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October 15, 2020

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Scot Stormo California Regional Water Quality Control Board Colorado River Basin Region 73-720 Fred Waring Drive, Suite 100 Palm Desert, CA 92260

#### Subject: Topock IM-3 Third Quarter 2020 Monitoring Report PG&E Topock Compressor Station, Needles, California Interim Measure No. 3 Groundwater Treatment System

Dear Ms. Innis and Mr. Stormo:

Enclosed is the Third Quarter 2020 Monitoring Report for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station, Interim Measure No. 3 (IM-3) Groundwater Treatment System. From July 2005 through September 2011 PG&E was operating the IM-3 groundwater treatment system as authorized by the Colorado River Basin Regional Water Quality Control Board (Regional Water Board) Order No. R7-2004-0103 (issued October 13, 2004); Order No. R7-2006-0060 (issued September 20, 2006); and the revised Monitoring and Reporting Program under Order No. R7-2006-0060 (issued August 28, 2008). Order No. R7-2006-0060 expired on September 20, 2011.

PG&E is currently operating the IM-3 groundwater treatment system as authorized by the U.S. Department of the Interior (DOI) Waste Discharge Applicable or Relevant and Appropriate Requirements (ARARs) as documented in Attachment A to the Letter Agreement issued July 26, 2011 from the Regional Water Board to DOI, and the subsequent Letter of Concurrence issued August 18, 2011 from DOI to the Regional Water Board. Quarterly monitoring reports are required to be submitted by the fifteenth day of the month following the end of the quarter.

The IM-3 groundwater extraction and treatment system has extracted and treated approximately 1,005,476,120 gallons of water and removed approximately 8,010 pounds of total chromium from August 1, 2005 through September 30, 2020.

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The groundwater monitoring results for wells OW-1S/M/D, OW-2S/M/D, OW-5S/M/D, CW-1M/D, CW-2M/D, CW-3M/D, and CW-4M/D will be submitted under separate cover, as part of the Compliance Monitoring Program.

If you have any questions regarding this report, please call me at (760) 326-5582.

Sincerely, ~

Curt Russell Topock Project Manager

Enclosures:

Topock IM-3 Third Quarter 2020 Monitoring Report

cc: Aaron Yue, California Department of Toxic Substances Control

# Topock Project Executive Abstract

Document Title:	Date of Document: October 15, 2020
Topock IM-3 Third Quarter 2020 Monitoring Report	Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other)
Final Document? <u>X</u> YesNo	PG&E
Priority Status:	Is this time critical? Yes XNo
Type of Document:	Action Required:
Draft X Report Letter Memo	X Information Only Review and Comment
Other / Explain:	Return to:
	By Date: Other / Explain:
What doos this information portain to?	
What does this information pertain to? Resource Conservation and Recovery Act	Is this a Regulatory Requirement? X Yes
(RCRA) Facility Assessment (RFA)/Preliminary	No
Assessment (PA)	If no, why is the document needed?
RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment)	
Corrective Measures Study (CMS)/Feasibility	
Study (FS)	
Corrective Measures Implementation (CMI)/ Remedial Action (RA)	
California Environmental Quality Act (CEQA)/	
Environmental Impact Report (EIR)	
X Interim Measures	
Other / Explain:	
What is the consequence of NOT doing this item? What is	Other Justification/s:
the consequence of DOING this item?	Permit Other / Explain:
Submittal of this report is a compliance requirement of the ARARs for waste discharge as documented in Attachment	
A to the Letter Agreement issued July 26, 2011.	
Brief Summary of attached document:	
This report covers the Interim Measures No. 3 (IM-3) groundwater	
2020 period. The groundwater monitoring results for wells OW 1S 3M/D, and CW 4M/D will be submitted under separate cover, as p	
Written by: Pacific Gas and Electric Company	
Recommendations:	
This report is for your information only.	
How is this information related to the Final Remedy or Regulatory	Requirements?
The Topock IM-3 Third Quarter 2020 Monitoring Report is related	-
groundwater treatment system as authorized by the U.S. Departm	ent of the Interior (DOI) Waste Discharge Applicable or Relevant
and Appropriate Requirements (ARARs) as documented in Attach Colorado River Basin Regional Water Quality Control Board (Regi	
Concurrence issued August 18, 2011 from DOI to the Regional W	
Other requirements of this information?	
None.	



# PG&E Topock Compressor Station Needles, California

### Third Quarter 2020 Monitoring Report Interim Measure No. 3 Groundwater Treatment System

October 15, 2020

Pacific Gas and Electric Company

Prepared for Colorado River Basin Regional Water Quality Control Board and United States Department of the Interior Third Quarter 2020 Monitoring Report

for Interim Measure No. 3 Groundwater Treatment System

PG&E Topock Compressor Station Needles, California

Prepared for

United States Department of the Interior and Colorado River Basin Regional Water Quality Control Board

on behalf of

Pacific Gas and Electric Company

October 15, 2020

This report was prepared under the supervision of a California Certified Professional Engineer

3 Poulle

John Porcella, P.E. Project Engineer





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# **Acronyms and Abbreviations**

ARARs	Applicable or Relevant and Appropriate Requirements
ASSET	ASSET Laboratories
DOI	United States Department of the Interior
gpm	gallons per minute
HMI	human-machine interface
IM	Interim Measure
IW	injection well
MRP	Monitoring and Reporting Program
PG&E	Pacific Gas and Electric Company
PLC	programmable logic controller
PST	Pacific Standard Time
Regional Water Board	Colorado River Basin Regional Water Quality Control Board
RO	reverse osmosis
Truesdail	Truesdail Laboratories, Inc.
WDR	Waste Discharge Requirements



## 1. Introduction

Pacific Gas and Electric Company (PG&E) is implementing an Interim Measure (IM) to address chromium concentrations in groundwater at the Topock Compressor Station near Needles, California. The IM consists of groundwater extraction for hydraulic control of the plume boundaries in the Colorado River floodplain, treatment of extracted groundwater, and treated groundwater injection into injection wells located on San Bernardino County Assessor's Parcel No. 650-151-06. The groundwater extraction, treatment, and injection systems collectively are referred to as Interim Measure No. 3 (IM-3). Figure 1 provides a map of the project area. All figures are located at the end of this report.

From July 2005 through September 2011 PG&E was operating the IM-3 groundwater treatment system as authorized by the Colorado River Basin Regional Water Quality Control Board (Regional Water Board) Order No. R7-2004-0103 (issued October 13, 2004), Order No. R7-2006-0060 (issued September 20, 2006), and the revised Monitoring and Reporting Program (MRP) under Order No. R7-2006-0060 (issued August 28, 2008). Order No. R7-2006-0060 expired September 20, 2011.

PG&E is currently operating the IM-3 groundwater treatment system as authorized by the U.S. Department of the Interior (DOI) Waste Discharge Applicable or Relevant and Appropriate Requirements (ARARs) as documented in Attachment A to the Letter Agreement issued July 26, 2011 from the Regional Water Board to DOI, and the subsequent Letter of Concurrence issued August 18, 2011 from DOI to the Regional Water Board. Quarterly monitoring reports are required to be submitted by the fifteenth day of the month following the end of the quarter.

This report covers monitoring activities related to operation of the IM-3 groundwater treatment system during the Third Quarter 2020. The groundwater monitoring results for wells OW-1S/M/D, OW-2S/M/D, OW-2S/M/D, CW-1M/D, CW-2M/D, CW-3M/D, and CW-4M/D will be submitted under separate cover, as part of the Compliance Monitoring Program.



# 2. Sampling Station Locations

Table 1 lists the locations of sampling stations. (All tables are located at the end of this report.) Sampling station locations are shown on the process and instrumentation diagrams (Figures TP-PR-10-10-04, PR-10-03, PR-10-04 and TP-PR-10-10-06) provided at the end of this report.



# 3. Description of Activities

The treatment system was initially operated between July 25 and July 28, 2005 for the Waste Discharge Requirement (WDR)-mandated startup phase. Discharge to the injection wells was initiated July 31, 2005 after successfully completing the startup phase in accordance with Order No. R7-2004-0103. Full-time operation of the treatment system commenced in August 2005.

Influent to the treatment facility, as listed in Attachment A, Waste Discharge ARARs, to the Letter Agreement issued July 26, 2011, includes:

- Groundwater from extraction wells TW-2S, TW-2D, TW-3D, and PE-1.
- Purged groundwater and water generated from rinsing field equipment during monitoring events.
- Groundwater generated during well installation, well development, and aquifer testing.

During the Third Quarter 2020, extraction well TW-3D operated at a target pumping rate of 135 gallons per minute (gpm), excluding periods of planned and unplanned downtime. Extraction wells TW-2D, TW-2S and PE-1 were not operated during the Third Quarter 2020. The recorded operational run time for the IM-3 groundwater extraction system (combined or individual pumping), by month, was approximately:

- 95.5 percent during July 2020
- 81.1 percent during August 2020
- 92.3 percent during September 2020

Operation of the groundwater treatment system results in the following three out-flow components:

- Treated effluent: Treated water that is discharged to the injection well(s).
- **Reverse osmosis (RO) concentrate (brine)**: Treatment byproduct that is transported and disposed of offsite at a permitted facility.
- **Sludge:** Treatment byproduct that is transported offsite for disposal at a permitted facility. Disposal occurs each time a sludge waste storage bin reaches capacity or within 90 days of the start date for accumulation in the storage container.

Activities during the Third Quarter 2020 are detailed in Section 4.



## 4. Groundwater Treatment System Flow Rates

The Third Quarter 2020 treatment system monthly average flow rates (influent, effluent, and RO concentrate) are presented in Table 2.

The system influent flow rate was measured by flow meters at groundwater extraction wells TW-2S, TW-2D, TW-3D, and PE-1 (Figure TP-PR-10-10-03). The treatment system effluent flow rate was measured by flow meters in the piping into injection wells IW-2 and IW-3 (Figure TP-PR-10-10-11). The RO concentrate flow rate was measured by a flow meter at the piping carrying water from RO concentrate tank T-701 to the truck load-out station (Figure PR-10-04), or from Liquid Environmental Solutions non-hazardous waste manifests (provided in Appendix A). Due to Final Groundwater Remedy construction activities at the MW-20 Bench adjacent to the IM-3 RO concentrate storage tank, the RO concentrate is temporarily being stored and shipped from the RO concentrate process collection tank. Since the flowmeter is located between the RO concentrate process collection tank and the RO concentrate storage tank, the RO concentrate storage tank and the RO concentrate storage tank, the RO concentrate storage tank and the RO concentrate storage tank, the RO concentrat

The IM-3 facility treated approximately 15,787,241 gallons of extracted groundwater during the Third Quarter 2020. Six containers of solids (sludge) were transported offsite from the IM-3 facility during Third Quarter 2020.

Periods of planned and unplanned extraction system downtime (that together resulted in approximately 10.4 percent downtime during Third Quarter 2020) are summarized below. The times shown are in Pacific Standard Time (PST) to be consistent with other data collected (e.g., water level data) at the site.

### 4.1 July 2020

During July 2020, extraction well TW-3D operated at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW-2S, TW-2D, and PE-01 were not operated during July 2020. A portion of the piping/conduit for PE-01 at the MW-20 Bench was disconnected from the IM-3 system on December 18, 2019 to allow for remedy construction activities without crossing under the PE-01 piping/conduit. The operational run time for the IM-3 groundwater extraction system (combined or individual pumping) was 95.5 percent during the July 2020 reporting period.

The IM-3 facility treated approximately 5,680,458 gallons of extracted groundwater during July 2020. The IM-3 facility also treated 18,800 gallons of Final Groundwater Remedy wastewater, 400 gallons of sampling purge water and zero gallons of groundwater from injection well backwashing/re-development during July 2020. Three containers of solids from the IM-3 facility were transported offsite during July 2020.

Periods of planned and unplanned extraction system down time (that together resulted in approximately 4.5 percent downtime during July 2020) are summarized below.

- July 1 6, 2020 (unplanned): The extraction well system was offline from 12:02 a.m. to 12:36 a.m. on July 1, 2020; from 4:52 p.m. to 6:48 p.m. on July 1, 2020; from 12:32 p.m. to 1:50 p.m. on July 2, 2020; from 5:32 a.m. to 6:28 a.m. on July 3, 2020; from 10:06 p.m. to 11:26 p.m. on July 3, 2020; from 7:06 p.m. to 8:32 p.m. on July 4, 2020; from 2:04 p.m. to 3:22 p.m. on July 5, 2020; and from 2:22 a.m. to 3:16 p.m. on July 6, 2020 due to a high-water level in Raw Water Storage Tank (T-100). The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 9 hours 42 minutes.
- July 6, 2020 (unplanned): The extraction well system was offline from 6:22 a.m. to 10:10 a.m. to replace the flow meters at the Clarifier Feed Pump (P-400) and the Plant Effluent Flow (FIT700). Extraction system downtime was 3 hours 48 minutes.
- July 6, 2020 (unplanned): The extraction well system was offline from 7:34 p.m. to 8:50 p.m. due to replacing microfilter modules. Extraction system downtime was 1 hour 16 minutes.



- July 7 9, 2020 (unplanned): The extraction well system was offline from 10:24 a.m. to 11:20 a.m. on July 7, 2020 and from 7:12 p.m. to 8:18 p.m. on July 9, 2020 due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 2 hours 2 minutes.
- July 11, 2020 (unplanned): The extraction well system was offline from 11:14 a.m. to 12:24 p.m. and from 12:26 p.m. to 1:04 p.m. due to replacing microfilter modules. Extraction system downtime was 1 hour 48 minutes.
- July 12, 2020 (unplanned): The extraction system was offline from 9:50 a.m. to 9:52 a.m. due to a programmable logic controller (PLC) and human machine interface (HMI) connectivity issue. Extraction system downtime was 2 minutes.
- July 18, 2020 (unplanned): The extraction well system was offline from 2:24 a.m. to 4:50 a.m. due to replacing microfilter modules. Extraction system downtime was 2 hours 26 minutes.
- July 19, 2020 (unplanned): The extraction well system was offline from 9:36 p.m. to 10:24 p.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 48 minutes.
- July 20, 2020 (unplanned): The extraction well system was offline from 12:12 p.m. to 2:16 p.m. due to replacing microfilter modules. Extraction system downtime was 2 hours 4 minutes.
- July 22, 2020 (planned): The extraction well system was offline from 7:38 a.m. to 8:22 a.m. due to testing of the pipeline critical alarms and leak detection system. Extraction system downtime was 44 minutes.
- July 22, 2020 (unplanned): The extraction well system was offline from 12:28 a.m. to 1:46 p.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 1 hour 18 minutes.
- July 23, 2020 (planned): The extraction well system was offline from 8:42 a.m. to 9:10 a.m. to process wastewater (8,000 gallons) generated from remedy well construction activities. Extraction system downtime was 28 minutes.
- July 23 25, 2020 (unplanned): The extraction well system was offline from 10:58 p.m. to 11:44 p.m. on July 23, 20202 and from 6:10 a.m. to 6:38 a.m. on July 25, 2020 due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 1 hour 14 minutes.
- July 25, 2020 (unplanned): The extraction well system was offline from 4:52 p.m. to 7:48 p.m. due to replacing microfilter modules. Extraction system downtime was 2 hours 56 minutes.
- July 26, 2020 (unplanned): The extraction well system was offline from 1:58 a.m. to 4:12 a.m. because the Acid Pump (P-801B) which feeds the Treated Water Storage Tank (T-700) failed. The pump was repaired and extraction resumed. Extraction system downtime was 2 hours 14 minutes.
- July 31, 2020 (unplanned): The extraction well system was offline from 8:42 a.m. to 9:06 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 24 minutes.

### 4.2 August 2020

During August 2020, extraction well TW-3D operated at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW-2S, TW-2D, and PE-01 were not operated during August 2020; an attempt was made to extract water using well TW-2D during August 2020, but the well was found to be inoperable. A portion of the piping/conduit for PE-01 at the MW-20 Bench was disconnected from the IM-3 system on December 18, 2019 to allow for remedy construction activities without crossing under the PE-01 piping/conduit. The operational run time for the IM-3 groundwater



extraction system (combined or individual pumping) was 81.1 percent during the August 2020 reporting period.

The IM-3 facility treated approximately 4,855,518 gallons of extracted groundwater during August 2020. The IM-3 facility also treated 57,147 gallons of Final Groundwater Remedy wastewater, 700 gallons of sampling purge water, and zero gallons of groundwater from injection well backwashing/re-development during August 2020. Two containers of solids from the IM-3 facility were transported offsite during August 2020.

Periods of planned and unplanned extraction system down time (that together resulted in approximately 18.9 percent downtime during August 2020) are summarized below.

