110 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 21.900 | 1.0 | 20.00 | 0 | 110 | 76 | 124 | | | | |
| Bromochloromethane | 22.330 | 1.0 | 20.00 | 0 | 112 | 65 | 129 | | | | |
| Bromodichloromethane | 21.670 | 0.50 | 20.00 | 0 | 108 | 76 | 121 | | | | |
| Bromoform | 20.290 | 1.0 | 20.00 | 0 | 101 | 69 | 128 | | | | |
| Bromomethane | 22.190 | 1.0 | 20.00 | 0 | 111 | 53 | 141 | | | | |
| Carbon disulfide | 22.780 | 1.0 | 20.00 | 0 | 114 | 75 | 125 | | | | |
| Carbon tetrachloride | 23.280 | 0.50 | 20.00 | 0 | 116 | 66 | 138 | | | | |
| Chlorobenzene | 21.120 | 0.50 | 20.00 | 0 | 106 | 81 | 122 | | | | |
| Chloroethane | 22.060 | 1.0 | 20.00 | 0 | 110 | 58 | 133 | | | | |
| Chloroform | 22.580 | 1.0 | 20.00 | 1.390 | 106 | 69 | 128 | | | | |
| Chloromethane | 20.810 | 1.0 | 20.00 | 0 | 104 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 22.030 | 1.0 | 20.00 | 0 | 110 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 22.500 | 0.50 | 20.00 | 0 | 112 | 69 | 131 | | | | |
| Dibromochloromethane | 21.420 | 0.50 | 20.00 | 0 | 107 | 66 | 133 | | | | |
| Dibromomethane | 21.060 | 1.0 | 20.00 | 0 | 105 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 25.000 | 1.0 | 20.00 | 0 | 125 | 53 | 153 | | | | |
| Ethylbenzene | 21.420 | 1.0 | 20.00 | 0 | 107 | 73 | 127 | | | | |
| Freon-113 | 22.060 | 1.0 | 20.00 | 0 | 110 | 75 | 125 | | | | |
| Hexachlorobutadiene | 20.150 | 0.50 | 20.00 | 0 | 101 | 67 | 131 | | | | |
| Isopropylbenzene | 23.670 | 1.0 | 20.00 | 0 | 118 | 75 | 127 | | | | |
| m,p-Xylene | 45.360 | 1.0 | 40.00 | 0 | 113 | 76 | 128 | | | | |
| Methylene chloride | 21.380 | 1.0 | 20.00 | 0.6900 | 103 | 63 | 137 | | | | |
| MTBE | 23.390 | 1.0 | 20.00 | 0 | 117 | 65 | 123 | | | | |
| n-Butylbenzene | 23.970 | 1.0 | 20.00 | 0 | 120 | 69 | 137 | | | | |
| n-Propylbenzene | 20.850 | 1.0 | 20.00 | 0 | 104 | 72 | 129 | | | | |
| Naphthalene | 19.540 | 1.0 | 20.00 | 0 | 97.7 | 54 | 138 | | | | |
| o-Xylene | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 80 | 121 | | | | |
| sec-Butylbenzene | 21.010 | 1.0 | 20.00 | 0 | 105 | 72 | 127 | | | | |
| Styrene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031328**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 22.700 | 1.0 | 20.00 | 0 | 114 | 66 | 128 | | | | |
| Toluene | 22.270 | 0.50 | 20.00 | 0 | 111 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 22.320 | 1.0 | 20.00 | 0 | 112 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 23.830 | 1.0 | 20.00 | 0 | 119 | 59 | 135 | | | | |
| Trichloroethene | 21.620 | 1.0 | 20.00 | 0 | 108 | 70 | 127 | | | | |
| Trichlorofluoromethane | 23.390 | 1.0 | 20.00 | 0 | 117 | 57 | 129 | | | | |
| Vinyl chloride | 23.510 | 0.50 | 20.00 | 0 | 118 | 50 | 134 | | | | |
| Xylenes, Total | 64.970 | 2.0 | 60.00 | 0 | 108 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 27.410 | | 25.00 | | 110 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 27.530 | | 25.00 | | 110 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 27.070 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.920 | | 25.00 | | 108 | 81 | 120 | | | | |