- August 1, 2020 (unplanned): The extraction well system was offline from 5:34 p.m. to 8:26 p.m. due to replacing microfilter modules. Extraction system downtime was 2 hours 52 minutes.
- August 6, 2020 (unplanned): The extraction well system was offline from 6:26 a.m. to 6:42 a.m. to process wastewater (400 gallons) generated from remedy well construction activities. A leak was found in the brine return line at the MW-20 Bench; the leak was contained in secondary containment (a flange fitting was loose), and the process was stopped. Extraction system downtime was 16 minutes.
- August 6, 2020 (unplanned): The extraction system was offline from 7:28 a.m. to 7:30 a.m. due to a PLC and HMI connectivity issue. Extraction system downtime was 2 minutes.
- August 6, 2020 (planned): The extraction well system was offline from 7:44 a.m. to 7:58 a.m. to confirm that the brine return line was repaired and to process wastewater (3,050 gallons) generated from remedy well construction activities. Extraction system downtime was 14 minutes.
- August 6, 2020 (unplanned): The extraction well system was offline from 3:44 p.m. to 4:34 p.m. due to a high-water level in Raw Water Storage Tank (T-100). The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 50 minutes.
- August 8, 2020 (planned): The extraction well system was offline from 8:22 a.m. to 9:24 a.m.; and from 12:06 p.m. to 1:02 p.m. to process wastewater (6,000 gallons) generated from remedy well construction activities. Extraction system downtime was 1 hour 58 minutes.
- August 8, 2020 (unplanned): The extraction well system was offline from 7:32 p.m. to 8:28 p.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 56 minutes.
- August 9-12, 2020 (planned): The extraction well system was offline from 4:18 a.m. August 9, 2020 to 8:44 a.m. August 12, 2020 for the semiannual scheduled maintenance outage. Extraction system downtime was 3 days 4 hours 26 minutes.
- August 12, 2020 (unplanned): The extraction well system was offline from 9:20 a.m. to 2:12 p.m. because as the plant came back online from the semiannual maintenance outage there were low pH values throughout the plant and higher conductivity values. The plant was kept in recirculation until the pH and conductivity values returned to normal. Extraction system downtime was 4 hours 52 minutes.
- August 14-16, 2020 (unplanned): The extraction well system was offline from 2:16 a.m. to 3:14 a.m. and from 10:18 p.m. to 11:00 p.m. on August 14, 2020; from 6:36 a.m. to 11:38 a.m. on August 15, 2020; and from 2:26 p.m. to 3:22 p.m. on August 16, 2020 due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 7 hours 38 minutes.
- August 17, 2020 (planned): The extraction well system was offline from 6:20 a.m. to 6:32 a.m. to
  process wastewater generated from remedy well construction activities. Extraction system downtime
  was 12 minutes.

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- August 17, 2020 (unplanned): The extraction well system was offline from 2:10 p.m. to 3:24 p.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 1 hour 14 minutes.
- August 18, 2020 (planned): The extraction well system was offline from 6:06 a.m. to 6:12 a.m. to process wastewater generated from remedy well construction activities. Extraction system downtime was 6 minutes.
- August 18, 2020 (unplanned): The extraction well system was offline from 6:30 p.m. to 7:46 p.m. due to a City of Needles power outage. The outage tripped out the microfilter and the air compressors. Extraction system downtime was 1 hour 16 minutes.
- August 19, 2020 (unplanned): The extraction system was offline from 3:56 a.m. to 3:58 a.m. and from 7:04 a.m. to 7:06 a.m. due to a PLC and HMI connectivity issue. Extraction system downtime was 4 minutes.
- August 19, 2020 (unplanned): The extraction well system was offline from 12:10 p.m. to 1:42 p.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 1 hour 32 minutes.
- August 20-21, 2020 (unplanned): The extraction well system was offline from 11:52 p.m. on August 20, 2020 to 12:46 p.m. on August 21, 2020; and from 12:48 a.m. to 12:58 a.m., from 1:02 a.m. to 1:30 a.m., and from 1:32 a.m. to 3:54 a.m. on August 21, 2020 due to a City of Needles power outage caused by high temperatures. The power outage tripped out the microfilter and the blowers resulting in a high-water level in T-100. Extraction system downtime was 3 hours 54 minutes.
- August 22, 2020 (unplanned): The extraction well system was offline from 2:56 a.m. to 3:54 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 58 minutes.
- August 22, 2020 (unplanned): The extraction well system was offline from 5:04 a.m. to 5:50 a.m. due to a tripped breaker for TW-3D. The operator reset the breaker and restarted the pump. Extraction system downtime was 46 minutes.
- August 23, 2020 (unplanned): The extraction well system was offline from 3:18 a.m. to 4:04 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 46 minutes.
- August 23, 2020 (unplanned): The extraction well system was offline from 4:32 a.m. to 4:44 a.m. due to a tripped breaker for TW-3D. The operator reset the breaker and restarted the pump. Extraction system downtime was 12 minutes.
- August 24, 2020 (unplanned): The extraction well system was offline from 7:46 a.m. to 9:08 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 1 hour 22 minutes.
- August 24, 2020 (unplanned): The extraction well system was offline from 9:28 a.m. to 9:34 a.m. due to a tripped breaker for TW-3D. The operator reset the breaker and restarted the pump. Extraction system downtime was 6 minutes.
- August 24, 2020 (unplanned): The extraction well system was offline from 9:40 a.m. to 9:44 a.m.; from 9:48 a.m. to 9:50 a.m.; from 9:54 a.m. to 9:56 a.m.; from 10:00 a.m. to 10:04 a.m.; from 10:08 a.m. to 10:10 a.m., and from 10:14 a.m. to 10:20 a.m. due to a tripped breaker for TW-3D. The TW-3D pump and motor wouldn't stay running. The heaters in the TW-3D panel/bucket kept tripping which stops the well from running. Technicians and electricians were scheduled to troubleshoot and inspect on August 25, 2020. Extraction system downtime was 20 minutes.
- August 25, 2020 (unplanned): The extraction well system was offline from 10:36 a.m. to 11:28 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 52 minutes.



- August 25-26, 2020 (unplanned): The extraction well system was offline from 11:40 a.m. to 11:44 a.m., from 11:48 a.m. to 11:52 a.m., from 11:56 a.m. to 12:02 p.m., from 12:06 p.m. to 12:10 p.m., from 12:22 p.m. to 12:32 p.m., from 12:46 p.m. to 1:38 p.m., and from 1:50 p.m. to 5:14 p.m. on August 25, 2020; from 5:20 p.m. on August 25, 2020 to 10:06 a.m. on August 26, 2020; and from 10:08 a.m. to 10:14 a.m. on August 26, 2020 due to a tripped breaker for TW-3D. The TW-3D pump and motor wouldn't stay running. Operator and IT technician tried troubleshooting, but no obvious issue was found. Extraction system downtime was 21 hours 36 minutes.
- August 27-28, 2020 (unplanned): The extraction well system was offline from 6:34 a.m. to 7:08 a.m. on August 27, 2020 and from 9:18 a.m. to 9:42 a.m. on August 28, 2020 due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 58 minutes.
- August 28, 2020 (unplanned): The extraction well system was offline from 9:54 a.m. to 10:24 a.m.; from 10:28 a.m. to 10:34 a.m.; from 10:38 a.m. to 11:00 a.m.; and from 11:02 a.m. to 11:28 a.m. due to a tripped breaker for TW-3D. The TW-3D pump and motor wouldn't stay running. Cascade team and Groundwater Partners team replaced the TW-3D pump and motor to eliminate that as a potential cause. Extraction system downtime was 1 hour 24 minutes.
- August 29, 2020 (unplanned): The extraction well system was offline from 12:44 a.m. to 1:40 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 56 minutes.
- August 29, 2020 (unplanned): The extraction well system was offline from 9:46 a.m. to 9:50 a.m., from 9:52 a.m. to 9:56 a.m., from 9:58 a.m. to 10:10 a.m., from 10:12 a.m. to 10:38 a.m., 10:40 a.m. to 10:44 a.m., from 10:46 a.m. to 10:50 a.m., from 10:52 to 12:00 p.m. (noon), from 12:02 p.m. 12:22 p.m., from 12:24 p.m. to 1:32 p.m., from 1:38 p.m. to 1:42 p.m., 1:52 p.m. to 2:02 p.m., and from 2:04 p.m. to 2:16 p.m. due to a tripped breaker for TW-3D. The TW-3D pump and motor wouldn't stay running. During this time, an attempt was made to extract groundwater from TW-2D, but it would not stay on. Parts have been since been ordered to replace the Motor Control Center (MCC) and disconnect for TW-2D. Extraction system downtime was 3 hours 56 minutes.
- August 29, 2020 (unplanned): The extraction well system was offline from 3:34 p.m. to 4:44 p.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 1 hour 10 minutes.
- August 29, 2020 (unplanned): The extraction system was offline from 5:16 p.m. to 5:20 p.m. and from 7:10 p.m. to 7:12 p.m. due to a PLC and HMI connectivity issue. Extraction system downtime was 6 minutes.
- August 30, 2020 (unplanned): The extraction well system was offline from 9:50 a.m. to 10:32 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 42 minutes.
- August 30, 2020 (unplanned): The extraction system was offline from 11:00 a.m. to 11:04 a.m. due to a PLC and HMI connectivity issue. Extraction system downtime was 4 minutes.

### 4.3 September 2020

During September 2020, extraction well TW-3D operated at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW-2S, TW-2D, and PE-01 were not operated during September 2020. A portion of the piping/conduit for PE-01 at the MW-20 Bench was disconnected from the IM-3 system on December 18, 2019 to allow for remedy construction activities without crossing under the PE-01 piping/conduit. The operational run time for the IM-3 groundwater extraction system (combined or individual pumping) was 92.3 percent during the September 2020 reporting period.

The IM-3 facility treated approximately 5,251,265 gallons of extracted groundwater during September 2020. The IM-3 facility also treated 16,000 gallons of Final Groundwater Remedy wastewater, zero

# **JACOBS**<sup>°</sup>

gallons of sampling purge water, and 28,600 gallons of groundwater from injection well backwashing/redevelopment during September 2020. One container of solids from the IM-3 facility was transported offsite during September 2020.

Periods of planned and unplanned extraction system down time (that together resulted in approximately 7.7 percent downtime during September 2020) are summarized below.

- **September 2, 2020 (unplanned):** The extraction well system was offline from 6:42 p.m. to 8:12 p.m. due to replacing microfilter modules. Extraction system downtime was 1 hour 30 minutes.
- September 3, 2020 (unplanned): The extraction well system was offline from 11:18 a.m. to 12:26 p.m. due to the air compressor failing. The air compressor belt broke; it was changed, and the compressor was restarted. Extraction system downtime was 1 hour 8 minutes.
- **September 4, 2020 (unplanned):** The extraction well system was offline from 6:44 p.m. to 7:36 p.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 52 minutes.
- September 4, 2020 (unplanned): The extraction well system was offline from 9:08 p.m. to 11:26 p.m. due to replacing microfilter modules. Extraction system downtime was 2 hours 18 minutes.
- September 5-7, 2020 (unplanned): The extraction well system was offline from 10:26 a.m. to 10:54 a.m. on September 5, 2020; from 7:04 p.m. to 7:52 p.m. on September 6, 2020; from 6:20 p.m. to 7:06 p.m. on September 7, 2020; and from 7:10 p.m. to 7:18 p.m. on September 7, 2020 due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 2 hour 10 minutes.
- September 7-8, 2020 (unplanned): The extraction system was offline from 7:28 p.m. to 7:34 p.m., from 7:40 p.m. to 7:46 p.m., and from 7:50 p.m. to 8:02 p.m. on September 7, 2020; from 8:28 p.m. on September 7, 2020 to 2:06 p.m. on September 8, 2020; and from 2:14 p.m. to 3:50 p.m. and from 3:54 p.m. to 4:28 p.m. on September 8, 2020 due to TW-3D shutting off for an unknown cause. The cause was investigated, repairs were attempted, and the system was restarted; however, the issue was not resolved (see below). Extraction system downtime was 20 hours 12 minutes.
- September 8-11, 2020 (unplanned): The extraction well system was offline from 11:34 p.m. on September 8, 2020 to 12:26 a.m. on September 9, 2020; from 3:16 a.m. to 4:02 a.m. on September 10, 2020; and from 2:40 a.m. to 3:36 a.m. on September 11, 2020 due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 2 hours 34 minutes.
- September 11, 2020 (unplanned): The extraction well system was offline from 6:14 a.m. to 6:16 a.m. and from 7:00 a.m. to 7:04 a.m. on September 11, 2020 due to TW-3D failing and working on the electrical components in the MCC enclosure (bucket) for TW-3D. Extraction system downtime was 6 minutes.
- September 12-13, 2020 (unplanned): The extraction well system was offline from 1:50 a.m. to 2:50 a.m. on September 12, 2020 and from 3:42 a.m. to 7:54 a.m. on September 13, 2020 due to a high-water level in T-100 and TW-3D not working. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. The TW-3D MCC enclosure was also replaced and the TW-3D starting issue was resolved. Extraction system downtime was 5 hours 12 minutes.
- September 13, 2020 (unplanned): The extraction system was offline from 7:56 a.m. to 7:58 a.m. due to a PLC and HMI connectivity issue. Extraction system downtime was 2 minutes.
- September 14, 2020 (unplanned): The extraction well system was offline from 3:08 a.m. to 3:56 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 48 minutes.
- **September 14, 2020 (unplanned):** The extraction well system was offline from 10:00 a.m. to 11:06 a.m. due to replacing microfilter modules. Extraction system downtime was 1 hour 6 minutes.



- September 18-19, 2020 (unplanned): The extraction well system was offline from 3:14 a.m. to 4:06 a.m. on September 18, 2020 and from 6:32 p.m. to 7:42 p.m. on September 19, 2020; due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 2 hours 34 minutes.
- September 20, 2020 (unplanned): The extraction well system was offline from 3:28 p.m. to 4:00 p.m. and from 4:06 p.m. to 4:18 p.m. due to a City of Needles power outage. Extraction system downtime was 44 minutes.
- September 21, 2020 (unplanned): The extraction well system was offline from 1:58 a.m. to 2:56 a.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 58 minutes.
- September 22, 2020 (unplanned): The extraction well system was offline from 11:26 a.m. to 12:44 p.m. due to replacing microfilter modules. Extraction system downtime was 1 hour 18 minutes.
- **September 22, 2020 (unplanned):** The extraction system was offline from 3:26 p.m. to 15:40 a.m. due to a PLC and HMI connectivity issue. Extraction system downtime was 14 minutes.
- **September 22, 2020 (unplanned):** The extraction well system was offline from 3:44 p.m. to 8:14 p.m. due to a City of Needles power outage. Also, the backup generator would not start due to needing new batteries. Batteries were replaced. Extraction system downtime was 4 hours 30 minutes.
- September 23, 2020 (unplanned): The extraction system was offline from 4:46 p.m. to 4:52 p.m. due to a PLC and HMI connectivity issue. Extraction system downtime was 6 minutes.
- September 23, 2020 (unplanned): The extraction well system was offline from 4:56 p.m. to 6:40 p.m. due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 1 hour 44 minutes.
- September 26, 2020 (planned): The extraction well system was offline from 10:48 a.m. to 11:26 a.m. due to testing of the pipeline critical alarms and leak detection system. Extraction system downtime was 38 minutes.
- September 29, 2020 (unplanned): The extraction well system was offline from 1:32 a.m. to 4:04 a.m. due to replacing microfilter modules and due to a high-water level in T-100. The operator shut down extraction so the tank could drain below the high-level alarm setpoint. Extraction system downtime was 2 hours 32 minutes.
- September 29, 2020 (planned): The extraction well system was offline from 8:34 a.m. to 9:04 a.m. to process wastewater (8,000 gallons) generated from remedy well construction activities. Extraction system downtime was 30 minutes.
- September 29, 2020 (unplanned): The extraction system was offline from 2:20 p.m. to 2:30 p.m. due to an update of the onsite computers. Extraction system downtime was 10 minutes.
- September 30, 2020 (planned): The extraction well system was offline from 7:54 a.m. to 9:36 a.m. to process wastewater (8,000 gallons) generated from remedy well construction activities. Extraction system downtime was 1 hour 42 minutes.



# 5. Sampling and Analytical Procedures

With the exception of pH, all samples were collected at the designated sampling locations and placed directly into containers provided by ASSET Laboratories (ASSET) and Truesdail Laboratories, Inc. (Truesdail). Sample containers were labeled and packaged according to standard sampling procedures.

The samples were stored in a sealed container chilled with ice and transported to ASSET or Truesdail via courier under chain-of-custody documentation. The laboratories confirmed the samples were received in chilled condition upon arrival.