Sample ID: **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.460 | 0.50 | 20.00 | 0 | 92.3 | 81 | 129 | 19.55 | 5.74 | 20 | |
| 1,1,1-Trichloroethane | 20.790 | 1.0 | 20.00 | 0 | 104 | 67 | 132 | 22.85 | 9.44 | 20 | |
| 1,1,2,2-Tetrachloroethane | 18.940 | 0.50 | 20.00 | 0 | 94.7 | 63 | 128 | 21.29 | 11.7 | 20 | |
| 1,1,2-Trichloroethane | 18.510 | 1.0 | 20.00 | 0 | 92.6 | 75 | 125 | 22.26 | 18.4 | 20 | |
| 1,1-Dichloroethane | 19.450 | 1.0 | 20.00 | 0 | 97.3 | 69 | 133 | 22.10 | 12.8 | 20 | |
| 1,1-Dichloroethene | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 68 | 130 | 23.20 | 15.8 | 20 | |
| 1,1-Dichloropropene | 22.030 | 1.0 | 20.00 | 0 | 110 | 73 | 132 | 23.78 | 7.64 | 20 | |
| 1,2,3-Trichlorobenzene | 20.370 | 1.0 | 20.00 | 0 | 102 | 67 | 137 | 22.84 | 11.4 | 20 | |
| 1,2,3-Trichloropropane | 19.920 | 1.0 | 20.00 | 0 | 99.6 | 73 | 124 | 21.63 | 8.23 | 20 | |
| 1,2,4-Trichlorobenzene | 20.600 | 1.0 | 20.00 | 0 | 103 | 66 | 134 | 22.46 | 8.64 | 20 | |
| 1,2,4-Trimethylbenzene | 19.730 | 1.0 | 20.00 | 0 | 98.6 | 74 | 132 | 20.53 | 3.97 | 20 | |
| 1,2-Dibromo-3-chloropropane | 20.530 | 2.0 | 20.00 | 0 | 103 | 50 | 132 | 21.52 | 4.71 | 20 | |
| 1,2-Dibromoethane | 19.620 | 1.0 | 20.00 | 0 | 98.1 | 80 | 121 | 23.14 | 16.5 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 20.480 | 1.0 | 20.00 | 0 | 102 | 71 | 122 | 22.03 | 7.29 | 20 | |
| 1,2-Dichloroethane | 18.380 | 0.50 | 20.00 | 0 | 91.9 | 69 | 132 | 20.18 | 9.34 | 20 | |
| 1,2-Dichloropropane | 18.410 | 1.0 | 20.00 | 0 | 92.0 | 75 | 125 | 20.61 | 11.3 | 20 | |
| 1,3,5-Trimethylbenzene | 19.570 | 1.0 | 20.00 | 0 | 97.9 | 74 | 131 | 20.41 | 4.20 | 20 | |
| 1,3-Dichlorobenzene | 20.690 | 1.0 | 20.00 | 0 | 103 | 75 | 124 | 22.16 | 6.86 | 20 | |
| 1,3-Dichloropropane | 20.150 | 1.0 | 20.00 | 0 | 101 | 73 | 126 | 21.88 | 8.23 | 20 | |
| 1,4-Dichlorobenzene | 20.740 | 0.50 | 20.00 | 0 | 104 | 74 | 123 | 21.78 | 4.89 | 20 | |
| 2,2-Dichloropropane | 19.990 | 1.0 | 20.00 | 0 | 100 | 69 | 137 | 22.31 | 11.0 | 20 | |
| 2-Butanone | 163.900 | 10 | 200.0 | 0 | 82.0 | 49 | 136 | 199.6 | 19.6 | 20 | |
| 2-Chlorotoluene | 21.420 | 1.0 | 20.00 | 0 | 107 | 73 | 126 | 21.64 | 1.02 | 20 | |
| 4-Chlorotoluene | 21.600 | 1.0 | 20.00 | 0 | 108 | 74 | 128 | 22.45 | 3.86 | 20 | |
| 4-Isopropyltoluene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 73 | 130 | 20.97 | 5.94 | 20 | |
| 4-Methyl-2-pentanone | 184.530 | 10 | 200.0 | 0 | 92.3 | 58 | 134 | 216.6 | 16.0 | 20 | |
| Acetone | 126.780 | 10 | 200.0 | 0 | 63.4 | 40 | 135 | 153.9 | 19.3 | 20 | |
| Acrolein | 203.180 | 20 | 200.0 | 0 | 102 | 75 | 125 | 239.5 | 16.4 | 20 | |
| Acrylonitrile | 198.820 | 20 | 200.0 | 0 | 99.4 | 75 | 125 | 238.5 | 18.1 | 20 | |
| Benzene | 20.200 | 0.50 | 20.00 | 0 | 101 | 81 | 122 | 22.04 | 8.71 | 20 | |
| Bromobenzene | 20.520 | 1.0 | 20.00 | 0 | 103 | 76 | 124 | 21.90 | 6.51 | 20 | |
| Bromochloromethane | 19.460 | 1.0 | 20.00 | 0 | 97.3 | 65 | 129 | 22.33 | 13.7 | 20 | |
| Bromodichloromethane | 19.510 | 0.50 | 20.00 | 0 | 97.6 | 76 | 121 | 21.67 | 10.5 | 20 | |
| Bromoform | 18.660 | 1.0 | 20.00 | 0 | 93.3 | 69 | 128 | 20.29 | 8.37 | 20 | |
| Bromomethane | 19.610 | 1.0 | 20.00 | 0 | 98.0 | 53 | 141 | 22.19 | 12.3 | 20 | |
| Carbon disulfide | 20.150 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | 22.78 | 12.3 | 20 | |
| Carbon tetrachloride | 20.630 | 0.50 | 20.00 | 0 | 103 | 66 | 138 | 23.28 | 12.1 | 20 | |
| Chlorobenzene | 19.730 | 0.50 | 20.00 | 0 | 98.6 | 81 | 122 | 21.12 | 6.81 | 20 | |
| Chloroethane | 20.070 | 1.0 | 20.00 | 0 | 100 | 58 | 133 | 22.06 | 9.45 | 20 | |
| Chloroform | 19.980 | 1.0 | 20.00 | 1.390 | 93.0 | 69 | 128 | 22.58 | 12.2 | 20 | |
| Chloromethane | 18.200 | 1.0 | 20.00 | 0 | 91.0 | 56 | 131 | 20.81 | 13.4 | 20 | |
| cis-1,2-Dichloroethene | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 72 | 126 | 22.03 | 14.8 | 20 | |
| cis-1,3-Dichloropropene | 20.050 | 0.50 | 20.00 | 0 | 100 | 69 | 131 | 22.50 | 11.5 | 20 | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043262-003EMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149242**
Client ID: **ZZZZZZ** Batch ID: **P20VW126** TestNo: **EPA 8260B** Analysis Date: **12/8/2020** SeqNo: **4031329**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 19.200 | 0.50 | 20.00 | 0 | 96.0 | 66 | 133 | 21.42 | 10.9 | 20 | |
| Dibromomethane | 19.000 | 1.0 | 20.00 | 0 | 95.0 | 76 | 125 | 21.06 | 10.3 | 20 | |
| Dichlorodifluoromethane | 22.150 | 1.0 | 20.00 | 0 | 111 | 53 | 153 | 25.00 | 12.1 | 20 | |
| Ethylbenzene | 20.760 | 1.0 | 20.00 | 0 | 104 | 73 | 127 | 21.42 | 3.13 | 20 | |
| Freon-113 | 20.020 | 1.0 | 20.00 | 0 | 100 | 75 | 125 | 22.06 | 9.70 | 20 | |
| Hexachlorobutadiene | 18.050 | 0.50 | 20.00 | 0 | 90.3 | 67 | 131 | 20.15 | 11.0 | 20 | |
| Isopropylbenzene | 23.170 | 1.0 | 20.00 | 0 | 116 | 75 | 127 | 23.67 | 2.13 | 20 | |
| m,p-Xylene | 42.120 | 1.0 | 40.00 | 0 | 105 | 76 | 128 | 45.36 | 7.41 | 20 | |
| Methylene chloride | 18.450 | 1.0 | 20.00 | 0.6900 | 88.8 | 63 | 137 | 21.38 | 14.7 | 20 | |
| MTBE | 19.110 | 1.0 | 20.00 | 0 | 95.6 | 65 | 123 | 23.39 | 20.1 | 20 | R |
| n-Butylbenzene | 23.410 | 1.0 | 20.00 | 0 | 117 | 69 | 137 | 23.97 | 2.36 | 20 | |
| n-Propylbenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 72 | 129 | 20.85 | 2.62 | 20 | |
| Naphthalene | 18.650 | 1.0 | 20.00 | 0 | 93.3 | 54 | 138 | 19.54 | 4.66 | 20 | |
| o-Xylene | 18.100 | 1.0 | 20.00 | 0 | 90.5 | 80 | 121 | 19.61 | 8.01 | 20 | |
| sec-Butylbenzene | 20.240 | 1.0 | 20.00 | 0 | 101 | 72 | 127 | 21.01 | 3.73 | 20 | |
| Styrene | 18.230 | 1.0 | 20.00 | 0 | 91.2 | 65 | 134 | 19.89 | 8.71 | 20 | |
| tert-Butylbenzene | 20.040 | 1.0 | 20.00 | 0 | 100 | 70 | 129 | 20.31 | 1.34 | 20 | |
| Tetrachloroethene | 21.060 | 1.0 | 20.00 | 0 | 105 | 66 | 128 | 22.70 | 7.50 | 20 | |
| Toluene | 20.320 | 0.50 | 20.00 | 0 | 102 | 77 | 122 | 22.27 | 9.16 | 20 | |
| trans-1,2-Dichloroethene | 19.410 | 1.0 | 20.00 | 0 | 97.0 | 63 | 137 | 22.32 | 13.9 | 20 | |
| trans-1,3-Dichloropropene | 20.890 | 1.0 | 20.00 | 0 | 104 | 59 | 135 | 23.83 | 13.1 | 20 | |
| Trichloroethene | 19.510 | 1.0 | 20.00 | 0 | 97.6 | 70 | 127 | 21.62 | 10.3 | 20 | |
| Trichlorofluoromethane | 21.160 | 1.0 | 20.00 | 0 | 106 | 57 | 129 | 23.39 | 10.0 | 20 | |
| Vinyl chloride | 21.570 | 0.50 | 20.00 | 0 | 108 | 50 | 134 | 23.51 | 8.61 | 20 | |
| Xylenes, Total | 60.220 | 2.0 | 60.00 | 0 | 100 | 75 | 125 | 64.97 | 7.59 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 23.940 | | 25.00 | | 95.8 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 25.720 | | 25.00 | | 103 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 23.020 | | 25.00 | | 92.1 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 25.230 | | 25.00 | | 101 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201214LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **LCSW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046018**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 20.680 | 0.50 | 20.00 | 0 | 103 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 20.150 | 1.0 | 20.00 | 0 | 101 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 19.780 | 0.50 | 20.00 | 0 | 98.9 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.670 | 1.0 | 20.00 | 0 | 108 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 19.810 | 1.0 | 20.00 | 0 | 99.0 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 18.250 | 1.0 | 20.00 | 0 | 91.2 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 22.240 | 1.0 | 20.00 | 0 | 111 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 21.900 | 1.0 | 20.00 | 0 | 110 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 20.600 | 1.0 | 20.00 | 0 | 103 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 20.790 | 1.0 | 20.00 | 0 | 104 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 23.480 | 2.0 | 20.00 | 0 | 117 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.840 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.790 | 1.0 | 20.00 | 0 | 104 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 22.170 | 0.50 | 20.00 | 0 | 111 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 20.740 | 1.0 | 20.00 | 0 | 104 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 22.600 | 1.0 | 20.00 | 0 | 113 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 20.910 | 1.0 | 20.00 | 0 | 105 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 21.010 | 1.0 | 20.00 | 0 | 105 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 20.110 | 0.50 | 20.00 | 0 | 101 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 20.400 | 1.0 | 20.00 | 0 | 102 | 69 | 137 | | | | |
| 2-Butanone | 209.530 | 10 | 200.0 | 0 | 105 | 49 | 136 | | | | |
| 2-Chlorotoluene | 21.570 | 1.0 | 20.00 | 0 | 108 | 73 | 126 | | | | |
| 4-Chlorotoluene | 22.330 | 1.0 | 20.00 | 0 | 112 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 22.380 | 1.0 | 20.00 | 0 | 112 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 236.720 | 10 | 200.0 | 0 | 118 | 58 | 134 | | | | |
| Acetone | 202.230 | 10 | 200.0 | 0 | 101 | 40 | 135 | | | | |
| Acrolein | 225.730 | 20 | 200.0 | 0 | 113 | 75 | 125 | | | | |
| Acrylonitrile | 219.920 | 20 | 200.0 | 0 | 110 | 75 | 125 | | | | |
| Benzene | 21.650 | 0.50 | 20.00 | 0 | 108 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201214LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **LCSW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046018**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 20.240 | 1.0 | 20.00 | 0 | 101 | 76 | 124 | | | | |
| Bromochloromethane | 20.840 | 1.0 | 20.00 | 0 | 104 | 65 | 129 | | | | |
| Bromodichloromethane | 20.420 | 0.50 | 20.00 | 0 | 102 | 76 | 121 | | | | |
| Bromoform | 20.910 | 1.0 | 20.00 | 0 | 105 | 69 | 128 | | | | |
| Bromomethane | 23.570 | 1.0 | 20.00 | 0 | 118 | 53 | 141 | | | | |
| Carbon disulfide | 20.910 | 1.0 | 20.00 | 0 | 105 | 75 | 125 | | | | |
| Carbon tetrachloride | 20.830 | 0.50 | 20.00 | 0 | 104 | 66 | 138 | | | | |
| Chlorobenzene | 20.920 | 0.50 | 20.00 | 0 | 105 | 81 | 122 | | | | |
| Chloroethane | 21.770 | 1.0 | 20.00 | 0 | 109 | 58 | 133 | | | | |
| Chloroform | 20.290 | 1.0 | 20.00 | 0 | 101 | 69 | 128 | | | | |
| Chloromethane | 22.720 | 1.0 | 20.00 | 0 | 114 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 21.200 | 1.0 | 20.00 | 0 | 106 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 21.050 | 0.50 | 20.00 | 0 | 105 | 69 | 131 | | | | |
| Dibromochloromethane | 21.010 | 0.50 | 20.00 | 0 | 105 | 66 | 133 | | | | |
| Dibromomethane | 22.310 | 1.0 | 20.00 | 0 | 112 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 20.910 | 1.0 | 20.00 | 0 | 105 | 53 | 153 | | | | |
| Ethylbenzene | 21.760 | 1.0 | 20.00 | 0 | 109 | 73 | 127 | | | | |
| Freon-113 | 20.250 | 1.0 | 20.00 | 0 | 101 | 75 | 125 | | | | |
| Hexachlorobutadiene | 19.520 | 0.50 | 20.00 | 0 | 97.6 | 67 | 131 | | | | |
| Isopropylbenzene | 22.090 | 1.0 | 20.00 | 0 | 110 | 75 | 127 | | | | |
| m,p-Xylene | 45.610 | 1.0 | 40.00 | 0 | 114 | 76 | 128 | | | | |
| Methylene chloride | 20.380 | 1.0 | 20.00 | 0 | 102 | 63 | 137 | | | | |
| MTBE | 21.470 | 1.0 | 20.00 | 0 | 107 | 65 | 123 | | | | |
| n-Butylbenzene | 21.330 | 1.0 | 20.00 | 0 | 107 | 69 | 137 | | | | |
| n-Propylbenzene | 21.880 | 1.0 | 20.00 | 0 | 109 | 72 | 129 | | | | |
| Naphthalene | 23.160 | 1.0 | 20.00 | 0 | 116 | 54 | 138 | | | | |
| o-Xylene | 22.130 | 1.0 | 20.00 | 0 | 111 | 80 | 121 | | | | |
| sec-Butylbenzene | 22.990 | 1.0 | 20.00 | 0 | 115 | 72 | 127 | | | | |
| Styrene | 22.470 | 1.0 | 20.00 | 0 | 112 | 65 | 134 | | | | |
| tert-Butylbenzene | 22.600 | 1.0 | 20.00 | 0 | 113 | 70 | 129 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201214LCS** SampType: **LCS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **LCSW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046018**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 20.310 | 1.0 | 20.00 | 0 | 102 | 66 | 128 | | | | |
| Toluene | 21.050 | 0.50 | 20.00 | 0 | 105 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 21.050 | 1.0 | 20.00 | 0 | 105 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 22.050 | 1.0 | 20.00 | 0 | 110 | 59 | 135 | | | | |
| Trichloroethene | 20.870 | 1.0 | 20.00 | 0 | 104 | 70 | 127 | | | | |
| Trichlorofluoromethane | 20.120 | 1.0 | 20.00 | 0 | 101 | 57 | 129 | | | | |
| Vinyl chloride | 21.870 | 0.50 | 20.00 | 0 | 109 | 50 | 134 | | | | |
| Xylenes, Total | 67.740 | 2.0 | 60.00 | 0 | 113 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 25.740 | | 25.00 | | 103 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 28.410 | | 25.00 | | 114 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.780 | | 25.00 | | 107 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 27.160 | | 25.00 | | 109 | 81 | 120 | | | | |

Sample ID: **P201214MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **PBW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046019**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,1-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | ND | 0.50 | | | | | | | | | |
| 1,1,2-Trichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethane | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloroethene | ND | 1.0 | | | | | | | | | |
| 1,1-Dichloropropene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,3-Trichloropropane | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2,4-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dibromo-3-chloropropane | ND | 2.0 | | | | | | | | | |
| 1,2-Dibromoethane | ND | 1.0 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201214MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **PBW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046019**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,2-Dichloroethane | ND | 0.50 | | | | | | | | | |
| 1,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,3,5-Trimethylbenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichlorobenzene | ND | 1.0 | | | | | | | | | |
| 1,3-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 1,4-Dichlorobenzene | ND | 0.50 | | | | | | | | | |
| 2,2-Dichloropropane | ND | 1.0 | | | | | | | | | |
| 2-Butanone | ND | 10 | | | | | | | | | |
| 2-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Chlorotoluene | ND | 1.0 | | | | | | | | | |
| 4-Isopropyltoluene | ND | 1.0 | | | | | | | | | |
| 4-Methyl-2-pentanone | ND | 10 | | | | | | | | | |
| Acetone | ND | 10 | | | | | | | | | |
| Acrolein | ND | 20 | | | | | | | | | |
| Acrylonitrile | ND | 20 | | | | | | | | | |
| Benzene | ND | 0.50 | | | | | | | | | |
| Bromobenzene | ND | 1.0 | | | | | | | | | |
| Bromochloromethane | ND | 1.0 | | | | | | | | | |
| Bromodichloromethane | ND | 0.50 | | | | | | | | | |
| Bromoform | ND | 1.0 | | | | | | | | | |
| Bromomethane | ND | 1.0 | | | | | | | | | |
| Carbon disulfide | ND | 1.0 | | | | | | | | | |
| Carbon tetrachloride | ND | 0.50 | | | | | | | | | |
| Chlorobenzene | ND | 0.50 | | | | | | | | | |
| Chloroethane | ND | 1.0 | | | | | | | | | |
| Chloroform | ND | 1.0 | | | | | | | | | |
| Chloromethane | ND | 1.0 | | | | | | | | | |
| cis-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| cis-1,3-Dichloropropene | ND | 0.50 | | | | | | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **P201214MB3** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **PBW** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/14/2020** SeqNo: **4046019**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | ND | 0.50 | | | | | | | | | |
| Dibromomethane | ND | 1.0 | | | | | | | | | |
| Dichlorodifluoromethane | ND | 1.0 | | | | | | | | | |
| Ethylbenzene | ND | 1.0 | | | | | | | | | |
| Freon-113 | ND | 1.0 | | | | | | | | | |
| Hexachlorobutadiene | ND | 0.50 | | | | | | | | | |
| Isopropylbenzene | ND | 1.0 | | | | | | | | | |
| m,p-Xylene | ND | 1.0 | | | | | | | | | |
| Methylene chloride | ND | 1.0 | | | | | | | | | |
| MTBE | ND | 1.0 | | | | | | | | | |
| n-Butylbenzene | ND | 1.0 | | | | | | | | | |
| n-Propylbenzene | ND | 1.0 | | | | | | | | | |
| Naphthalene | ND | 1.0 | | | | | | | | | |
| o-Xylene | ND | 1.0 | | | | | | | | | |
| sec-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Styrene | ND | 1.0 | | | | | | | | | |
| tert-Butylbenzene | ND | 1.0 | | | | | | | | | |
| Tetrachloroethene | ND | 1.0 | | | | | | | | | |
| Toluene | ND | 0.50 | | | | | | | | | |
| trans-1,2-Dichloroethene | ND | 1.0 | | | | | | | | | |
| trans-1,3-Dichloropropene | ND | 1.0 | | | | | | | | | |
| Trichloroethene | ND | 1.0 | | | | | | | | | |
| Trichlorofluoromethane | ND | 1.0 | | | | | | | | | |
| Vinyl chloride | ND | 0.50 | | | | | | | | | |
| Xylenes, Total | ND | 2.0 | | | | | | | | | |
| Surr: 1,2-Dichloroethane-d4 | 28.170 | | 25.00 | | 113 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 25.090 | | 25.00 | | 100 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 26.910 | | 25.00 | | 108 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 26.550 | | 25.00 | | 106 | 81 | 120 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043351-001AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046030**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 18.900 | 0.50 | 20.00 | 0 | 94.5 | 81 | 129 | | | | |
| 1,1,1-Trichloroethane | 16.590 | 1.0 | 20.00 | 0 | 83.0 | 67 | 132 | | | | |
| 1,1,2,2-Tetrachloroethane | 20.910 | 0.50 | 20.00 | 0 | 105 | 63 | 128 | | | | |
| 1,1,2-Trichloroethane | 21.360 | 1.0 | 20.00 | 0 | 107 | 75 | 125 | | | | |
| 1,1-Dichloroethane | 17.060 | 1.0 | 20.00 | 0 | 85.3 | 69 | 133 | | | | |
| 1,1-Dichloroethene | 16.370 | 1.0 | 20.00 | 0 | 81.8 | 68 | 130 | | | | |
| 1,1-Dichloropropene | 20.400 | 1.0 | 20.00 | 0 | 102 | 73 | 132 | | | | |
| 1,2,3-Trichlorobenzene | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 67 | 137 | | | | |
| 1,2,3-Trichloropropane | 18.910 | 1.0 | 20.00 | 0 | 94.6 | 73 | 124 | | | | |
| 1,2,4-Trichlorobenzene | 18.600 | 1.0 | 20.00 | 0 | 93.0 | 66 | 134 | | | | |
| 1,2,4-Trimethylbenzene | 19.170 | 1.0 | 20.00 | 0 | 95.9 | 74 | 132 | | | | |
| 1,2-Dibromo-3-chloropropane | 23.110 | 2.0 | 20.00 | 0 | 116 | 50 | 132 | | | | |
| 1,2-Dibromoethane | 20.820 | 1.0 | 20.00 | 0 | 104 | 80 | 121 | | | | |
| 1,2-Dichlorobenzene | 20.460 | 1.0 | 20.00 | 0 | 102 | 71 | 122 | | | | |
| 1,2-Dichloroethane | 21.280 | 0.50 | 20.00 | 0 | 106 | 69 | 132 | | | | |
| 1,2-Dichloropropane | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 75 | 125 | | | | |
| 1,3,5-Trimethylbenzene | 20.700 | 1.0 | 20.00 | 0 | 104 | 74 | 131 | | | | |
| 1,3-Dichlorobenzene | 19.520 | 1.0 | 20.00 | 0 | 97.6 | 75 | 124 | | | | |
| 1,3-Dichloropropane | 20.170 | 1.0 | 20.00 | 0 | 101 | 73 | 126 | | | | |
| 1,4-Dichlorobenzene | 18.560 | 0.50 | 20.00 | 0 | 92.8 | 74 | 123 | | | | |
| 2,2-Dichloropropane | 15.480 | 1.0 | 20.00 | 0 | 77.4 | 69 | 137 | | | | |
| 2-Butanone | 184.590 | 10 | 200.0 | 0 | 92.3 | 49 | 136 | | | | |
| 2-Chlorotoluene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 73 | 126 | | | | |
| 4-Chlorotoluene | 20.770 | 1.0 | 20.00 | 0 | 104 | 74 | 128 | | | | |
| 4-Isopropyltoluene | 19.760 | 1.0 | 20.00 | 0 | 98.8 | 73 | 130 | | | | |
| 4-Methyl-2-pentanone | 233.990 | 10 | 200.0 | 0 | 117 | 58 | 134 | | | | |
| Acetone | 850.190 | 10 | 200.0 | 616.2 | 117 | 40 | 135 | | | | |
| Acrolein | 198.820 | 20 | 200.0 | 0 | 99.4 | 75 | 125 | | | | |
| Acrylonitrile | 195.270 | 20 | 200.0 | 0 | 97.6 | 75 | 125 | | | | |
| Benzene | 20.000 | 0.50 | 20.00 | 0 | 100 | 81 | 122 | | | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043351-001AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046030**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Bromobenzene | 18.720 | 1.0 | 20.00 | 0 | 93.6 | 76 | 124 | | | | |
| Bromochloromethane | 19.230 | 1.0 | 20.00 | 0 | 96.2 | 65 | 129 | | | | |
| Bromodichloromethane | 19.730 | 0.50 | 20.00 | 0 | 98.6 | 76 | 121 | | | | |
| Bromoform | 20.920 | 1.0 | 20.00 | 0 | 105 | 69 | 128 | | | | |
| Bromomethane | 21.300 | 1.0 | 20.00 | 0 | 106 | 53 | 141 | | | | |
| Carbon disulfide | 17.020 | 1.0 | 20.00 | 0 | 85.1 | 75 | 125 | | | | |
| Carbon tetrachloride | 19.090 | 0.50 | 20.00 | 0 | 95.4 | 66 | 138 | | | | |
| Chlorobenzene | 19.150 | 0.50 | 20.00 | 0 | 95.8 | 81 | 122 | | | | |
| Chloroethane | 18.230 | 1.0 | 20.00 | 0 | 91.2 | 58 | 133 | | | | |
| Chloroform | 17.740 | 1.0 | 20.00 | 0 | 88.7 | 69 | 128 | | | | |
| Chloromethane | 20.120 | 1.0 | 20.00 | 0 | 101 | 56 | 131 | | | | |
| cis-1,2-Dichloroethene | 17.900 | 1.0 | 20.00 | 0 | 89.5 | 72 | 126 | | | | |
| cis-1,3-Dichloropropene | 18.600 | 0.50 | 20.00 | 0 | 93.0 | 69 | 131 | | | | |
| Dibromochloromethane | 20.010 | 0.50 | 20.00 | 0 | 100 | 66 | 133 | | | | |
| Dibromomethane | 22.100 | 1.0 | 20.00 | 0 | 110 | 76 | 125 | | | | |
| Dichlorodifluoromethane | 19.650 | 1.0 | 20.00 | 0 | 98.2 | 53 | 153 | | | | |
| Ethylbenzene | 19.870 | 1.0 | 20.00 | 0 | 99.4 | 73 | 127 | | | | |
| Freon-113 | 17.450 | 1.0 | 20.00 | 0 | 87.2 | 75 | 125 | | | | |
| Hexachlorobutadiene | 18.200 | 0.50 | 20.00 | 0 | 91.0 | 67 | 131 | | | | |
| Isopropylbenzene | 19.900 | 1.0 | 20.00 | 0 | 99.5 | 75 | 127 | | | | |
| m,p-Xylene | 41.440 | 1.0 | 40.00 | 0 | 104 | 76 | 128 | | | | |
| Methylene chloride | 18.490 | 1.0 | 20.00 | 0.4600 | 90.2 | 63 | 137 | | | | |
| MTBE | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 65 | 123 | | | | |
| n-Butylbenzene | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 69 | 137 | | | | |
| n-Propylbenzene | 19.860 | 1.0 | 20.00 | 0 | 99.3 | 72 | 129 | | | | |
| Naphthalene | 20.720 | 1.0 | 20.00 | 0 | 104 | 54 | 138 | | | | |
| o-Xylene | 19.890 | 1.0 | 20.00 | 0 | 99.4 | 80 | 121 | | | | |
| sec-Butylbenzene | 20.310 | 1.0 | 20.00 | 0 | 102 | 72 | 127 | | | | |
| Styrene | 20.360 | 1.0 | 20.00 | 0 | 102 | 65 | 134 | | | | |
| tert-Butylbenzene | 20.540 | 1.0 | 20.00 | 0 | 103 | 70 | 129 | | | | |