ASSET is certified by the California Department of Health Services (Certification No. 2676) under the State of California's Environmental Laboratory Accreditation Program. Truesdail is certified by the California Department of Health Services (Certification No. 1237) under the State of California's Environmental Laboratory Accreditation Program. California-certified laboratory analyses were performed in accordance with the latest edition of the *Guidelines Establishing Test Procedures for Analysis of Pollutants* (40 Code of Federal Regulations Part 136), promulgated by the U.S. Environmental Protection Agency.

During the Third Quarter 2020, analysis of pH was conducted by field method pursuant to the Regional Water Board letter dated October 16, 2007 (subject: Clarification of Monitoring and Reporting Program Requirements), authorizing pH measurements to be conducted in the field. The field method pH samples were collected at the designated sampling locations and field tested within 15 minutes of sampling.

As required by the MRP, the analytical method selected for total chromium has a method detection limit of 1 part per billion, and the analytical method selected for hexavalent chromium has a method detection limit of 0.2 part per billion.

Influent, effluent, RO concentrate, and sludge sampling frequency were in accordance with the MRP.

Groundwater quality is being monitored in observation and compliance wells according to Attachment A, Waste Discharge ARARs, to the Letter Agreement issued July 26, 2011, and the procedures and schedules approved in the *Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area* submitted to the Regional Water Board on June 17, 2005. Quarterly groundwater monitoring analytical results for the injection area (wells OW-1S/M/D, OW-2S/M/D, OW-5S/M/D, CW-1M/D, CW-2M/D, and CW-4M/D) are reported in a separate document, in conjunction with groundwater level maps of the same monitoring wells.



# 6. Analytical Results

Laboratory reports for samples collected in the Third Quarter 2020 were prepared by certified analytical laboratories, and are presented in Appendix B.

Samples were collected in accordance with the ARARs sampling frequency requirements. See Table 3 for sample collection dates.

The influent sampling analytical results are presented in Table 4. The effluent sampling analytical results are presented in Table 5. The RO concentrate sampling analytical results are presented in Table 6. The sludge sampling analytical results are presented in Table 7.

Table 8 identifies the laboratory that performed each analysis and lists the following required information:

- Sample location
- Sample identification number
- Sampler name
- Sample date
- Sample time
- Laboratory performing analysis
- Analysis method
- Analysis date
- Laboratory technician



# 7. Conclusions

There were no exceedances of effluent limitations during the reporting period.

In addition, no incidents of non-compliance were identified during the reporting period. No events that caused an immediate or potential threat to human health or the environment, or new releases of hazardous waste or hazardous waste constituents, or new solid waste management units were identified during the reporting period.



# 8. Certification

#### Certification Statement:

I declare under the penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment for knowing violations.

Signature:	behunn
Name:	Curt Russell
Company <u>:</u>	Pacific Gas and Electric Company
Title:	Topock Project Manager
Date:	October 15, 2020

**Tables** 

### Table 1. Sampling Station Descriptions

Third Quarter 2020 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Sample Station	Sample ID <sup>a</sup>	Location
Sampling Station A: Groundwater Treatment System Influent	SC-100B-WDR-###	Sample collected from tap on pipe into T-100 (see Figure TP-RP-10-10-04).
Sampling Station B: Groundwater Treatment System Effluent	SC-700B-WDR-###	Sample collected from tap on pipe downstream from T-700 (see Figure TP-RP-10-10-04).
Sampling Station D: Groundwater Treatment System Reverse Osmosis Concentrate	SC-701-WDR-###	Sample collected from tap on pipe into T-701 (see Figure PR-10-03 and PR-10-04).
Sampling Station E: Groundwater Treatment System Sludge	SC-SLUDGE-WDR-###	Sample collected from sludge accumulated in the phase separator used this quarter (see Figure TP-RP-10-10-06).

#### Note:

### = Sequential sample identification number at each sample station.

<sup>a</sup> The sample event number is included at the end of the sample ID (e.g., SC-100B-WDR-015).

#### **Table 2. Flow Monitoring Results**

Third Quarter 2020 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Parameter	System Influent <sup>a,b</sup> (gpm)	System Effluent <sup>ь</sup> (gpm)	Reverse Osmosis Concentrate <sup>b, c</sup> (gpm)
July 2020 Average Monthly Flowrate	127.7 <sup>d</sup>	129.6	0.5
August 2020 Average Monthly Flowrate	110.1 °	110.1	0.6
September 2020 Average Monthly Flowrate	122.2 <sup>f</sup>	122.3	0.4

#### Notes:

gpm: gallons per minute

- <sup>a</sup> Extraction well TW-3D was operated during the Third Quarter 2020. Extraction wells TW-2D, TW-2S and PE-1 were not operated during Third Quarter 2020.
- <sup>b</sup> The difference between influent flow rate (including groundwater remedy wastewater and injection well backwash water) and the sum of the effluent and reverse osmosis concentrate flow rates during the Third Quarter 2020 is approximately 0.84 percent.
- <sup>c</sup> Due to Final Groundwater Remedy construction activities at the MW-20 bench, RO concentrate has not been sent to the brine tanks since May 8, 2019. The total gallons removed from IM-3 since that date are an estimate from the Liquid Environmental Systems non-hazardous waste manifests.

<sup>d</sup> The larger than normal amount of groundwater remedy wastewater (18,800 gallons) during July 2020 was included in the system influent value shown.

- <sup>e</sup> The larger than normal amount of groundwater remedy wastewater (57,141 gallons) during August 2020 was included in the system influent value shown.
- <sup>f</sup> The larger than normal amount of injection well development water and groundwater remedy wastewater (44,600 gallons) during September 2020 was included in the system influent value shown.

#### Table 3. Sample Collection Dates

Third Quarter 2020 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Parameter	Sample Collection Dates	Results
Influent	July 7, 2020	See Table 4
	August 4, 2020	
	September 1, 2020	
Effluent	July 7, 2020	See Table 5
	August 4, 2020	
	September 1, 2020	
Reverse Osmosis Concentrate	July 7, 2020	See Table 6
Sludgeª	July 7, 2020	See Table 7

Notes:

<sup>a</sup> Sludge samples analysis is required quarterly by composite; sludge samples were collected from each container prior to shipment off-site, and combined for the composite sample of the preceding quarter.

### Table 4. Influent Monitoring Results<sup>a</sup>

Third Quarter 2020 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

	Analytes Units <sup>b</sup> MDL	TDS mg/L 50.0	Turbidity NTU 0.100	Specific Conductance µmhos/cm 0.100	Field <sup>c</sup> pH pH units	Chromium µg/L 0.650	Hexavalent Chromium µg/L 1.70	Aluminium µg/L 200	Ammonia (as N) mg/L 0.0670	Antimony μg/L 0.160	Arsenic μg/L 0.0810	Barium μg/L 0.150	Boron mg/L 0.0740	μg/L	Fluoride mg/L 0.0480	μg/L	Manganese µg/L 0.260	Molybdenum μg/L 0.210		Nitrate/Nitri (as N) mg/L 0.160	te Sulfate mg/L 2.00	lron μg/L 18.0	Zinc μg/L 2.30
Sampling	Frequency			Мо	onthly										Q	uarterly							
Sample ID	Date																						
SC-100B-WDR-604	7/7/2020	4600	0.310	7000	7.6	410	400	150	ND (0.200)	ND (0.500)	0.770	32.0	0.920	ND (1.00)	2.70	ND (1.00)	6.80	23.0	1.00 R	2.90	480	ND (20.0)	ND (10.0)J
RL		50.0	0.100	0.100		5.00	10.0	50.0	0.200	0.500	0.100	1.00	0.100	1.00	0.500	1.00	0.500	0.500	1.00	0.250	25.0	20.0	10.0
SC-100B-WDR-605	8/4/2020	4400	0.190	7200	7.5	420	440	ND (250)		ND (0.500)	ND (0.100)	32.0	0.780	ND (1.00)		ND (1.00)	7.10	23.0	1.00 R			ND (100)	ND (10.0)J
RL		50.0	0.100	0.100		5.00	10.0	250		0.500	0.100	1.00	0.500	1.00		1.00	0.500	0.500	1.00			100	10.0
SC-100B-WDR-607	9/1/2020	4600	0.190	7000	7.0	420	420										9.90					140 J	
RL		50.0	0.100	0.100		5.00	10.0										0.500					20.0	

Notes:

(---) = not required by the ARARs Monitoring and Reporting Program

J = concentration or reporting limits estimated by laboratory or validation

MDL = method detection limit

mg/L = milligrams per liter

N = nitrogen

ND = parameter not detected at the listed value

NTU = nephelometric turbidity units

RL = project reporting limit

 $\mu$ g/L = micrograms per liter

 $\mu$ mhos/cm = micromhos per centimeter

<sup>a</sup> Sampling Location for all influent samples is tap on pipe from extraction wells into tank T-100 (see attached P&ID TP-PR-10-10-04).

<sup>b</sup> Units reported in this table are those units required in the ARARs.

c Starting 11/20/2007, analysis of pH was switched from California certified laboratory analysis to field method pursuant to the Water Board letter dated October 16, 2007 – Clarification of Monitoring and Reporting Program Requirements, stating that pH measurements may be conducted in the field.

# Table 5. Effluent Monitoring Results

Third Quarter 2020 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

	Ur	llytes hits <sup>c</sup> DL <sup>d</sup>	TDS mg/L 50.0	Turbidity NTU 0.100	Specific Conductance μmhos/cm 0.100	Field <sup>e</sup> pH pH units	Chromium µg/L 0.130	Hexavalent Chromium µg/L 0.0330	Aluminium μg/L 200	Ammonia (as N) mg/L 0.0670	Antimony μg/L 0.160	Arsenic μg/L 0.0810	Barium μg/L 0.150	Boron mg/L 0.0740	Copper μg/L 0.550	Fluoride mg/L 0.0480	Lead µg/L 0.130	Manganese µg/L 0.260	Molybdenum µg/L 0.210	Nickel μg/L 0.260	Nitrate/N (as N mg/l 0.16	l) (		lron μg/L 18.0	Zinc μg/L 2.30
Effluent	Ave. Mo	nthly	NA	NA	NA	6.5 8.4	25	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Limits <sup>b</sup>	Max	Daily	NA	NA	NA	6.5 8.4	50	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Sam	pling Frequ	ency											Monthly	,											
Sample ID	Date																								
SC-700B-WDR	604 7/7/202	D A	4500	0.280	6900	7.4	ND (1.00)	ND (0.200)	ND (50.0)	ND (0.200)	ND (0.500)	ND (0.100)	23.0	0.860	ND (1.00)	2.50	ND (1.00)	64.0	23.0	ND (1.00)	3.20	,	460 2	3.0	ND (10.0)
RL			50.0	0.100	0.100		1.00	0.200	50.0	0.200	0.500	0.100	1.00	0.100	1.00	0.500	1.00	0.500	0.500	1.00	0.250		25.0 2	0.0	10.0
SC-700B-WDR	605 8/4/202	0	4500	0.670	7100	7.1	ND (1.00)	ND (0.200)	ND (250)	ND (0.200)	ND (0.500)	ND (0.100)	24.0	0.900	ND (1.00)	2.20	ND (1.00)	63.0	19.0	ND (1.00)	3.00		480 ND	(100)	ND (10.0)
RL			50.0	0.100	0.100		1.00	0.200	250	0.200	0.500	0.100	1.00	0.500	1.00	0.500	1.00	0.500	0.500	1.00	0.250		25.0	00	10.0
SC-700B-WDR	607 9/1/202	0 4	4200	0.160	6900	7.0	ND (1.00)	ND (0.200)	ND (50.0)	ND (0.200)	ND (0.500)	ND (0.100)	17.0	1.10	ND (1.00)	2.50	ND (1.00)	1.70	22.0	ND (1.00)	2.60		450 5	5.0	ND (10.0)
RL			50.0	0.100	0.100		1.00	0.200	50.0	0.200	0.500	0.100	1.00	0.100	1.00	0.500	1.00	0.500	0.500	1.00	0.250		25.0 2	20.0	10.0

Notes:

(---) = not required by the ARARs Monitoring and Reporting Program

J = concentration or reporting limits estimated by laboratory or validation

MDL = method detection limit

mg/L = milligrams per liter

N = nitrogen

NA = not applicable

ND = parameter not detected at the listed value NTU = nephelometric turbidity units

RL = project reporting limit  $\mu g/L = micrograms per liter$ 

µmhos/cm = micromhos per centimeter

<sup>a</sup> Sampling location for all effluent samples is tap on pipe downstream from tank T-700 to injection wells (see attached P&ID TP-PR-10-10-04).

<sup>b</sup> In addition to the listed effluent limits, the ARARs state that the effluent shall not contain heavy metals, chemicals, pesticides or other constituents in concentrations toxic to human health.

<sup>c</sup> Units reported in this table are those units required in the ARARs.

<sup>d</sup> MDL listed is the target MDL by analysis method; however, the MDL may change for each sample analysis due to the dilution required by the matrix to meet the method QC requirements. The target MDL for each method/analyte combination is calculated annually.

<sup>e</sup> Starting 11/20/2007, analysis of pH was switched from California certified laboratory analysis to field method pursuant to the Water Board letter dated October 16, 2007 – Clarification of Monitoring and Reporting Program Requirements, stating that pH measurements may be conducted in the field.

### Table 6. Reverse Osmosis Concentrate Monitoring Results<sup>a</sup>

Third Quarter 2020 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Analytes Units <sup>b</sup> MDL	mg/L	Specific Conductance µmhos/cm 0.100	Field <sup>C</sup> pH pH units	Chromium mg/L 0.00013	Hexavalent Chromium mg/L 0.00033	mg/L	mg/L	mg/L	mg/L	Cadmium mg/L 0.000053	mg/L	mg/L	Fluoride mg/L 0.190	Lead mg/L 0.00013	mg/L	n Mercury mg/L 0.00013	Nickel mg/L 0.00026	Selenium mg/L 0.00036	mg/L	Thallium mg/L 0.00019	Vanadium mg/L 0.00028	Zinc mg/L 0.0023
Sampling Frequency											Quarter	у										
Sample ID Date																						
SC-701-WDR-604 7/7/2020	38000	50000	8.2	0.00170	ND (0.0020) N	ID (0.00050)	0.00170	0.230 I	ND (0.00050)	ND (0.00050)	ND (0.00050	0.00390	24.0	ND (0.001	0) 0.230	ND (0.00020)	0.0270	0.0450	ND (0.0005	0)ND (0.0005	0) 0.00350	ND (0.0100)
RL	500	0.100		0.0010	0.0020	0.00050	0.00010	0.0050	0.00050	0.00050	0.00050	0.0010	2.00	0.0010	0.0025	0.00020	0.0010	0.00050	0.00050	0.00050	0.0010	0.0100

#### Notes:

(---) = not required by the ARARs Monitoring and Reporting Program

MDL = method detection limit

mg/L = milligrams per liter

ND = parameter not detected at the listed value

RL = project reporting limit  $\mu g/L$  = micrograms per liter

µmhos/cm = micromhos per centimeter

<sup>a</sup> Sampling location for all reverse osmosis samples is tap on pipe T-701 (see attached P&ID PR-10-04).

<sup>b</sup> Units reported in this table are those units required in the ARARs.

<sup>c</sup> Starting 11/20/2007, analysis of pH was switched from California certified laboratory analysis to field method pursuant to the Water Board letter dated October 16, 2007 – Clarification of Monitoring and Reporting Program Requirements, stating that pH measurements may be conducted in the field.

### Table 7. Sludge Monitoring Results<sup>a</sup>

Third Quarter 2020 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Analytes Units <sup>b</sup> MDL	Chromium mg/kg 2800	Hexavalent Chromium mg/kg 58.0	Antimony mg/kg 29.0	Arsenic mg/kg 17.0	Barium mg/kg 86.0	Beryllium mg/kg ND (3.50)	Cadmium mg/kg 3.80	Cobalt mg/kg 8.50	Copper mg/kg 210	Fluoride mg/kg 41.0	Lead mg/kg ND (3.50)	Molybdenum mg/kg 12.0	Mercury mg/kg ND (0.350)	Nickel mg/kg 62.0	mg/kg	mg/kg	Thallium mg/kg ND (6.90)	mg/kg	Zinc mg/kg 45.0	Bioassay % Survival at 750 mg/L <sup><b>c</b></sup>
Sampling Frequency									Q	uarterly										Annually
Sample ID Date																				_
Phase Separator-604-Sludge 7/7/2020	2800	58.0	29.0	17.0	86.0	ND (3.50)	3.80	8.50	210	41.0	ND (3.50)	12.0	ND (0.350)	62.0	ND (3.50)	ND (3.50)	ND (6.90)	44.0	45.0	100
RL	3.50	3.50	6.90	0.870	3.50	3.50	3.50	3.50	6.90	6.90	3.50	3.50	0.350	3.50	3.50	3.50	6.90	3.50	3.50	100

Notes:

(---) = not required by the ARARs Monitoring and Reporting Program J = concentration or reporting limits estimated by laboratory or validation

mg/kg = milligrams per killogram

mg/L = milligrams per literMDL = method detection limit ND = parameter not detected at the listed reporting limit

RL = project reporting limit

<sup>a</sup> Sampling location for all sludge samples is the sludge collection bin (see attached P&ID TP-PR-10-10-06).

<sup>b</sup> Units reported in this table are those units required in the ARARs.

<sup>c</sup> Sludge samples analysis is required quarterly by composite; sludge samples were collected from each container prior to shipment off-site, and combined for the composite sample of the preceding quarter.

		Sampler	Sample	Sample		Analysis	Parameter	Analysis	Lab Technician
Location SC-100B	Sample ID	Name	Date		Lab	Method		Date	Technician
20-100B	SC-100B-WDR-604	Ryan Phelps	7/7/2020	1:05:00 PM	ASSET ASSET	EPA 120.1 EPA 200.7	SC AL	7/8/2020 7/10/2020	Lilia Ramit Diane Jetajobe
					ASSET	EPA 200.7 EPA 200.7	B	7/10/2020	Diane Jetajobe
					ASSET	EPA 200.7 EPA 200.7	FE	7/10/2020	Diane Jetajobe
					ASSET	EPA 200.7	AS	7/10/2020	Claire Ignacio
					ASSET	EPA 200.8	BA	7/13/2020	Claire Ignacio
					ASSET	EPA 200.8	CR	7/10/2020	Claire Ignacio
					ASSET	EPA 200.8	CU	7/13/2020	Claire Ignacio
					ASSET	EPA 200.8	MN	7/10/2020	Claire Ignacio
					ASSET	EPA 200.8	MO	7/10/2020	Claire Ignacio
					ASSET	EPA 200.8	NI	7/10/2020	Claire Ignacio
					ASSET	EPA 200.8	PB	7/10/2020	Claire Ignacio
					ASSET	EPA 200.8	SB	7/13/2020	Claire Ignacio
					ASSET	EPA 200.8	ZN	7/10/2020	Claire Ignacio
					ASSET	EPA 218.6	CR6	7/9/2020	Ria Abes
					ASSET	EPA 300.0	FL	7/9/2020	Ria Abes
					ASSET	EPA 300.0	SO4	7/9/2020	Ria Abes
					Field	HACH	PH	7/7/2020	Ryan Phelps
					ASSET	SM 2540C	TDS	7/8/2020	Lilia Ramit
					ASSET	SM 4500-NO3F	NO3NO2N	7/9/2020	Julia Bundalian
					ASSET	SM2130B	TRB	7/8/2020	Lilia Ramit
					BCLabs	SM4500NH3G	NH3N	7/14/2020	Marion Cartin
SC-100B	SC-100B-WDR-605	Ryan Phelps	8/4/2020	8:20:00 AM	ASSET	EPA 120.1	SC	8/5/2020	Lilia Ramit
					ASSET	EPA 200.7	AL	8/9/2020	Diane Jetajobe
					ASSET	EPA 200.7	В	8/9/2020	Diane Jetajobe
					ASSET	EPA 200.7	FE	8/9/2020	Diane Jetajobe
					ASSET	EPA 200.8	AS	8/9/2020	Claire Ignacio
					ASSET	EPA 200.8	BA	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	CR	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	CU	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	MN	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	MO	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	NI	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	PB	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	SB	8/9/2020	Claire Ignacio
					ASSET	EPA 200.8	ZN	8/7/2020	Claire Ignacio
					ASSET	EPA 218.6	CR6	8/5/2020	Ria Abes
					Field	HACH	PH	8/4/2020	Ryan Phelps