**Qualifiers:**

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

Calculations are based on raw values

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043351-001AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046030**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Tetrachloroethene | 18.810 | 1.0 | 20.00 | 0 | 94.1 | 66 | 128 | | | | |
| Toluene | 19.490 | 0.50 | 20.00 | 0 | 97.5 | 77 | 122 | | | | |
| trans-1,2-Dichloroethene | 17.090 | 1.0 | 20.00 | 0 | 85.4 | 63 | 137 | | | | |
| trans-1,3-Dichloropropene | 20.930 | 1.0 | 20.00 | 0 | 105 | 59 | 135 | | | | |
| Trichloroethene | 18.440 | 1.0 | 20.00 | 0 | 92.2 | 70 | 127 | | | | |
| Trichlorofluoromethane | 17.140 | 1.0 | 20.00 | 0 | 85.7 | 57 | 129 | | | | |
| Vinyl chloride | 18.100 | 0.50 | 20.00 | 0 | 90.5 | 50 | 134 | | | | |
| Xylenes, Total | 61.330 | 2.0 | 60.00 | 0 | 102 | 75 | 125 | | | | |
| Surr: 1,2-Dichloroethane-d4 | 22.930 | | 25.00 | | 91.7 | 72 | 119 | | | | |
| Surr: 4-Bromofluorobenzene | 24.840 | | 25.00 | | 99.4 | 76 | 119 | | | | |
| Surr: Dibromofluoromethane | 22.470 | | 25.00 | | 89.9 | 85 | 115 | | | | |
| Surr: Toluene-d8 | 24.770 | | 25.00 | | 99.1 | 81 | 120 | | | | |

Sample ID: **N043351-001AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046031**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | 17.970 | 0.50 | 20.00 | 0 | 89.8 | 81 | 129 | 18.90 | 5.04 | 20 | |
| 1,1,1-Trichloroethane | 16.070 | 1.0 | 20.00 | 0 | 80.4 | 67 | 132 | 16.59 | 3.18 | 20 | |
| 1,1,2,2-Tetrachloroethane | 19.270 | 0.50 | 20.00 | 0 | 96.4 | 63 | 128 | 20.91 | 8.16 | 20 | |
| 1,1,2-Trichloroethane | 20.530 | 1.0 | 20.00 | 0 | 103 | 75 | 125 | 21.36 | 3.96 | 20 | |
| 1,1-Dichloroethane | 16.630 | 1.0 | 20.00 | 0 | 83.2 | 69 | 133 | 17.06 | 2.55 | 20 | |
| 1,1-Dichloroethene | 16.100 | 1.0 | 20.00 | 0 | 80.5 | 68 | 130 | 16.37 | 1.66 | 20 | |
| 1,1-Dichloropropene | 18.370 | 1.0 | 20.00 | 0 | 91.9 | 73 | 132 | 20.40 | 10.5 | 20 | |
| 1,2,3-Trichlorobenzene | 19.490 | 1.0 | 20.00 | 0 | 97.5 | 67 | 137 | 19.65 | 0.818 | 20 | |
| 1,2,3-Trichloropropane | 19.090 | 1.0 | 20.00 | 0 | 95.4 | 73 | 124 | 18.91 | 0.947 | 20 | |
| 1,2,4-Trichlorobenzene | 17.230 | 1.0 | 20.00 | 0 | 86.2 | 66 | 134 | 18.60 | 7.65 | 20 | |
| 1,2,4-Trimethylbenzene | 17.460 | 1.0 | 20.00 | 0 | 87.3 | 74 | 132 | 19.17 | 9.34 | 20 | |
| 1,2-Dibromo-3-chloropropane | 22.180 | 2.0 | 20.00 | 0 | 111 | 50 | 132 | 23.11 | 4.11 | 20 | |
| 1,2-Dibromoethane | 20.050 | 1.0 | 20.00 | 0 | 100 | 80 | 121 | 20.82 | 3.77 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043351-001AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046031**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichlorobenzene | 18.580 | 1.0 | 20.00 | 0 | 92.9 | 71 | 122 | 20.46 | 9.63 | 20 | |
| 1,2-Dichloroethane | 20.230 | 0.50 | 20.00 | 0 | 101 | 69 | 132 | 21.28 | 5.06 | 20 | |
| 1,2-Dichloropropane | 17.790 | 1.0 | 20.00 | 0 | 89.0 | 75 | 125 | 18.99 | 6.53 | 20 | |
| 1,3,5-Trimethylbenzene | 18.930 | 1.0 | 20.00 | 0 | 94.6 | 74 | 131 | 20.70 | 8.93 | 20 | |
| 1,3-Dichlorobenzene | 17.910 | 1.0 | 20.00 | 0 | 89.6 | 75 | 124 | 19.52 | 8.60 | 20 | |
| 1,3-Dichloropropane | 19.130 | 1.0 | 20.00 | 0 | 95.7 | 73 | 126 | 20.17 | 5.29 | 20 | |
| 1,4-Dichlorobenzene | 17.080 | 0.50 | 20.00 | 0 | 85.4 | 74 | 123 | 18.56 | 8.31 | 20 | |
| 2,2-Dichloropropane | 14.660 | 1.0 | 20.00 | 0 | 73.3 | 69 | 137 | 15.48 | 5.44 | 20 | |
| 2-Butanone | 197.140 | 10 | 200.0 | 0 | 98.6 | 49 | 136 | 184.6 | 6.58 | 20 | |
| 2-Chlorotoluene | 18.630 | 1.0 | 20.00 | 0 | 93.2 | 73 | 126 | 19.89 | 6.54 | 20 | |
| 4-Chlorotoluene | 18.820 | 1.0 | 20.00 | 0 | 94.1 | 74 | 128 | 20.77 | 9.85 | 20 | |
| 4-Isopropyltoluene | 18.370 | 1.0 | 20.00 | 0 | 91.9 | 73 | 130 | 19.76 | 7.29 | 20 | |
| 4-Methyl-2-pentanone | 230.950 | 10 | 200.0 | 0 | 115 | 58 | 134 | 234.0 | 1.31 | 20 | |
| Acetone | 864.520 | 10 | 200.0 | 616.2 | 124 | 40 | 135 | 850.2 | 1.67 | 20 | |
| Acrolein | 203.290 | 20 | 200.0 | 0 | 102 | 75 | 125 | 198.8 | 2.22 | 20 | |
| Acrylonitrile | 203.560 | 20 | 200.0 | 0 | 102 | 75 | 125 | 195.3 | 4.16 | 20 | |
| Benzene | 18.190 | 0.50 | 20.00 | 0 | 91.0 | 81 | 122 | 20.00 | 9.48 | 20 | |
| Bromobenzene | 17.490 | 1.0 | 20.00 | 0 | 87.5 | 76 | 124 | 18.72 | 6.79 | 20 | |
| Bromochloromethane | 18.490 | 1.0 | 20.00 | 0 | 92.5 | 65 | 129 | 19.23 | 3.92 | 20 | |
| Bromodichloromethane | 18.540 | 0.50 | 20.00 | 0 | 92.7 | 76 | 121 | 19.73 | 6.22 | 20 | |
| Bromoform | 19.850 | 1.0 | 20.00 | 0 | 99.2 | 69 | 128 | 20.92 | 5.25 | 20 | |
| Bromomethane | 20.810 | 1.0 | 20.00 | 0 | 104 | 53 | 141 | 21.30 | 2.33 | 20 | |
| Carbon disulfide | 16.590 | 1.0 | 20.00 | 0 | 83.0 | 75 | 125 | 17.02 | 2.56 | 20 | |
| Carbon tetrachloride | 17.740 | 0.50 | 20.00 | 0 | 88.7 | 66 | 138 | 19.09 | 7.33 | 20 | |
| Chlorobenzene | 18.240 | 0.50 | 20.00 | 0 | 91.2 | 81 | 122 | 19.15 | 4.87 | 20 | |
| Chloroethane | 18.450 | 1.0 | 20.00 | 0 | 92.2 | 58 | 133 | 18.23 | 1.20 | 20 | |
| Chloroform | 17.430 | 1.0 | 20.00 | 0 | 87.2 | 69 | 128 | 17.74 | 1.76 | 20 | |
| Chloromethane | 19.340 | 1.0 | 20.00 | 0 | 96.7 | 56 | 131 | 20.12 | 3.95 | 20 | |
| cis-1,2-Dichloroethene | 18.030 | 1.0 | 20.00 | 0 | 90.2 | 72 | 126 | 17.90 | 0.724 | 20 | |
| cis-1,3-Dichloropropene | 17.860 | 0.50 | 20.00 | 0 | 89.3 | 69 | 131 | 18.60 | 4.06 | 20 | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