C-100B         SC-100B-WDR-605         Ryan Phelps         8/4/2020         8/20/200         ASSET         SM2/400         TDS         8/5/2020         Lilia Ramit           C-100B         SC-100B-WDR-607         Ron Phelps         9/1/2020         9/35/00A         ASSET         SM2/130B         TDS         8/5/2020         Lilia Ramit           C-100B         SC-100B-WDR-607         Ron Phelps         9/1/2020         9/35/00A         ASSET         EPA 200.7         FE         9/8/2020         Diana-Jetajobe           ASSET         EPA 200.8         CR         9/4/2020         Cialre Ignacio         ASSET         EPA 200.8         MN         9/4/2020         Cialre Ignacio           ASSET         EPA 216.6         CR6         9/3/2020         Lilia Ramit         ASSET         SM2/300         TDS         9/2/2020         Lilia Ramit           ASSET         SM2/300         TDS         9/2/2020         Lilia Ramit         ASSET         SM2/300         TDS         9/2/2020         Lilia Ramit           C-700B         SC-700B-WDR-604         Ryan Phelps         7/7/2020         12:48:00 PM         ASSET         SPA 200.7         R         7/10/2020         Diane Jetajobe           C-700B         SC-700B-WDR-604         Ryan Phelps												
2-1008         SC-1008-WDR-605         Pyan Phelps         B/42020         B-2000 AM         ASSET         SM 25403         TIB         8-56200         Lila Ramit           2-1008         SC-1008-WDR-607         Ron Phelps         9/1/2020         9/35.00 AM         ASSET         EPA 120.1         SC         9/2/2020         Lila Ramit           2-1008         SC-1008-WDR-607         Ron Phelps         9/1/2020         9/35.00 AM         ASSET         EPA 200.7         FE         9/4/2020         Claire Ignacio           ASSET         EPA 200.8         GR         9/2/2020         Claire Ignacio         Claire Ignacio           ASSET         SSET         EPA 200.8         GR         9/2/2020         Lila Ramit           ASSET         SSM 2540C         TDS         9/2/2020         Lila Ramit           ASSET         SSM 2540C         TDS         9/2/2020         Lila Ramit           C7008         SC-7008-WDR-604         Ryan Phelps         7/7/2/2020         12/48:00 PM         ASSET         EPA 200.7         R         7/10/2/2020         Dana-Melaphe           C7008         SC-7008-WDR-604         Ryan Phelps         7/7/2/2/2         12/48:00 PM         ASSET         EPA 200.7         R         7/10/2/2/2         Claire Ignacio </th <th>Location</th> <th>Sample ID</th> <th></th> <th></th> <th></th> <th>Lab</th> <th></th> <th>Parameter</th> <th></th> <th></th>	Location	Sample ID				Lab		Parameter				
SC-100B-WDR-607         Ron Phelps         9/1/2020         9:35:00 AM         ASSET         EPA 120.1         SC         9/2/2020         Lilia Ramit           ASSET         EPA 200.8         CR         9/4/2020         Claire Ignacio           ASSET         EPA 200.8         CR         9/4/2020         Claire Ignacio           ASSET         EPA 208.8         MN         9/4/2020         Claire Ignacio           ASSET         EPA 208.8         MN         9/4/2020         Claire Ignacio           ASSET         EPA 218.6         CR6         9/4/2020         Claire Ignacio           ASSET         EPA 218.6         CR6         9/4/2020         Claire Ignacio           ASSET         EPA 218.6         CR6         9/4/2020         Lilia Ramit           ASSET         SC-700B-WDR-604         Ryan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 200.7         AL         7/10/2020         Diare Jatajobe           2:700B         SC-700B-WDR-604         Ryan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 200.7         AL         7/10/2020         Diare Jatajobe           2:700B         SC-700B-WDR-604         Ryan Phelps         7/17/2020         12:48:00 PM         ASSET	SC-100B	SC-100B-WDR-605	Ryan Phelps	8/4/2020	8:20:00 AM	ASSET	SM 2540C	TDS	8/5/2020	Lilia Ramit		
5.700B         SC-700B-WDR-604         Pyan Phelps Poan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 200.8         GR         9/4/2020         Claire Ignacio           5.700B         SC-700B-WDR-604         Pyan Phelps Ron Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 20.1         SC         7/8/2020         Lilia Ramit           5.700B         SC-700B-WDR-604         Pyan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 20.7         AL         7/1/2020         Lilia Ramit           5.700B         SC-700B-WDR-604         Pyan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 20.7         AL         7/1/2020         Diane Jerigiobe           5.700B         SC-700B-WDR-604         Pyan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 20.7         AL         7/1/2020         Diane Jerigiobe           5.700B         SC-700B-WDR-604         Pyan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 20.0         AL         7/1/2020         Diane Jerigiobe           5.700B         MCR         Pyan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 20.0         AL         7/1/3/2020         Diane Jerigiobe           5.						ASSET	SM2130B	TRB	8/5/2020	Lilia Ramit		
ASSET         EPA 200.8         CR         94/4202         Claire Ignado           ASSET         EPA 200.8         CR         94/2020         Claire Ignado           ASSET         EPA 200.8         CR         94/2020         Claire Ignado           ASSET         EPA 218.6         CR6         94/2020         Claire Ignado           ASSET         SM 2400C         CR0         94/2020         Kamit           ASSET         SM 2400C         TDS         9/2020         Lila Ramit           ASSET         SM 2400C         TDS         9/2020         Lila Ramit           ASSET         EPA 200.7         AS         7/10/202         Diane Jetajobe           ASSET         EPA 200.7         B         7/10/202         Diane Jetajobe           ASSET         EPA 200.8         AS         7/10/202         Claire Ignado	SC-100B	SC-100B-WDR-607	Ron Phelps	9/1/2020	9:35:00 AM		EPA 120.1	SC	9/2/2020	Lilia Ramit		
Sc.700B         WDR-604         Pyan Phelps         77/2020         12:48:00 PM         ASSET         EPA 200.8         MM         9/4/2020         Claine ignacio           5:700B         Bon Phelps         No         Sc.700B-WDR-604         Pyan Phelps         77/2020         12:48:00 PM         ASSET         SM21300         TRB         9/2/2020         Lilia Ramit           5:700B         Sc.700B-WDR-604         Pyan Phelps         77/2020         12:48:00 PM         ASSET         EPA 120.1         SC         7/8/2020         Lilia Ramit           5:700B         Sc.700B-WDR-604         Pyan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 200.7         AL         7/10/2020         Diane-Jetajobe           5:700B         WDR-604         Pyan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 200.7         AL         7/10/2020         Diane-Jetajobe           5:700B         WDR-604         Pyan Phelps         7/7/2020         ASSET         EPA 200.7         AL         7/10/2020         Diane-Jetajobe           6:80         7/10/2020         Claine Ignacio         ASSET         EPA 200.8         CM         7/10/2020         Claine Ignacio           6:80         7/10/2020         Claine Ignacio						ASSET	EPA 200.7	FE	9/8/2020	Diane Jetajobe		
Para Phelps Ron Phelps         Field         PER PA 19.6.6         Order PH 1900         Outenine Maximitim           C-700B         SC-700B-WDR-604         Ryan Phelps         7/7.2020         12.48.00 PM         ASSET         EPA 10.1         SC         7/8.2020         Lilia Ramit           C-700B         SC-700B-WDR-604         Ryan Phelps         7/7.2020         12.48.00 PM         ASSET         EPA 200.7         AL         7/102020         Diame Jetajobe           C-700B         SC-700B-WDR-604         Ryan Phelps         7/7.2020         12.48.00 PM         ASSET         EPA 200.7         FE         7/102020         Diame Jetajobe           C-700B         SC-700B-WDR-604         Ryan Phelps         7/7.2020         12.48.00 PM         ASSET         EPA 200.7         FE         7/102020         Diame Jetajobe           ASSET         EPA 200.8         ASS         7/102020         Claire Ignacio         ASSET         EPA 200.8         CR         7/102020         Claire Ignacio           ASSET         EPA 200.8         MM         7/102020         Claire Ignacio         ASSET         EPA 200.8         MM         7/102020         Claire Ignacio           ASSET         EPA 200.8         MM         7/102020         Claire Ignacio         ASSET						ASSET	EPA 200.8	CR	9/4/2020	Claire Ignacio		
Field         Field <th< td=""><td></td><td></td><td></td><td></td><td></td><td>ASSET</td><td>EPA 200.8</td><td>MN</td><td>9/4/2020</td><td>Claire Ignacio</td></th<>						ASSET	EPA 200.8	MN	9/4/2020	Claire Ignacio		
Ron Phelps         ASSET         SM 2540C MC 302         TDS MR 302202         Dilla Ramit Lila Ramit           2:700B         SC-700B-WDR-604         Ryan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 120.1         SC         7/8/2020         Lila Ramit           2:700B         SC-700B-WDR-604         Ryan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 20.0         R         7/1/02020         Diane Jetajobe           ASSET         EPA 20.0         B         7/1/02020         Diane Jetajobe         ASSET         EPA 20.0         B         7/1/02020         Diane Jetajobe           ASSET         EPA 20.0         B         7/1/02020         Claire Ignacio         ASSET         EPA 20.0         BA         7/1/3/2020         Claire Ignacio           ASSET         EPA 20.0         BA         7/1/3/2020         Claire Ignacio         ASSET         EPA 20.0         MN         7/1/0/2020         Claire Ignacio           ASSET         EPA 20.0         MN         7/1/0/2020         Claire Ignacio         ASSET         EPA 20.0         MN         7/1/0/2020         Claire Ignacio           ASSET         EPA 20.0         SB         7/1/3/2020         Claire Ignacio         ASSET         EPA 20.0 <t< td=""><td></td><td></td><td></td><td></td><td></td><td>ASSET</td><td>EPA 218.6</td><td>CR6</td><td>9/3/2020</td><td>Quennie Manimtim</td></t<>						ASSET	EPA 218.6	CR6	9/3/2020	Quennie Manimtim		
2-700BSC-700B-WDR-604Ryan Pheips7/7/202012:48:00 PMASSETEPA 120.1SC7/8/202Lilia RamitC-700BSC-700B-WDR-604Ryan Pheips7/7/202012:48:00 PMASSETEPA 200.7AL7/10/2020Diane JetajobeASSETEPA 200.7FE7/10/2020Diane JetajobeASSETEPA 200.7FE7/10/2020Diane JetajobeASSETEPA 200.7FE7/10/2020Claire IgnacioASSETEPA 200.8AS7/10/2020Claire IgnacioASSETEPA 200.8CR7/10/2020Claire IgnacioASSETEPA 200.8CR7/10/2020Claire IgnacioASSETEPA 200.8CR7/10/2020Claire IgnacioASSETEPA 200.8MN7/10/2020Claire IgnacioASSETEPA 200.8MN7/10/2020Claire IgnacioASSETEPA 200.8NN7/10/2020Claire IgnacioASSETEPA 200.8MN7/10/2020Claire IgnacioASSETEPA 200.8NN7/10/2020Claire IgnacioASSETEPA 200.8SN7/10/2020Claire IgnacioASSETEPA 200.8SN7/10/2020Claire IgnacioASSETEPA 200.8SN7/10/2020Claire IgnacioASSETEPA 200.8SN7/10/2020Claire IgnacioASSETEPA 200.8SN7/10/2020Claire IgnacioASSETEPA 200.8SN7/10/2020Claire IgnacioASSETEPA 200.8SNSNSN <td< td=""><td></td><td></td><td>Ryan Phelps</td><td></td><td></td><td>Field</td><td>HACH</td><td>PH</td><td>9/1/2020</td><td>Ryan Phelps</td></td<>			Ryan Phelps			Field	HACH	PH	9/1/2020	Ryan Phelps		
SC-700B         SC-700B-WDR-604         Ryan Phelps         7/7/2020         12:48:00 PM         ASSET         EPA 200.7         AL         7/10/2020         Diane Jetajobe           ASSET         EPA 200.7         AL         7/10/2020         Diane Jetajobe         ASSET         EPA 200.7         AL         7/10/2020         Diane Jetajobe           ASSET         EPA 200.7         FE         7/10/2020         Diane Jetajobe         ASSET         EPA 200.7         FE         7/10/2020         Claire Ignacio           ASSET         EPA 200.8         AS         7/10/2020         Claire Ignacio         ASSET         EPA 200.8         CR         7/10/2020         Claire Ignacio           ASSET         EPA 200.8         CR         7/10/2020         Claire Ignacio         ASSET         EPA 200.8         MN         7/10/2020         Claire Ignacio           ASSET         EPA 200.8         MN         7/10/2020         Claire Ignacio         ASSET         EPA 200.8         NI         7/10/2020         Claire Ignacio           ASSET         EPA 200.8         NS         7/10/2020         Claire Ignacio         ASSET         EPA 200.8         SI         7/10/2020         Claire Ignacio           ASSET         EPA 200.8         SI         7			Ron Phelps			ASSET	SM 2540C	TDS	9/2/2020	Lilia Ramit		
<ul> <li>ASSET</li> <li>EPA 200.7</li> <li>AL</li> <li>7/10/2020</li> <li>Diane Jetajobe</li> <li>ASSET</li> <li>EPA 200.7</li> <li>B</li> <li>7/10/2020</li> <li>Diane Jetajobe</li> <li>ASSET</li> <li>EPA 200.7</li> <li>B</li> <li>7/10/2020</li> <li>Diane Jetajobe</li> <li>ASSET</li> <li>EPA 200.8</li> <li>ASSET</li> <li>EPA 200.4</li> <li>ASSET</li> <li>ASSET</li> <li>SM 2500-NOSP</li> <li>ASSET</li> <li>ASSET</li> <li>SM 2500-NOSP</li> <li>ASSET</li> <li>ASSET<!--</td--><td></td><td></td><td></td><td></td><td></td><td>ASSET</td><td>SM2130B</td><td>TRB</td><td>9/2/2020</td><td>Lilia Ramit</td></li></ul>						ASSET	SM2130B	TRB	9/2/2020	Lilia Ramit		
<ul> <li>ASSET EPA 200.7 B 7/10/202 Diane Jetajobe</li> <li>ASSET EPA 200.7 FE 7/10/202 Diane Jetajobe</li> <li>ASSET EPA 200.8 AS 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 CR 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 CR 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 CR 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 MN 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 SC 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 SC 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 SC 7/10/202 Claire Ignacio</li> <li>ASSET SE SM 25400 FL 7/9/202 Ria Abes</li> <li>ASSET SM 25400 TD 7/9/202 Ria Abes</li> <li>ASSET SM 25400 TD 7/9/202 Ria Abes</li> <li>ASSET SM 25400 TD 7/9/202 Ilia Ramit</li> <li>ASSET SM 25400 TD 7/9/202 Llia Ramit</li> <li>ASSET EPA 200.7 RE 8/9/202 Diane Jetajobe</li> <li>ASSET EPA 200.7 FE 8/9/202 Diane Jetaj</li></ul>	SC-700B	SC-700B-WDR-604	Ryan Phelps	7/7/2020	12:48:00 PM	ASSET	EPA 120.1	SC	7/8/2020	Lilia Ramit		
<ul> <li>ASSET</li> <li>EPA 200.7</li> <li>FE</li> <li>7/10/2020</li> <li>Diane Jetajobe</li> <li>ASSET</li> <li>EPA 200.8</li> <li>ASS</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>BA</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>CR</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>CR</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>CU</li> <li>7/13/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>MO</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>MI</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>NI</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>NI</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SN</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>NEN</li> <li>7/10/2020</li> <li>Ria Abes</li> <li>ASSET</li> <li>SN 25040</li> <li>TBN</li> <li>7/8/2020</li></ul>						ASSET	EPA 200.7	AL	7/10/2020	Diane Jetajobe		
<ul> <li>ASSET</li> <li>EPA 200.8</li> <li>ASS</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>BA</li> <li>7/13/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>CR</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>CN</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>CN</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>MN</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>MN</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>NN</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/13/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/13/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SD</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SO4</li> <li>7/19/2020</li> <li>Ria Abes</li> <li>Ria Abes</li> <li>SM4500/NO3F</li> <li>NO3NO2N</li> <li>7/19/2020</li> <li>Llia Ramit</li> <li>ASSET</li> <li>EPA 200.7</li> <li>SM50/NIG3</li> <li>NH3N</li></ul>						ASSET	EPA 200.7	В	7/10/2020	Diane Jetajobe		
ASSET       EPA 200.8       BA       7/13/2020       Claire Ignacio         ASSET       EPA 200.8       CR       7/10/2020       Claire Ignacio         ASSET       EPA 200.8       CU       7/13/2020       Claire Ignacio         ASSET       EPA 200.8       MN       7/10/2020       Claire Ignacio         ASSET       EPA 200.8       NI       7/10/2020       Claire Ignacio         ASSET       EPA 200.8       NI       7/10/2020       Claire Ignacio         ASSET       EPA 200.8       SB       7/10/2020       Claire Ignacio         ASSET       EPA 200.7       SC       NIA						ASSET	EPA 200.7	FE	7/10/2020	Diane Jetajobe		
<ul> <li>ASSET</li> <li>EPA 200.8</li> <li>CR</li> <li>7/10/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>CU</li> <li>7/13/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>MN</li> <li>7/10/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>MN</li> <li>7/10/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>MN</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>NI</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>NI</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>NI</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>NI</li> <li>7/10/2020</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>SB</li> <li< td=""><td></td><td></td><td></td><td></td><td></td><td>ASSET</td><td>EPA 200.8</td><td>AS</td><td>7/10/2020</td><td>Claire Ignacio</td></li<></ul>						ASSET	EPA 200.8	AS	7/10/2020	Claire Ignacio		
<ul> <li>ASSET EPA 200.8 CU 7/13/202 Claire Ignacio</li> <li>ASSET EPA 200.8 MN 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 MN 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 MO 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 MO 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 PB 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/13/202 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/13/202 Claire Ignacio</li> <li>ASSET EPA 200.8 CR 7/9/202 Ria Abes</li> <li>ASSET EPA 200.0 FL 7/9/202 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/202 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/202 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/202 Ria Abes</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/8/202 Lilia Ramit</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/9/202 Lilia Ramit</li> <li>BCLabs SM4500NH3G NH3N 7/14/202 Marion Cartin</li> </ul>						ASSET	EPA 200.8	BA	7/13/2020	Claire Ignacio		
<ul> <li>ASSET EPA 200.8 MN 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 MO 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 MO 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 PB 7/10/2020 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/13/202 Ria Abes</li> <li>ASSET EPA 300.0 FL 7/9/202 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/202 Ria Abes</li> <li>ASSET SM 2540C TDS 7/8/202 Lilia Ramit</li> <li>ASSET SM 2540C TDS 7/8/202 Lilia Ramit</li> <li>ASSET SM 2540C TDS 7/8/202 Lilia Ramit</li> <li>ASSET SM 2540C TBS 7/8/202 Lilia Ramit</li> <li>ASSET SM 2540C TBS 7/8/202 Lilia Ramit</li> <li>ASSET SM 2540C TBS 7/8/202 Lilia Ramit</li> <li>BCLabs SM4500NH3G NH3N 7/14/202 Marion Cartin</li> <li>BCLabs SM4500NH3G NH3N 7/14/202 Diane Jetajobe</li> <li>ASSET EPA 200.7 B 8/9/202 Diane Jetajobe</li> <li>ASSET EPA 200.8 AS 8/9/202 Diane Jetajobe</li> <li>ASSET EPA 200.8 AS 8/9/202 Diane Jetajobe</li> </ul>						ASSET	EPA 200.8	CR	7/10/2020	Claire Ignacio		
<ul> <li>ASSET EPA 200.8 MO 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 NI 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 PB 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 PB 7/10/202 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/13/202 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/13/202 Claire Ignacio</li> <li>ASSET EPA 200.8 CR 7/9/202 Ria Abes</li> <li>ASSET EPA 300.0 FL 7/9/202 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/202 Ria Abes</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/9/202 Ria Abes</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/9/202 Ulia Ramit</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/14/202 Marion Cartin</li> </ul>						ASSET	EPA 200.8	CU	7/13/2020	Claire Ignacio		
<ul> <li>ASSET EPA 200.8 NI 7/10/2020 Claire Ignacio</li> <li>ASSET EPA 200.8 PB 7/10/2020 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/13/2020 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/13/2020 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/13/2020 Claire Ignacio</li> <li>ASSET EPA 200.8 SB 7/19/2020 Ria Abes</li> <li>ASSET EPA 300.0 FL 7/9/2020 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/2020 Ria Abes</li> <li>ASSET SM 2540C TDS 7/8/2020 Lilia Ramit</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/9/2020 Julia Bundalian</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/9/2020 Julia Bundalian</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/9/2020 Julia Bundalian</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/14/2020 Marion Cartin</li> <li>C-700B SC-700B-WDR-605 Ryan Phelps 8/4/2020 8:30:00 AM ASSET EPA 200.7 AL 8/9/2020 Diane Jetajobe</li> <li>ASSET EPA 200.7 FE 8/9/2020 Claire Ignacio</li> <li>ASSET EPA 200.8 BA 8/7/2020 Claire Ignacio</li> </ul>						ASSET	EPA 200.8	MN	7/10/2020	Claire Ignacio		
<ul> <li>ASSET</li> <li>EPA 200.8</li> <li>PB</li> <li>7/10/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/13/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/10/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/10/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>SB</li> <li>7/10/202</li> <li>Claire Ignacio</li> <li>ASSET</li> <li>EPA 200.8</li> <li>CR6</li> <li>7/9/2020</li> <li>Ria Abes</li> <li>ASSET</li> <li>EPA 300.0</li> <li>SO4</li> <li>7/9/2020</li> <li>Ria Abes</li> <li>ASSET</li> <li>SM 2540C</li> <li>TDS</li> <li>7/8/2020</li> <li>Liia Ramit</li> <li>ASSET</li> <li>SM 4500-NO3F</li> <li>NO3NO2N</li> <li>7/9/2020</li> <li>Liia Ramit</li> <li>BCLabs</li> <li>SM4500NH3G</li> <li>NH3N</li> <li>7/14/2020</li> <li>Liia Ramit</li> <li>ASSET</li> <li>EPA 200.7</li> <li>SM 2/9/2020</li> <li>Liia Ramit</li> <li>ASSET</li> <li>EPA 200.7</li> <li>SM 2/9/2020</li> <li>Diane Jetajobe</li> <li>ASSET</li> <li>EPA 200.7</li> <li>SM/9/2020</li> <li>Diane Jetajobe</li> <li>ASSET</li> <li>EPA 200.7</li> <li>SM/9/2020</li> <li>Diane Jetajobe</li> <li>ASSET</li> <li>EPA 200.7</li> <li>FE</li> <li>SM/9/2020</li> <li>Diane Jetajobe</li> <li>ASSET</li> <li>EPA 200.7</li> <li>FE</li> <li>SM/9/2020<!--</td--><td></td><td></td><td></td><td></td><td></td><td>ASSET</td><td>EPA 200.8</td><td>MO</td><td>7/10/2020</td><td>Claire Ignacio</td></li></ul>						ASSET	EPA 200.8	MO	7/10/2020	Claire Ignacio		
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<ul> <li>ASSET EPA 218.6 CR6 7/9/2020 Ria Abes</li> <li>ASSET EPA 300.0 FL 7/9/2020 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/2020 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/2020 Ria Abes</li> <li>ASSET EPA 300.0 SO4 7/9/2020 Ria Abes</li> <li>ASSET SM 2540C TDS 7/8/2020 Lilia Ramit</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/9/2020 Julia Bundalian</li> <li>ASSET SM 4500-NO3F NO3NO2N 7/9/2020 Lilia Ramit</li> <li>BCLabs SM4500NH3G NH3N 7/14/2020 Marion Cartin</li> <li>C-700B SC-700B-WDR-605 Ryan Phelps 8/4/2020 8:30:00 AM ASSET EPA 120.1 SC 8/5/2020 Lilia Ramit</li> <li>ASSET EPA 200.7 AL 8/9/2020 Diane Jetajobe</li> <li>ASSET EPA 200.7 FE 8/9/2020 Diane Jetajobe</li> <li>ASSET EPA 200.8 AS 8/9/2020 Claire Ignacio</li> </ul>						ASSET	EPA 200.8	SB	7/13/2020	Claire Ignacio		
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<ul> <li>ASSET EPA 300.0 SO4 7/9/2020 Ria Abes</li> <li>Right Abes<td></td><td></td><td></td><td></td><td></td><td>ASSET</td><td>EPA 218.6</td><td>CR6</td><td>7/9/2020</td><td>Ria Abes</td></li></ul>						ASSET	EPA 218.6	CR6	7/9/2020	Ria Abes		
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-605	Ryan Phelps	8/4/2020	8:30:00 AM	ASSET	EPA 200.8	CR	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	CU	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	MN	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	MO	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	NI	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	PB	8/7/2020	Claire Ignacio
					ASSET	EPA 200.8	SB	8/9/2020	Claire Ignacio
					ASSET	EPA 200.8	ZN	8/7/2020	Claire Ignacio
					ASSET	EPA 218.6	CR6	8/5/2020	Ria Abes
					ASSET	EPA 300.0	FL	8/5/2020	Ria Abes
					ASSET	EPA 300.0	SO4	8/5/2020	Ria Abes
					Field	HACH	PH	8/4/2020	Ryan Phelps
					ASSET	SM 2540C	TDS	8/5/2020	Lilia Ramit
					ASSET	SM 4500-NO3F	NO3NO2N	8/11/2020	Julia Bundalian
					ASSET	SM2130B	TRB	8/5/2020	Lilia Ramit
					BCLabs	SM4500NH3G	NH3N	8/11/2020	Marion Cartin
SC-700B	SC-700B-WDR-607	Ron Phelps	9/1/2020	9:25:00 AM	ASSET	EPA 120.1	SC	9/2/2020	Lilia Ramit
					ASSET	EPA 200.7	AL	9/8/2020	Diane Jetajobe
					ASSET	EPA 200.7	В	9/8/2020	Diane Jetajobe
					ASSET	EPA 200.7	FE	9/8/2020	Diane Jetajobe
					ASSET	EPA 200.8	AS	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	BA	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	CR	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	CU	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	MN	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	MO	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	NI	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	PB	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	SB	9/4/2020	Claire Ignacio
					ASSET	EPA 200.8	ZN	9/4/2020	Claire Ignacio
					ASSET	EPA 218.6	CR6	9/3/2020	Quennie Manimtim
					ASSET	EPA 300.0	FL	9/16/2020	Julia Bundalian
					ASSET	EPA 300.0	SO4	9/16/2020	Julia Bundalian
		Ryan Phelps			Field	HACH	PH	9/1/2020	Ryan Phelps
		Ron Phelps			ASSET	SM 2540C	TDS	9/2/2020	Lilia Ramit
					ASSET	SM 4500-NO3F	NO3NO2N	9/10/2020	Julia Bundalian
					ASSET	SM2130B	TRB	9/2/2020	Lilia Ramit
					BCLabs	SM4500NH3G	NH3N	9/8/2020	Marion Cartin

	Sampler	Sample	Sample		Analysis		Analysis	Lab
Location Sample ID	Name	Date	Time	Lab	Method	Parameter	Date	Technician
SC-701 SC-701-WDR-604	Ryan Phelps	7/7/2020	12:40:00 PM	ASSET	EPA 120.1	SC	7/8/2020	Lilia Ramit
				ASSET	EPA 200.8	AG	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	AS	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	BA	7/13/2020	Claire Ignacio
				ASSET	EPA 200.8	BE	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	CD	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	CO	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	CR	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	CU	7/13/2020	Claire Ignacio
				ASSET	EPA 200.8	MO	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	NI	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	PB	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	SB	7/15/2020	Claire Ignacio
				ASSET	EPA 200.8	SE	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	TL	7/10/2020	Claire Ignacio
				ASSET	EPA 200.8	V	7/13/2020	Claire Ignacio
				ASSET	EPA 200.8	ZN	7/10/2020	Claire Ignacio
				ASSET	EPA 218.6	CR6	7/9/2020	Ria Abes
				ASSET	EPA 245.1	HG	7/9/2020	Diane Jetajobe
				ASSET	EPA 300.0	FL	7/9/2020	Ria Abes
				Field	HACH	PH	7/7/2020	Ryan Phelps
				ASSET	SM 2540C	TDS	7/8/2020	Lilia Ramit
Phase Separator Phase Separator-604-Slud	ge Ryan Phelps	7/7/2020	1:25:00 PM	ASSET	EPA 300.0	FL	7/13/2020	Ria Abes
				ASSET	EPA 6010B	AG	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	BA	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	BE	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	CD	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	CO	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	CR	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	CU	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	MN	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	MO	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	NI	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	PB	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	SB	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	SE	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	TL	7/8/2020	Diane Jetajobe
				ASSET	EPA 6010B	V	7/8/2020	Diane Jetajobe

Third Quarter 2020 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
Phase Separator P	hase Separator-604-Sludge	Ryan Phelps	7/7/2020	1:25:00 PM	ASSET	EPA 6010B	ZN	7/8/2020	Diane Jetajobe
					ASSET	EPA 7471A	HG	7/8/2020	Diane Jetajobe
					ASSET	SW 6020A	AS	7/16/2020	Claire Ignacio
					ASSET	SW 7199	CR6	7/9/2020	Ria Abes

#### Notes:

SC-700B = Sampling location for all effluent samples is tap on pipe downstream from tank T-700 to injection well IW-2 (see attached P&ID TP-PR-10-10-04).