**CLIENT:** ARCADIS U.S., Inc. - California
**Work Order:** N043263
**Project:** PG&E Topock - GMP, 30035275

# ANALYTICAL QC SUMMARY REPORT

**TestCode: 8260_WP_LLPGE**

Sample ID: **N043351-001AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **ug/L** Prep Date: RunNo: **149446**
Client ID: **ZZZZZZ** Batch ID: **P20VW129** TestNo: **EPA 8260B** Analysis Date: **12/15/2020** SeqNo: **4046031**

| Analyte | Result | PQL | SPK value | SPK Ref Val | %REC | LowLimit | HighLimit | RPD Ref Val | %RPD | RPDLimit | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Dibromochloromethane | 18.210 | 0.50 | 20.00 | 0 | 91.1 | 66 | 133 | 20.01 | 9.42 | 20 | |
| Dibromomethane | 20.850 | 1.0 | 20.00 | 0 | 104 | 76 | 125 | 22.10 | 5.82 | 20 | |
| Dichlorodifluoromethane | 20.550 | 1.0 | 20.00 | 0 | 103 | 53 | 153 | 19.65 | 4.48 | 20 | |
| Ethylbenzene | 18.220 | 1.0 | 20.00 | 0 | 91.1 | 73 | 127 | 19.87 | 8.66 | 20 | |
| Freon-113 | 16.440 | 1.0 | 20.00 | 0 | 82.2 | 75 | 125 | 17.45 | 5.96 | 20 | |
| Hexachlorobutadiene | 16.480 | 0.50 | 20.00 | 0 | 82.4 | 67 | 131 | 18.20 | 9.92 | 20 | |
| Isopropylbenzene | 18.320 | 1.0 | 20.00 | 0 | 91.6 | 75 | 127 | 19.90 | 8.27 | 20 | |
| m,p-Xylene | 37.970 | 1.0 | 40.00 | 0 | 94.9 | 76 | 128 | 41.44 | 8.74 | 20 | |
| Methylene chloride | 18.090 | 1.0 | 20.00 | 0.4600 | 88.2 | 63 | 137 | 18.49 | 2.19 | 20 | |
| MTBE | 20.150 | 1.0 | 20.00 | 0 | 101 | 65 | 123 | 19.33 | 4.15 | 20 | |
| n-Butylbenzene | 17.490 | 1.0 | 20.00 | 0 | 87.5 | 69 | 137 | 19.33 | 9.99 | 20 | |
| n-Propylbenzene | 18.230 | 1.0 | 20.00 | 0 | 91.2 | 72 | 129 | 19.86 | 8.56 | 20 | |
| Naphthalene | 20.730 | 1.0 | 20.00 | 0 | 104 | 54 | 138 | 20.72 | 0.0483 | 20 | |
| o-Xylene | 18.470 | 1.0 | 20.00 | 0 | 92.4 | 80 | 121 | 19.89 | 7.40 | 20 | |
| sec-Butylbenzene | 18.990 | 1.0 | 20.00 | 0 | 95.0 | 72 | 127 | 20.31 | 6.72 | 20 | |
| Styrene | 19.280 | 1.0 | 20.00 | 0 | 96.4 | 65 | 134 | 20.36 | 5.45 | 20 | |
| tert-Butylbenzene | 18.930 | 1.0 | 20.00 | 0 | 94.6 | 70 | 129 | 20.54 | 8.16 | 20 | |
| Tetrachloroethene | 17.080 | 1.0 | 20.00 | 0 | 85.4 | 66 | 128 | 18.81 | 9.64 | 20 | |
| Toluene | 17.930 | 0.50 | 20.00 | 0 | 89.7 | 77 | 122 | 19.49 | 8.34 | 20 | |
| trans-1,2-Dichloroethene | 16.430 | 1.0 | 20.00 | 0 | 82.2 | 63 | 137 | 17.09 | 3.94 | 20 | |
| trans-1,3-Dichloropropene | 19.330 | 1.0 | 20.00 | 0 | 96.7 | 59 | 135 | 20.93 | 7.95 | 20 | |
| Trichloroethene | 17.760 | 1.0 | 20.00 | 0 | 88.8 | 70 | 127 | 18.44 | 3.76 | 20 | |
| Trichlorofluoromethane | 16.860 | 1.0 | 20.00 | 0 | 84.3 | 57 | 129 | 17.14 | 1.65 | 20 | |
| Vinyl chloride | 17.620 | 0.50 | 20.00 | 0 | 88.1 | 50 | 134 | 18.10 | 2.69 | 20 | |
| Xylenes, Total | 56.440 | 2.0 | 60.00 | 0 | 94.1 | 75 | 125 | 61.33 | 8.30 | 20 | |
| Surr: 1,2-Dichloroethane-d4 | 22.730 | | 25.00 | | 90.9 | 72 | 119 | | 0 | | |
| Surr: 4-Bromofluorobenzene | 23.920 | | 25.00 | | 95.7 | 76 | 119 | | 0 | | |
| Surr: Dibromofluoromethane | 22.470 | | 25.00 | | 89.9 | 85 | 115 | | 0 | | |
| Surr: Toluene-d8 | 22.810 | | 25.00 | | 91.2 | 81 | 120 | | 0 | | |

**Qualifiers:**

B Analyte detected in the associated Method Blank
ND Not Detected at the Reporting Limit
DO Surrogate Diluted Out
E Value above quantitation range
R RPD outside accepted recovery limits
Calculations are based on raw values
H Holding times for preparation or analysis exceeded
S Spike/Surrogate outside of limits due to matrix interference

ARCUS02 C: 12/15/202 12:00 AM
FOLDER R: 12/3/2020
**N043263-013A** 1 of 1

# ASSET LABORATORIES
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD

California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com

Page 3 of 4

| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330 Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Matt Traimoth | | Phone: 949-727-1400, ext 200 | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: BH Sampler | Phone: 916-786-3302 Fax: | Fax: | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12-3-20 | Sampled By: Nara Tep | P.O.# SWA-ASSET-C9817-057 | Global ID: | Regulatory | 5. IR number 9 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: Date: 12/3/20 | Matrix: Ground x, Sediment; Potable, Soil; NPDES, Other Solid; Surface | | | Sample Temp: 3.8°C / 1.5°C / 3.3°C / 2.9°C |
| Project Number: 30035275 | | | | | Courier: 5.4°C |
| | | | | | ASSET Tracking No.: |

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Oxygen and Deuterium Isotopes (CFIRM), Ice | Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | Alkalinity, Total as CaCO3 (SM2320B) | Bromide, Sulfate, Chloride (EPA 300.0) | Fluoride (EPA 300.0) | Specific Conductance (EPA 120.1) | Total Dissolved Solids (SM2540) | Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 | Total Organic Carbon (SM5310C); H2SO4 | Metals Dissolved (EPA7470A FF) Hg; HNO3 | Dissolved Metals (SW 6010B); HNO3 Potassium | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | Dissolved metals (SW 6010B), HNO3 Cu, Ni | Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mo, Mo, Pb, Sb, Se, Tl, V, Zn | Total metals, Chromium (non-filter) (EPA 200.8), HNO3 | VOCs (8260) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043263-01 | MW-26-Q420 | 12/3/2020 | 9:56 | | X | X | | X | X | | X | X | X | | X | X | | | X | X | | | | | | E | 5 | P | BNS | |
| 2 | -02 | MW-909-Q420 | 12/3/2020 | 10:06 | | X | X | | X | X | | X | X | X | | X | X | | | X | X | | | | | | E | 5 | P | BNS | |
| 3 | -03 | MW-51-Q420 | 12/3/2020 | 9:06 | | X | | | X | X | | X | X | X | | X | | | | X | X | | | | | | E | 4 | P | BNS | |
| 4 | -04 | MW-916-Q420 | 12/3/2020 | 9:16 | | X | | | X | X | | X | X | X | | X | | | | X | X | | | | | | E | 4 | P | BNS | |
| 5 | -05 | MW-69-195-Q420 | 12/3/2020 | 12:20 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 6 | -06 | PGE-07BR-Q420 | 12/3/2020 | 16:00 | | X | | | X | X | | X | X | | | | | X | | | | | X | | | | E | 3 | P | BNS | |
| 7 | -07 | MW-939-Q420 | 12/3/2020 | 9:30 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | X | E | 7 | PV | BNSH | |
| 8 | -08 | EB-706-Q420 | 12/3/2020 | 15:30 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 9 | -09 | EB-707-Q420 | 12/3/2020 | 16:44 | | X | | | | | | | | | | | | | | | | | | | | | E | 1 | P | B | |
| 10 | -10 | MW-65-160-Q420 | 12/3/2020 | 10:26 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nara Tep | 12/3/20 1735 | | 12-3-20 1735 |
| | 12-3-20 8:15 | | 12-3-20 8:15 PM |
| | | | |

**Turn Around Time (TAT)**

- [ ] A = < 24 Hrs or Same Day TAT
- [ ] B = Next Workday
- [ ] C = 2 Workdays
- [ ] D = 3 Workdays
- [X] E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

Terms
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=50% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level III Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy
Yellow=Customer's Copy