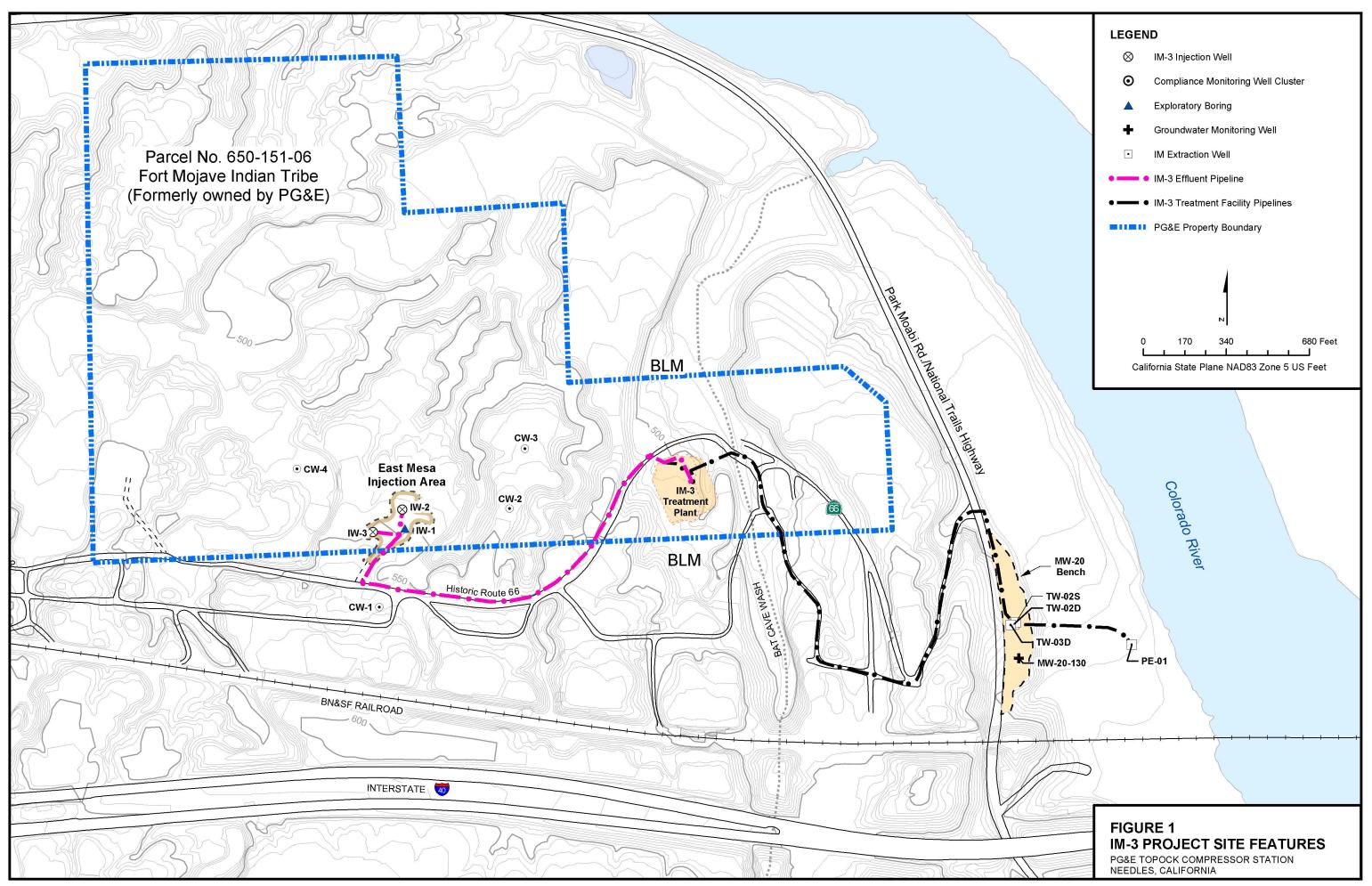
SC-100B = Sampling location for all influent samples is tap on pipe from extraction wells into tank T-100 (see attached P&ID TP-PR-10-10-04).

SC-701 = Sampling location for all reverse osmosis samples is tap on pipe T-701 (see attached P&ID PR-10-04).

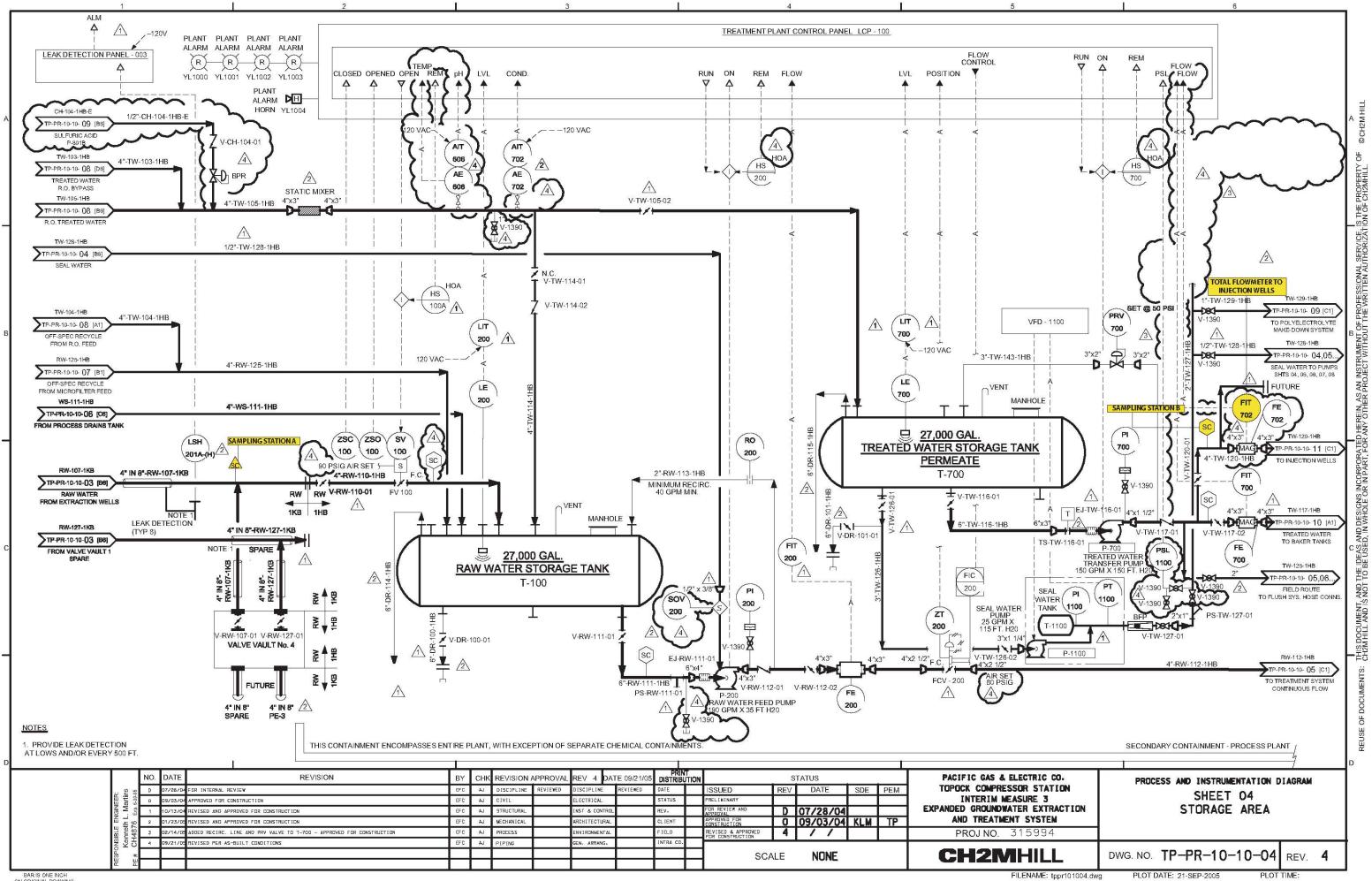
Prior to April 11, 2007 the analytical methods listed in the 40 CFR Part 136 for pH and TDS were E150.1 and E160.1, respectively. Per EPA and Department of Health Services guidelines, the analytical methods listed in the current 40 CFR Part 136 have changed to SM4500-H B and SM2540C as shown on the table.

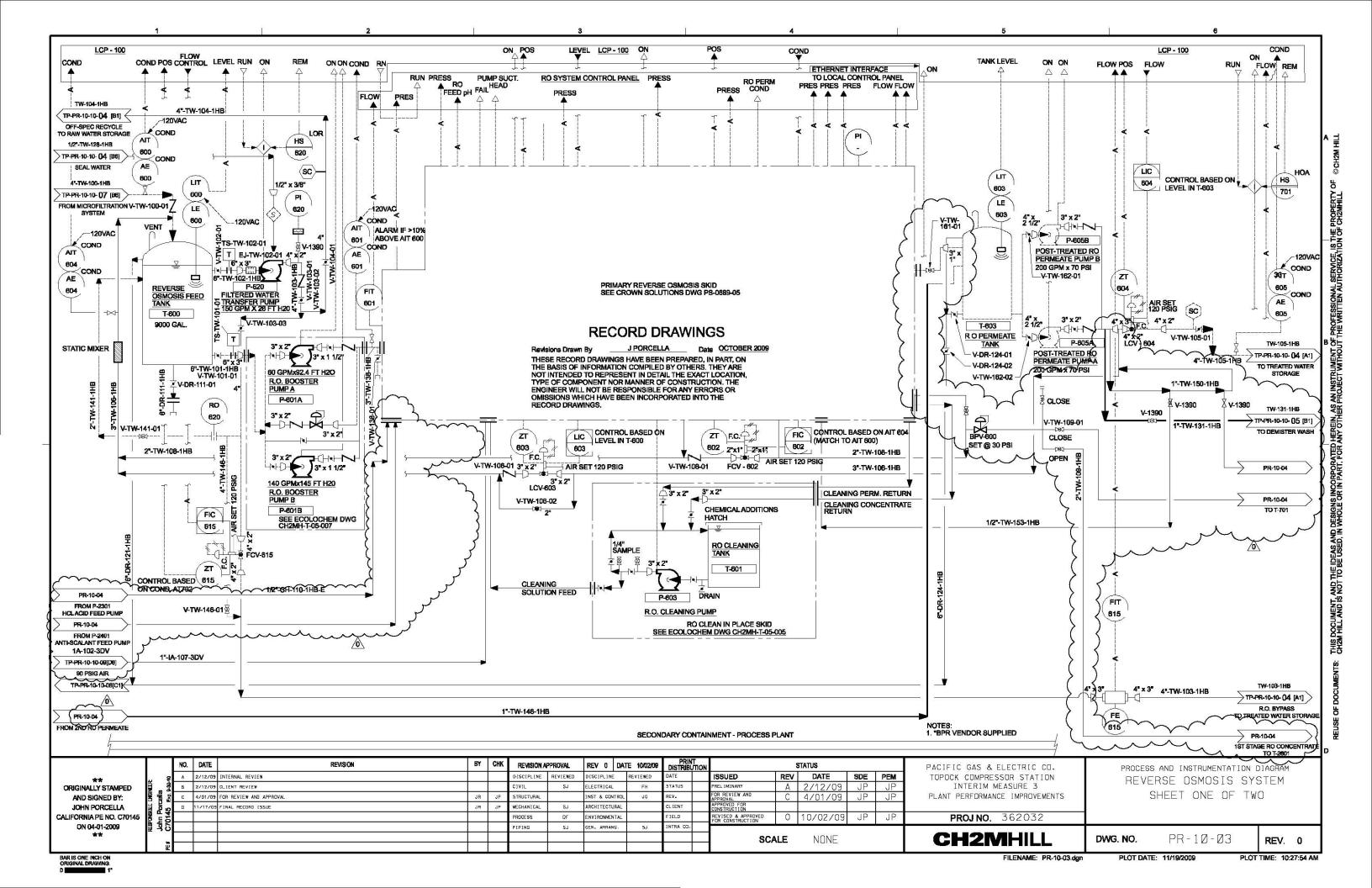
ALKB = ALKC = AL = AS = B = BA = BA = BA = CD = CC = CR = CR6 = CU = FE = FETD = EL =	alkalinity, bicarb as CaCO3 alkalinity, carb as CaCO3 aluminum silver arsenic boron barium beryllium cadmium cobalt chromium hexavalent chromium copper iron iron, dissolved fluoride	PB = PH = SC = SC = SC = TDS = TL = TRB = V =	molybdenum moisture ammonia (as N) nickel nitrate/nitrite (as N) lead pH antimony specific conductance selenium sulfate total dissolved solids thallium turbidity vanadium zinc
	-		,
FL =	fluoride	ZN =	zinc
HG =	mercury		
MN =	manganese		
	manager and a share build		