# ASSET LABORATORIES

ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

## CHAIN OF CUSTODY RECORD

Page 4 of 4


Contact us:
Nevada: 3151 W. Post Road, Las Vegas, NV 89118
P: 702.307.2659 F: 702.307.2691
California: 11060 Artesia Blvd., Ste C, Cerritos, CA 90703
P: 562.219.7435 F:562.219.7436
www.assetlaboratories.com


| | | | | | |
|---|---|---|---|---|---|
| Client: Arcadis | Report to: Dan Bush | Bill to: Marty Bloes | EDD Requirement | QA/QC | Sample Receipt Condition |
| Address: 1410 Rocky Ridge Dr # 330 | Company: Arcadis | Address: | Excel EDD | RTNE | Y N |
| Address: Roseville, CA 95661 | Email: dan.bush@arcadis.com; daniel.moore@critigen.com | Address: | Geotracker | RWQCB ✓ | 1. Chilled ✓ |
| Phone: 916-786-3302 Fax: | Address: 1410 Rocky Ridge Dr # 330, Roseville, CA 95661 | Email to: mbloes@pivox.com | Labspec | CalTrans | 2. Headspace |
| Submitted By: Matt Travis | | P.O.# SWA-ASSET-C9817-057 | Others ✓ | LEVEL III | 3. Container Intact ✓ |
| Title: Sampler | Phone: 916-786-3302 Fax: | Phone: 949-727-1400, ext 200 Fax: | Specify: RWQCB | LEVEL IV | 4. Seal Present ✓ |
| Signature: Date: 12-3-20 | Sampled By: Nana Tay | | Global ID: | Regulatory | 5. IR number #2 |
| I hereby authorize ASSET Labs to perform the tests indicated below. | I attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabeling the sample location, date or time of collection is considered fraud and may be grounds for legal action. | | | Specify State: | 6. Method of Cooling: ICE |
| Project Name: PG&E Topock - GMP | Signature: Date: 12/3/20 | | | | Sample Temp: 3.9°C / 1.1°C / 1.5°C / 3.3°C / 2.9°C |
| Project Number: 30035275 | | | | | Courier: 5.4°C ASSET |
| | | | | | Tracking No.: |

Matrix: Ground x | Sediment; Potable | Soil; NPDES | Other Solid; Surface

| Item No. | Laboratory Work Order No. | Sample ID/Location | Sample Date | Sample Time | Others | 250 mL poly Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | 250 mL poly Oxygen and Deuterium Isotopes (CFIRM), ice | 250 mL poly Cr(VI) FF (E218.6) (NH4)2, SO4, NH4, OH | 1 liter poly Alkalinity, Total as CaCO3 (SM2320B) | 1 liter poly Bromide, Sulfate, Chloride (EPA 300.0) | 1 liter poly Fluoride (EPA 300.0) | 1 liter poly Specific Conductance (EPA 120.1) | 1 liter poly Total Dissolved Solids (SM92540) | 125 mL poly Nitrate/Nitrite (SM4500N03) Nitrate; H2SO4 | 3x40 mL VOAs Total Organic Carbon (SM5310C); H2SO4 | 500 mL poly Metals Dissolved (EPA7470A FF) Hg; HNO3 | 500 mL poly Dissolved Metals (SW 6010B); HNO3 Potassium | 500 mL poly Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | 500 mL poly Dissolved metals (SW 6020), HNO3 As, Cr, Mg, Mn, Mo, Se | 500 mL poly Dissolved metals (SW 6010B), HNO3 B, Ca, Cu, Fe, Na, Ni | 500 mL poly Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mg, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | 500 mL poly Dissolved metals (SW 6010B), HNO3 B, Ca, Fe, Na | 500 mL poly Dissolved metals (SW 6020), HNO3 Cr, Mg, Mn, Mo, Se | 500 mL poly Dissolved metals (SW 6010B), HNO3 Cu, Ni | 500 mL poly Dissolved metals (SW 6020), HNO3 Ag, As, Ba, Be, Cd, Co, Cr, Mn, Mo, Pb, Sb, Se, Tl, V, Zn | 500 mL poly Total metals, Chromium (non-filter) (EPA 200.8), HNO3 | 3x40 mL VOAs VOCs (8260) | Turn Around Time | No. of Container | Container Type | PRESERVATION | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | N043263-11 | MW-65-225-Q420 | 12/3/2020 | 11:08 | | X | | | X | X | | X | X | X | | | | X | X | | | | | | | | E | 4 | P | BNS | |
| 2 | -12 | Trip Blank | 12/3/20 | 0700 | | | | | | | | | | | | | | | | | | | | | | X | E | 2 | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
|---|---|---|---|
| Nana Tay | 12/3/20 1735 | | 12-3-20 1735 |
| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |
| | 12-3-20 8:15 | | 12-3-20 8:15 pm |
| Relinquished by (Signature and Printed Name): | Date/Time: | Received by (Signature and Printed Name): | Date/Time: |

**Turn Around Time (TAT)**

- A = < 24 Hrs or Same Day TAT
- B = Next Workday
- C = 2 Workdays
- D = 3 Workdays
- X E = Routine 5-7 Workdays

TAT Starts at 8 AM the following day if samples received after 3:00PM.

**Special Instruction:**
Title 22 Metals - Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na

**Terms**
1. All samples will be disposed in 45 days and records will be destroyed in 5 years upon submission of final report.
2. Regular TAT is 5-7 business days, surcharges will apply for rush analysis
Less than 24 Hrs.=200% Next Day=100% 2 Workdays=80% 3 Workdays=35 % 4 Workdays=20%
3. Custom EDD formats will be an additional 3% of the total project price.
4. Add 10% surcharge for Level II Data Packages, 15% for Level IV Data Packages. Surcharge applied on total project price.
5. Trip Blanks and Equipment Blanks are billable sample.
6. Asset Laboratories is not responsible for samples collected using incorrect methodology.
7. Terms are net 30 days.
8. All reports are submitted in electronic format. Please inform ASSET Laboratories if hard copy of report is needed.
9. For subcontract analysis, TAT and Surcharges will vary.

**Preservatives:**

| | | | |
|---|---|---|---|
| H=HCL | N=$HNO_3$ | S=$H_2SO_4$ | C=4°C |
| Z=Zn(AC)$_2$ | O=NaOH | T=$Na_2S_2O_3$ | |
| Others/Specify: | B | (NH4)2SO4/NH4OH | |

**Container Type:**

| | | |
|---|---|---|
| T=Tube | V=VOA | P=Pint |
| J=Jar | B=Tedlar | G=Glass |
| M=Metal | M=Metal | C=Can |

White=Laboratory Copy

Yellow=Customer's Copy

## ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

| | | | |
|---|---|---|---|
| Cooler Received/Opened On: | 12/3/2020 | Workorder: | N043263 |
| Rep sample Temp (Deg C): | 3.9/1.1/1.5/3.3/2.9/5.4 | IR Gun ID: | 2 |
| Temp Blank: | ☑ Yes ☐ No | | |
| Carrier name: | ASSET | | |
| Last 4 digits of Tracking No.: | NA | Packing Material Used: | None |
| Cooling process: | ☑ Ice ☐ Ice Pack ☐ Dry Ice ☐ Other ☐ None | | |

### Sample Receipt Checklist

| | | | |
|---|---|---|---|
| 1. Shipping container/cooler in good condition? | Yes ☑ | No ☐ | Not Present ☐ |
| 2. Custody seals intact, signed, dated on shippping container/cooler? | Yes ☐ | No ☐ | Not Present ☑ |
| 3. Custody seals intact on sample bottles? | Yes ☐ | No ☐ | Not Present ☑ |
| 4. Chain of custody present? | Yes ☑ | No ☐ | |
| 5. Sampler's name present in COC? | Yes ☑ | No ☐ | |
| 6. Chain of custody signed when relinquished and received? | Yes ☑ | No ☐ | |
| 7. Chain of custody agrees with sample labels? | Yes ☑ | No ☐ | |
| 8. Samples in proper container/bottle? | Yes ☑ | No ☐ | |
| 9. Sample containers intact? | Yes ☑ | No ☐ | |
| 10. Sufficient sample volume for indicated test? | Yes ☑ | No ☐ | |
| 11. All samples received within holding time? | Yes ☑ | No ☐ | |
| 12. Temperature of rep sample or Temp Blank within acceptable limit? | Yes ☑ | No ☐ | NA ☐ |
| 13. Water - VOA vials have zero headspace? | Yes ☑ | No ☐ | NA ☐ |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes ☑ | No ☐ | NA ☐ |
| 15. Did the bottle labels indicate correct preservatives used? | Yes ☑ | No ☐ | NA ☐ |
| 16. Were there Non-Conformance issues at login? | Yes ☐ | No ☐ | NA ☑ |
| Was Client notified? | Yes ☐ | No ☐ | NA ☑ |

Comments:

Checklist Completed By: BHN BHdez 12/7/2020

Reviewed By: MBC 12/14/2020

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043263

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043263-001A | MW-26-Q420 | 12/3/2020 9:56:00 AM | 12/17/2020 | Groundwater | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-001B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-001C | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043263-001D | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043263-001E | | | 12/17/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043263-002A | MW-909-Q420 | 12/3/2020 10:06:00 AM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-002B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043263

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043263-002B | MW-909-Q420 | 12/3/2020 10:06:00 AM | 12/17/2020 | Groundwater | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-002C | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043263-002D | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043263-002E | | | 12/17/2020 | | OXY_DEUT | Oxygen and Deuterium (CF-IRMS) | ☐ | ☐ | ☑ | SUB |
| N043263-003A | MW-51-Q420 | 12/3/2020 9:06:00 AM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-003B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043263

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043263-003B | MW-51-Q420 | 12/3/2020 9:06:00 AM | 12/17/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-003C | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043263-003D | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043263-004A | MW-916-Q420 | 12/3/2020 9:16:00 AM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-004B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-004C | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043263

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043263-004D | MW-916-Q420 | 12/3/2020 9:16:00 AM | 12/17/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | | DISSOLVED MERCURY PREP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 7470A | DISSOLVED MERCURY BY COLD VAPOR TECHNIQUE | ☐ | ☐ | ☐ | WW |
| N043263-005A | MW-69-195-Q420 | 12/3/2020 12:20:00 PM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-005B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-005C | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043263-005D | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043263

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043263-005D | MW-69-195-Q420 | 12/3/2020 12:20:00 PM | 12/17/2020 | Groundwater | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043263-006A | PGE-07BR-Q420 | 12/3/2020 4:00:00 PM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-006B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-006C | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043263-007A | MW-939-Q420 | 12/3/2020 9:30:00 AM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-007B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043263

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043263-007B | MW-939-Q420 | 12/3/2020 9:30:00 AM | 12/17/2020 | Groundwater | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-007C | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043263-007D | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043263-007E | | | 12/17/2020 | | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |
| N043263-008A | EB-706-Q420 | 12/3/2020 3:30:00 PM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-009A | EB-707-Q420 | 12/3/2020 4:44:00 PM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-010A | MW-65-160-Q420 | 12/3/2020 10:28:00 AM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-010B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-010C | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043263

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043263-010D | MW-65-160-Q420 | 12/3/2020 10:28:00 AM | 12/17/2020 | Groundwater | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043263-011A | MW-65-225-Q420 | 12/3/2020 11:08:00 AM | 12/17/2020 | | EPA 218.6 | Hexavalent Chromium by IC | ☐ | ☐ | ☐ | WW |
| N043263-011B | | | 12/17/2020 | | EPA 120.1 | SPECIFIC CONDUCTANCE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM2540C | TOTAL FILTERABLE RESIDUE | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | | Total Dissolved Solids Prep | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 2320 B | ALKALINITY, SPECIATED | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | EPA 300.0 | ANIONS BY ION CHROMATOGRAPHY | ☐ | ☐ | ☐ | LSR |
| | | | 12/17/2020 | | SM 1030F1 | Cation-Anion Balance Calculation | ☐ | ☐ | ☐ | LSR |
| N043263-011C | | | 12/17/2020 | | SM4500-NO3F | NITRATE/NITRITE-N BY CADMIUM REDUCTION | ☐ | ☐ | ☑ | SUB |
| N043263-011D | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 3010A | AQPREP TOTAL METALS: ICP, FLAA | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6010B | DISSOLVED METALS BY ICP | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| | | | 12/17/2020 | | EPA 6020 | DISSOLVED METALS BY ICP-MS | ☐ | ☐ | ☐ | WW |
| N043263-012A | Trip Blank | 12/3/2020 7:00:00 AM | 12/17/2020 | Water | EPA 8260B | VOLATILE ORGANIC COMPOUNDS BY GC/MS | ☐ | ☐ | ☐ | VW |

# ASSET Laboratories

## WORK ORDER Summary

*10-Dec-20*

**WorkOrder:** N043263

**Client ID:** ARCUS02

**Project:** PG&E Topock - GMP, 30035275 **QC Level:** Level IV **Date Received:** 12/3/2020

**Comments:** Title 22 Metals- Al, Sb, As, Ba, Be, B, Ca, Cd, Co, Cr, Cu, Fe, Pb, Mg, Mn, Hg, Mo, Ni, Se, Ag, Tl, V, Zn, K, Na.

| Sample ID | Client Sample ID | Date Collected | Date Due | Matrix | Test No | Test Name | Hld | MS | Sub | Storage |
|---|---|---|---|---|---|---|---|---|---|---|
| N043263-013A | FOLDER | 12/17/2020 | 12/17/2020 | | EDD | Client specific project | ☐ | ☐ | ☐ | LAB |
| | | | 12/17/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |
| | | | 12/17/2020 | | Folder | Level IV Report | ☐ | ☐ | ☐ | LAB |
| | | | 12/17/2020 | | Folder | Folder | ☐ | ☐ | ☐ | LAB |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

BC Labs
4100 Atlas Court
Bakersfield, CA 93308

TEL: (661) 327-4911
FAX: (661) 327-1918
Acct #:

Field Sampler: Nara Tep

**10-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **SM4500-NO3F** | | |
| N043263-001C / MW-26-Q420 | Groundwater | 12/3/2020 9:56:00 AM | 8OZP | 1 | | |
| N043263-002C / MW-909-Q420 | Groundwater | 12/3/2020 10:06:00 AM | 8OZP | 1 | | |
| N043263-003C / MW-51-Q420 | Groundwater | 12/3/2020 9:06:00 AM | 8OZP | 1 | | |
| N043263-004C / MW-916-Q420 | Groundwater | 12/3/2020 9:16:00 AM | 8OZP | 1 | | |
| N043263-005C / MW-69-195-Q420 | Groundwater | 12/3/2020 12:20:00 PM | 8OZP | 1 | | |
| N043263-007C / MW-939-Q420 | Groundwater | 12/3/2020 9:30:00 AM | 8OZP | 1 | | |
| N043263-010C / MW-65-160-Q420 | Groundwater | 12/3/2020 10:28:00 AM | 8OZP | 1 | | |
| N043263-011C / MW-65-225-Q420 | Groundwater | 12/3/2020 11:08:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43263B Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Nitrate/Nitrite by SM4500NO3F. EDD Requirement Labspec7 edata.

GSO #: 551486685

| | Date/Time | | Date/Time |
|---|---|---|---|
| **Relinquished by:** YRJ | 12/9/2020 1630 | **Received by:** | |
| **Relinquished by:** | | **Received by:** | |

**ASSET Laboratories**
*3151-3153 W Post Rd., Las Vegas, NV 89118*
*www.atl-labs.com*
*TEL: 7023072659* *FAX: 7023072691*

# CHAIN-OF-CUSTODY RECORD



**QC Level: Level IV**

**Subcontractor:**

ISOTECH
1308 Parkland Court
Champaign, Illinois 61821

TEL: (217) 398-3490
FAX:
Acct #:

Field Sampler: Nara Tep

**07-Dec-20**

| | | | | Requested Tests | | |
|---|---|---|---|---|---|---|
| **Sample ID** | **Matrix** | **Date Collected** | **Bottle Type** | **OXY_DEUT** | | |
| N043263-001E / MW-26-Q420 | Groundwater | 12/3/2020 9:56:00 AM | 8OZP | 1 | | |
| N043263-002E / MW-909-Q420 | Groundwater | 12/3/2020 10:06:00 AM | 8OZP | 1 | | |

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N43263A Please email Invoices and Account Receivable Statements to elvira@assetlaboratories.com. For questions, call Marlon at (702)-307-2659. Please e-mail results to reports.lv@assetlaboratories.com by: Standard TAT.

Please analyze for Oxygen and Deuterium by CF-IRMS. EDD Requirement Labspec7 edata.

Fedex #: 772289919056

| | | Date/Time | | Date/Time |
|---|---|---|---|---|
| **Relinquished by:** | YRJ | 12/7/2020 1600 | **Received by:** | |
| **Relinquished by:** | | | **Received by:** | |