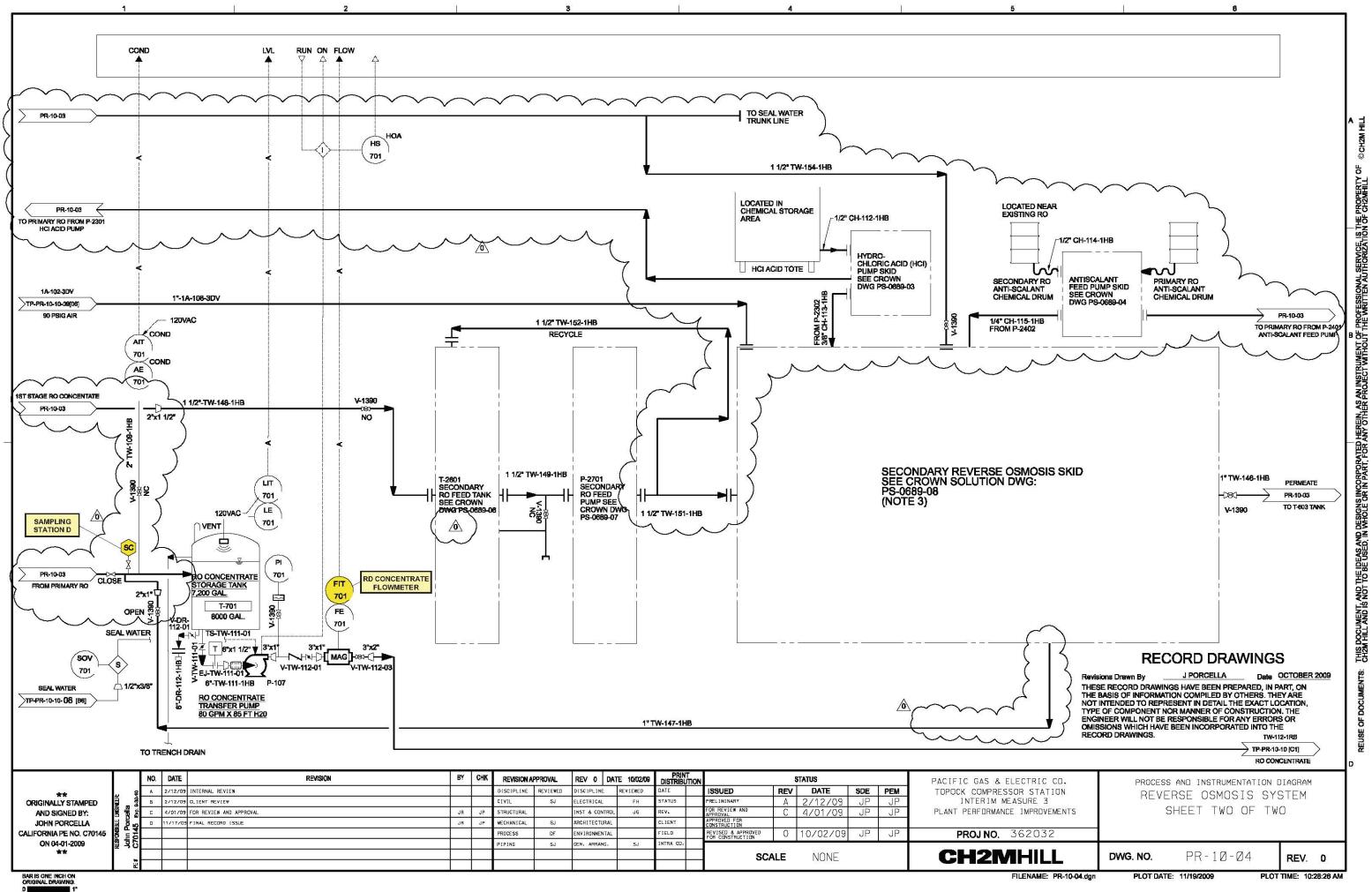
**Figures** 

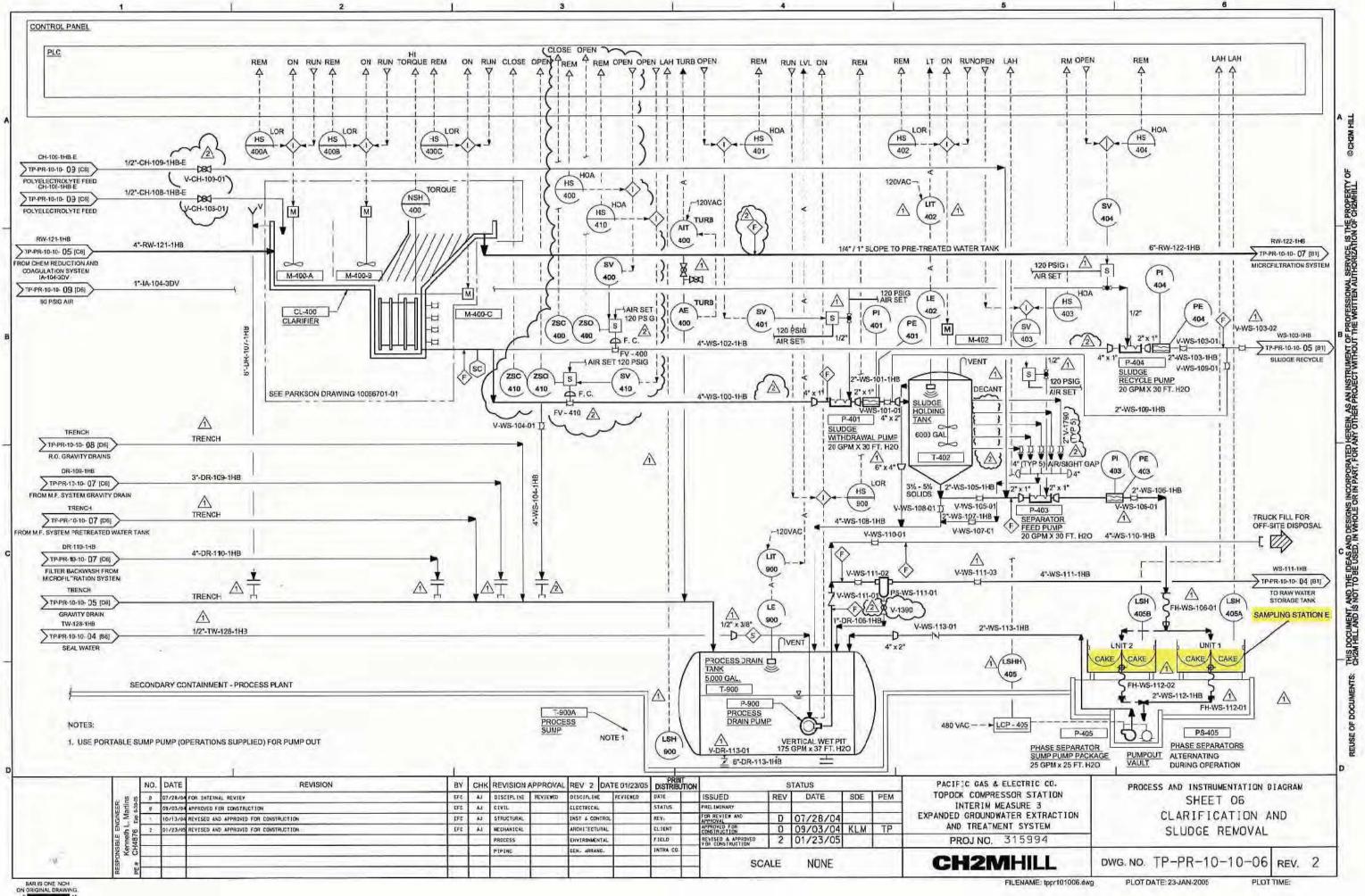


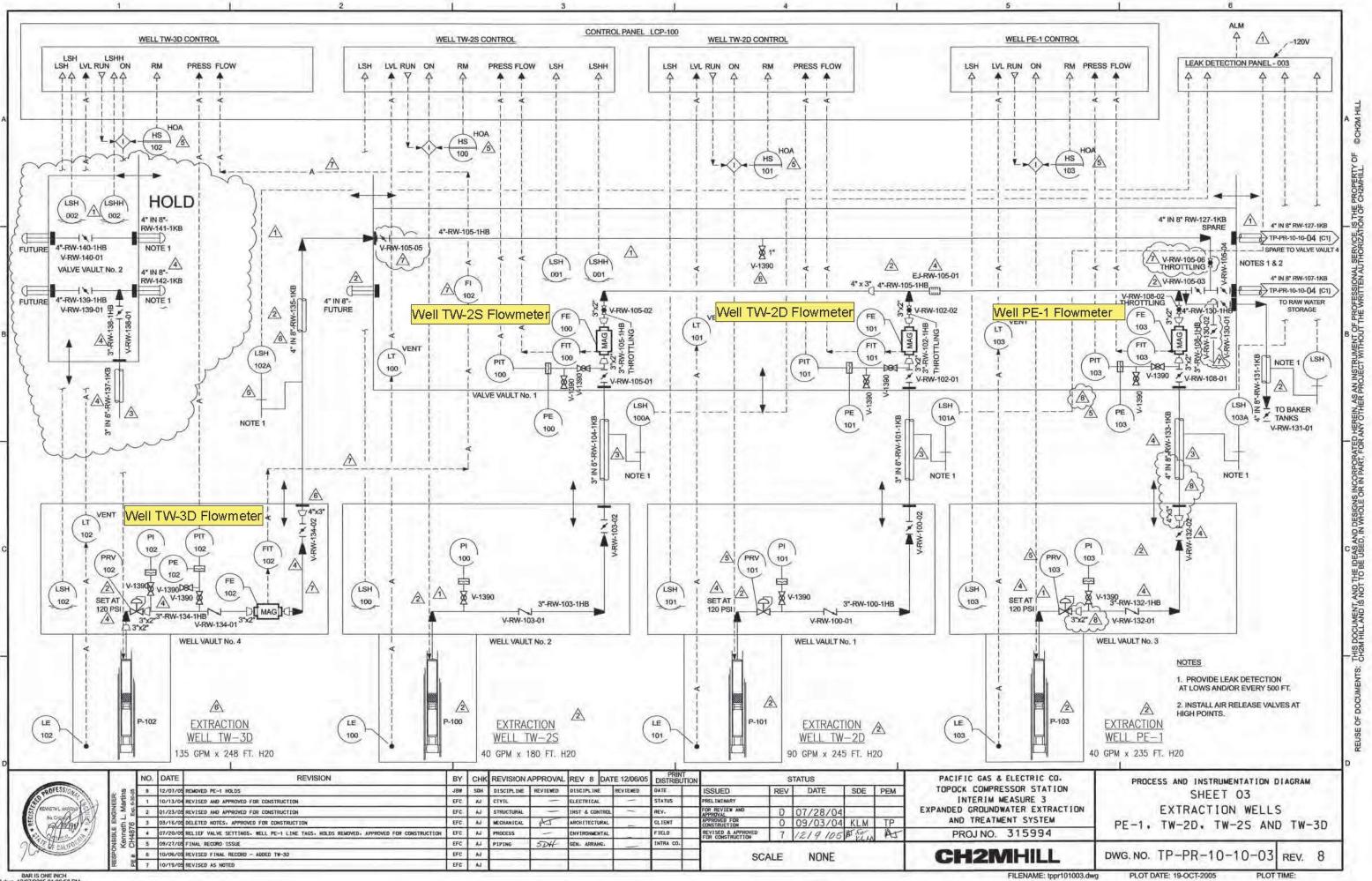
\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2010\\IM3\IM3\_PROJECT\_AREA\_APRIL10.MXD JLAMANTI 10/8/2010 12:12:30

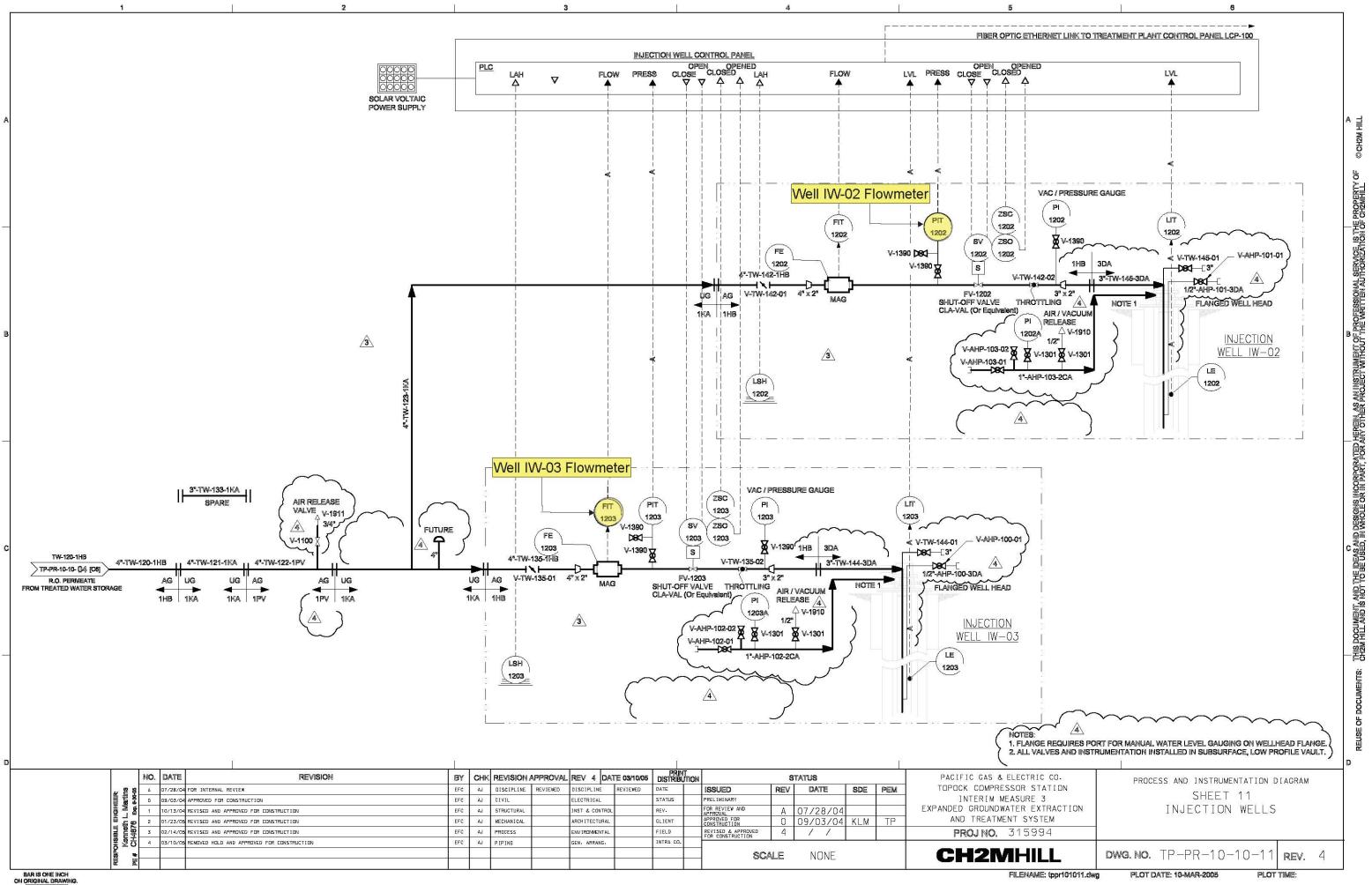












Appendix A RO Concentrate Non-hazardous Waste Manifests



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# NON-HAZARDOUS WASTE MANIFEST

						Profile Number
						15713
Generator Name	PG&E Topock G Extraction Phone: (760) 3 Emergency: (800	Site 26-3326	Generator Address		15 Mi Southw Hwy I40 & Pa Needles, 0 EPA ID#: CA	CA 92363
Waste Type	No	n Hazardous Waste, i	Liquid (Brine V	Water)		
material ("Exc solvent or oil a Compensation rule, whether of any costs incur expressly agre	he waste material removed from cluded Waste"). The term "haza is defined in or pusuant to the Re and Liability Act, the Federal C existing as of the date of this agre- red by the Transporter or Dispo- es to defend, indemnify and hold or arising out of any such hazar	irdous material" is defin esource Conservation an lean Water Act, or any cement or subsequently osal Facility in handling harmless the Transpor	ned as any one or ad Recovery Act, other federal, sta enacted. I also ac or proper dispos	more poll the Comp te or local cknowledg al of any h	utant, toxic substa rehensive Environ environmental la ge that the Genera azardous waste a	ance, hazardous substance, imental Response w, regulation, ordinance, or tor shall be responsible for nd that the Generator
Generator Rep. Name (please print)	Seot O'D	enne (	Generator Rep. Signature	5	att R	Dell
Transporter Name	MP Environment	al Services	Transporter Address			51st Ave. AZ 85043
		Vehicle In				
Truck #	750	Tank#	346	1	nspection Paper	work Verified By:
Waste Removed (Gallons)	5000 Tota Read (Gall	lings	<u>Fi</u>	nish	Date Sto	Time           7D         050D
the servicing	the information above is accuvely vehicle. I am aware that fals	ification of this manif	est may result in	n prosecu	ition.	
	t comply with proper PPE re	quirements. Includin	g; gloves, safety	vest, hai	rd hat, steel toes	shoes & safety glasses
Driver Name (please print)	Manuel	Avena	Driver Signature	11	111	
Disposal Facility	Liquid Environmental So	lutions of Arizona	Address			n Buren Street AZ 85043
Waste Received			Date		Tim	e
(Gallons)						
Facility Rep. Name (please print)			Facility Rep. Signature			



## NON-HAZARDOUS WASTE MANIFEST

SOLUTI							Profile Number
							15713
Generator Name	PG&E Topock Extracti Phone: (760 Emergency: (8	on Site ) 326-3326		Generator Address		15 Mi Southw Hwy I40 & Pa Needles, 0 EPA ID#: CA	irk Moabi Rd. CA 92363
Waste Type		Non Hazaro	dous Waste, I	.iquid (Brine V	Vater)	1	
solvent or oil as Compensation rule, whether e any costs incur expressly agree	uded Waste"). The term "h defined in or pusuant to the and Liability Act, the Federa xisting as of the date of this a red by the Transporter or D s to defend, indemnify and h or arising out of any such ha	Resource C al Clean Wat agreement or isposal Facil old harmles	onservation and ter Act, or any or r subsequently of ity in handling s the Transport	d Recovery Act, t other federal, stat enacted. I also ac or proper dispose	he Comprete or local of knowledge	chensive Environ environmental la that the Genera izardous waste a	umental Response w, regulation, ordinance, or tor shall be responsible for nd that the Generator
Generator Rep. Name (please print)	How PH.	24,23		Generator Rep. Signature	1	11/2	1/2-
Transporter Name	MP Environme	ental Servi	ces	Transporter Address			51st Ave. AZ 85043
		,	Vehicle Inf	formation	_		
Truck #	150	Tank#	3344		h	spection Paper	rwork Verified By:
Waste		otalizer	Start	Fi	nish	Date	Time
Removed (Gallons)	1 1 1 1 1 1 1	eadings Gallons)	1.1 R	pd.	H.	7-13-2	0 7.00
	the information above is a vehicle. I am aware that t						nerator is contained in
Driver must	comply with proper PPE	requireme	ents, Includin	g: gloves, safety	vest, har	d hat, steel toes	shoes & safety glasses

Driver Name (please print)	Mand Avena	Driver Signature	1111/
	14 22		0° - 6° - 61

Disposal Facility	Liquid Environmental Solutions of Arizona	Address	5159 West Van Buren Street Phoenix, AZ 85043
Waste Received (Gallons)		Date	Time
Facility Rep. Name (please print)		Facility Rep. Signature	

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# NON-HAZARDOUS WASTE MANIFEST

50101							Profile Number	
							15713	
Generator Name	Ext Phone:	pock Groundwater raction Site (760) 326-3326 y: (800) 833-7602		Generator Address		15 Mi Southw Hwy I40 & Pa Needles, 0 EPA ID#: CA	rk Moabi Rd. CA 92363	
Waste Type		Non Hazardou	ıs Waste,	Liquid (Brine Wa	ater)			
solvent or oil a Compensation rule, whether o any costs incur expressly agree resulting from	s defined in or pusuant t and Liability Act, the Fo	o the Resource Cons ederal Clean Water A this agreement or su or Disposal Facility i nd hold harmless th	servation ar Act, or any bsequently in handling	id Recovery Act, the other federal, state enacted. I also ack or proper disposal	e Compre or local e nowledge of any ha	hensive Environ nvironmental la that the Genera zardous waste a	w, regulation, ordinance, tor shall be responsible fo ad that the Generator	
Generator Rep. Name (please print)	CHIERE L	ENTE		Generator Rep. Signature		ha.	An	
Transporter Name	MP Enviro	nmental Services		Transporter Address				
		Vel	hicle In	formation	-	-		
Truck #		Tank#			In	spection Paper	work Verified By:	
Waste Removed (Gallons)	3500	Totalizer Readings (Gallons)	Start	Fini	sh	Date 7/17	Time	
the servicing	the information above vehicle. I am aware th	nat falsification of	this manif	est may result in p	prosecuti	ion.		
Driver mus	t comply with proper	PPE requirements.	. Includin	g; gloves, safety v	est, hard	hat, steel toes	shoes & safety glasses	
Driver Name (please print)	Manual	Avene		Driver Signature	18	11		
Disposal Facility	Liquid Environme	ntal Solutions of A	Arizona	Address	:	5159 West Va	n Buren Street	

Disposal Facility	Liquid Environmental Solutions of Arizona	Address	5159 West Van Buren Street Phoenix, AZ 85043
Waste Received (Gallons)		Date	Time
Facility Rep. Name (please print)		Facility Rep. Signature	



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## NON-HAZARDOUS WASTE MANIFEST

SOLUTI	ONS						Profile	Number
							157	713
Generator Name	PG&E Topock ( Extractio Phone: (760) Emergency: (80	n Site 326-3326		Generator Address		15 Mi Southwa Hwy 140 & Pa Needles, C EPA ID#: CA	rk Moabi Rd. CA 92363	
Waste Type	N	on Hazard	ous Waste, Li	quid (Brine Wa	ter)			
solvent or oil as Compensation a rule, whether er any costs incurr expressly agree	uded Waste"). The term "ha defined in or pusuant to the l and Liability Act, the Federal xisting as of the date of this ag red by the Transporter or Dis s to defend, indemnify and ho or arising out of any such haze	Resource Co Clean Wate reement or bosal Facilit d harmless	nservation and r Act, or any of subsequently en y in handling of the Transporte	Recovery Act, the her federal, state o acted. I also ackn proper disposal o	Compre or local e owledge of any ha	thensive Environ nvironmental lay that the General zardous waste ar	mental Respo w, regulation, tor shall be re- ind that the Ge	nse ordinance, or sponsible for nerator
Generator Rep. Name (please print)	Etters 10			Generator Rep. Signature		lan .	L.	
Transporter Name	MP Environmer	tal Servic	es	Transporter Address			51st Ave. AZ 85043	
		v	ehicle Info	rmation				_
Truck #		Tank#			In	spection Paper	work Verifie	d By:
Waste Removed (Gallons)	Res	alizer dings llons)	Start	Finis	h	Date 7/24/2	Time	
I certify that t the servicing v	he information above is ac vehicle. I am aware that fa	curate, and	l that only the of this manifes	waste certified f	or remo	val by the Gen ion.	erator is con	tained in

Driver mus	t comply with proper PPE requirements. Including	g; gloves, safet	y vest, hard hat, steel toes shoes & safety glasses
Driver Name (please print)	Man I Am	Driver Signature	11111

Disposal Facility	Liquid Environmental Solutions of Arizona	Address	5159 West Van Buren Street Phoenix, AZ 85043
Waste Received (Gallons)		Date	Time
Facility Rep. Name (please print)		Facility Rep. Signature	



NON-HAZARDOUS WASTE MANIFEST

							Pi	ofile Number
								15713
Generator Name	Extra Phone: (	ock Groundwate action Site 760) 326-3326 : (800) 833-7602		Generator Address		Hwy I40 Nee	outhwest of ? 0 & Park Mo dles, CA 923 #: CAR0001	abi Rd. 63
Waste Type		Non Hazardo	ous Waste,	Liquid (Brine V	Vater)			1
material ("Exc solvent or oil a Compensation rule, whether of any costs incur expressly agree	te waste material removed luded Waste"). The term s defined in or pusuant to and Liability Act, the Fed existing as of the date of the red by the Transporter of es to defend, indemnify an or arising out of any such	"hazardous mat the Resource Co leral Clean Wate tis agreement or s r Disposal Facilit d hold harmless	erial" is defin nservation an r Act, or any subsequently y in handling the Transpor	ned as any one or ad Recovery Act, other federal, sta enacted. I also a or proper dispos	more p the Con te or loo cknowle al of an	ollutant, toxic aprehensive E cal environme edge that the G y hazardous w	substance, ha nvironmental ntal law, regu Generator sha aste and that	izardous substance, Response lation, ordinance, o ll be responsible for the Generator
Generator Rep. Name (please print)	Proces 20	Thre		Generator Rep. Signature	Ú	Riv	P	
Transporter Name	MP Environmental Services			45 S. 51st A penix, AZ 8:				
		v	ehicle In	formation				
Truck #		Tank#				Inspection	Paperwork	Verified By:
Waste Removed (Gallons)	5000	Totalizer Readings (Gallons)	Start	Fi	nish	Date	21/202	Time
I certify that the servicing	the information above vehicle. I am aware the	is accurate, and at falsification o	that only the this manif	ne waste certifie lest may result i	d for r n prose	emoval by th ecution.	e Generator	is contained in
Company of the second of the second s	t comply with proper P	PE requiremen	ts. Includin	g; gloves, safety	vest, l	hard hat, stee	el toes shoes	& safety glasses
Driver Name (please print)	Manuel	Ave	- G	Driver Signature	2	111	2	
		_						
Disposal Facility	Liquid Environmen	tal Solutions o	f Arizona	Address			est Van Bur enix, AZ 85	200 90 20 20 20 20 20 20 20 20 20 20 20 20 20
Waste Received (Gallons)				Date			Time	
Facility Rep. Name (please print)			57	Facility Rep. Signature				

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NON-HAZARDOUS WASTE MANIFEST

SOLUT	I O N S			[	Profile Number
					15713
Generator Name	Extrac Phone: (76	k Groundwater tion Site 0) 326-3326 800) 833-7602	Generator Address	15 Mi Southwe Hwy 140 & Par Needles, C EPA ID#: CAI	k Moabi Rd. A 92363
Waste Type		Non Hazardous Wast	e, Liquid (Brine Wate	r)	
material ("Exc solvent or oil a Compensation rule, whether of any costs incur expressly agree	he waste material removed fi cluded Waste"). The term " is defined in or pusuant to the and Liability Act, the Feder existing as of the date of this rred by the Transporter or E es to defend, indemnify and or arising out of any such he	hazardous material" is d the Resource Conservation al Clean Water Act, or a agreement or subsequen Disposal Facility in handl hold harmless the Trans	efined as any one or more and Recovery Act, the C ny other federal, state or tly enacted. I also acknow ing or proper disposal of	e pollutant, toxic substan comprehensive Environn local environmental law wledge that the Generate any hazardous waste an	nce, hazardous substance nental Response , regulation, ordinance, o or shall be responsible for d that the Generator
Generator Rep. Name (please print)	Comos c	Cost	Generator Rep. Signature	J.J.	11
Transporter Name	r MP Environmental Services Transporter 3045				ilst Ave. AZ 85043
		Vahiala	Information		
Truck #		Tank#	Information	Inspection Papers	work Verified By:
Waste Removed (Gallons)	Cons F	otalizer <u>Start</u> teadings Gallons)	Finish	Date 9/7/2	Time
I certify that the servicing	the information above is a vehicle. I am aware that	accurate, and that only falsification of this ma	the waste certified for nifest may result in pro-	removal by the Gene osecution.	rator is contained in
Driver mus	t comply with proper PPI	E requirements. Inclu	ding; gloves, safety ves	t, hard hat, steel toes s	shoes & safety glasses
Driver Name (please print)	al and	Au a	Driver Signature	11.1	
Disposal Facility	Liquid Environmental	Solutions of Arizona	Address	5159 West Van Phoenix, A	
Waste Received			Date	Time	
(Gallons)					
cacility Rep. ame (please print)			Facility Rep. Signature		



# NON-HAZARDOUS WASTE MANIFEST

SOLUTI	ONS						I	Profile Number
								15713
Generator Name	Extr Phone: (	ock Groundw action Site 760) 326-332 /: (800) 833-7	6	Generator Address		Hwy I N	Southwest of 40 & Park M cedles, CA 9: D#: CAR000	oabi Rd. 2363
Waste Type		Non Haza	rdous Waste,	Liquid (Brine V	Vater)			
material ("Exc solvent or oil a Compensation rule, whether o any costs incur expressly agree	te waste material removed luded Waste"). The term s defined in or pusuant to and Liability Act, the Fee existing as of the date of the red by the Transporter of es to defend, indemnify an or arising out of any such	n "hazardous n o the Resource deral Clean W his agreement r Disposal Fac od hold harmle	naterial" is defin Conservation and ater Act, or any or subsequently ility in handling ess the Transpor	ned as any one or nd Recovery Act, t other federal, stat enacted. I also ac or proper dispose	more po the Com te or loca knowled al of any	llutant, tox prehensive al environn ige that the hazardous	ic substance, Environment nental law, reg Generator sh waste and th	hazardous substance al Response gulation, ordinance, nall be responsible fo at the Generator
Rep. Name (please print)	Byan Pl	relpo		Rep. Signature	t	K-	-	-
Transporter Name	MP Enviror	nmental Serv	Hennal Services				045 S. 51st noenix, AZ	
)			V. L. L. L.					
Fruck #	78 2	Tank	Vehicle In #	4.Z		Inspectio	n Paperworl	k Verified By:
Waste Removed (Gallons)	5000	Totalizer Readings (Gallons)	Start	Fi	nish	Date	Inh	Time
certify that he servicing	the information above vehicle. I am aware th	is accurate, a at falsificatio	nd that only the only	ne waste certifie fest may result in	l for re 1 prosec	moval by	the Generate	or is contained in
Driver mus	t comply with proper P	PE requirem	nents. Includin	ig; gloves, safety	vest, h	ard hat, st	eel toes shoe	s & safety glasses
Driver Name please print)	Manuel	Ace	Y.C.	Driver Signature	11	111	1/2	
Disposal Facility	Liquid Environmen	tal Solutions	s of Arizona	Address			/est Van Bu oenix, AZ 8	
Vaste Received Gallons)				Date			Time	
<b>acility Rep.</b> ame please print)				Facility Rep. Signature				
HITE - Tr	ansporter YELLO		d Generator	GOLDENR		Disposal I	Facility I	PINK - Generato

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NON-HAZARDOUS WASTE MANIFEST

					Profile Number	
					15713	
Generator Name	PG&E Topock C Extraction Phone: (760) Emergency: (800	vest of Needles ark Moabi Rd. CA 92363 AR000151118				
Waste Type	No	n Hazardous Waste,	Liquid (Brine Wate	er)		
material ("Exc solvent or oil a Compensation rule, whether of any costs incur expressly agree	he waste material removed from cluded Waste"). The term "haz is defined in or pusuant to the R and Liability Act, the Federal d existing as of the date of this ago red by the Transporter or Disp es to defend, indemnify and hol or arising out of any such haza	ardous material" is defi esource Conservation a Clean Water Act, or any reement or subsequently osal Facility in handling d harmless the Transpor	ned as any one or mor nd Recovery Act, the C other federal, state or enacted. I also ackno or proper disposal of	e pollutant, toxic subst Comprehensive Environ local environmental la wledge that the Genera any hazardous waste a	ance, hazardous substance, nmental Response w, regulation, ordinance, o itor shall be responsible for nd that the Generator	
Generator Rep. Name (please print)	14215 1	CINT	Generator Rep. Signature	1h.	l.	
Transporter Name	MP Environmen	tal Services	Transporter Address	3045 S. 51st Ave. Phoenix, AZ 85043		
		Vehicle In	formation			
Truck #		Tank#	iloi mation	Inspection Pape	rwork Verified By:	
Waste Removed (Gallons)	Rea	Totalizer Readings (Gallons)		Date 8/a/2	Time	
I certify that the servicing	the information above is acc vehicle. I am aware that fal	urate, and that only this mani-	he waste certified fo fest may result in pr	r removal by the Ger osecution.	nerator is contained in	
Driver mus	t comply with proper PPE re	equirements. Includin	ng; gloves, safety ves	t, hard hat, steel toes	s shoes & safety glasses	
Driver Name (please print)	anamel	Avena	Driver Signature	1111	2	
Disposal Facility	Liquid Environmental Solutions of Arizona		Address		in Buren Street AZ 85043	
Waste Received			Date	Tin	ie	
(Gallons)			_			
Facility Rep. Name (please print)			Facility Rep. Signature			



NON-HAZARDOUS WASTE MANIFEST

							123	Profile Number
								15713
Generator Name	Ext Phone:	pock Groundw traction Site (760) 326-332 sy: (800) 833-7	26	Generator Address		Hwy	Southwest of 40 & Park N eedles, CA 9 ID#: CAR00	10abi Rd. 2363
Waste Fype		Non Haza	ardous Waste	, Liquid (Brine V	Water)			
colvent or oil Compensation rule, whether any costs incu- expressly agree	the waste material remove scluded Waste"). The terr as defined in or pusuant t n and Liability Act, the Fe existing as of the date of t urred by the Transporter of ees to defend, indemnify a n or arising out of any suc	the Resource ederal Clean W this agreement or Disposal Fac nd hold harmly	Conservation a ater Act, or an or subsequently illity in handlin	ined as any one or and Recovery Act, y other federal, sta y enacted. I also ad	more p the Con te or lo cknowle	collutant, tox mprehensive cal environn edge that the	ic substance, Environmen iental law, re Generator s	hazardous substanc tal Response gulation, ordinance, hall be responsible fo
Generator Rep. Name please print)	CHRIS	LEUT	z	Generator Rep. Signature	2	Hu	H	9
Transporter Name	MP Enviro	nmental Serv	Transporter Address		3045 S. 51st Ave. Phoenix, AZ 85043			
			Vahiela Ir	formation	_			
ruck #	782	Tank		46		Inspectio	n Paperwor	k Verified By:
Vaste lemoved Gallons)	5500	Totalizer Readings (Gallons)	Start	Fir	nish	Date	Ter Ine	Time
it ber nemg	the information above vehicle. I am aware th st comply with proper F	at faisificatio	n of this mani	fest may result in	n prose	cution.		
river ame lease print)	planut	Aur		Driver Signature	2			s & sarety glasses
isposal acility	Liquid Environmen	tal Solutions	of Arizona	Address 5159 West Var Phoenix, A		est Van Bu benix, AZ 8	Construction of the second second	
aste eceived allons)				Date			Time	
		_				-		

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P 5473

NON-HAZARDOUS WASTE MANIFEST

SOLUTI	0 N 5				[	Profile Number
						15713
Generator Name	PG&E Topock C Extraction Phone: (760) Emergency: (800	n Site 326-3326	Generate Address	r	15 Mi Southwes Hwy I40 & Par Needles, CA EPA ID#: CAR	k Moabi Rd. A 92363
Waste Type	No					
material ("Exc solvent or oil as Compensation rule, whether e any costs incur expressly agree	e waste material removed from luded Waste"). The term "haz s defined in or pusuant to the R and Liability Act, the Federal G xisting as of the date of this agr red by the Transporter or Disp is to defend, indemnify and hole or arising out of any such haza	ardous material" cesource Conserva Clean Water Act, reement or subseq osal Facility in ha d harmless the Tr	is defined as any or ation and Recovery or any other federa juently enacted. I a andling or proper di	e or more p Act, the Cou , state or lo so acknowl sposal of an	oollutant, toxic substan mprehensive Environm cal environmental law edge that the Generato y hazardous waste and	ace, hazardous substance, nental Response , regulation, ordinance, or or shall be responsible for d that the Generator
Generator Rep. Name (please print)	Ryan Phelips	Generato Rep. Signaturo	X	for	-	
Transporter Name	MP Environmen	Transpor Address	ter	3045 S. 51st Ave. Phoenix, AZ 85043		
		Vehic	le Informatio			
Truck #	82	Tank#	4 (p		Inspection Paperv	vork Verified By:
Waste Removed		alizer St dings	art	Finish	Date	Time
(Gallons)		llons)			8-31-24	20 9:00
I certify that t the servicing	he information above is acc vehicle. I am aware that fals	urate, and that sification of this	only the waste cer manifest may res	tified for r alt in pros	emoval by the Gene ecution.	rator is contained in
Driver must	comply with proper PPE re	equirements. In	cluding; gloves, sa	fety vest,	hard hat, steel toes s	hoes & safety glasses

Driver Driver Name M. Signature (please print)

Disposal Facility	Liquid Environmental Solutions of Arizona	Address	5159 West Van Buren Street Phoenix, AZ 85043
Waste Received (Gallons)		Date	Time
Facility Rep. Name (please print)		Facility Rep. Signature	

WHITE - Transporter YELLOW - Second Generator GOLDENROD - Disposal Facility PINK - Generator Liquid Environmental Solutions of Arizona 5159 West Van Buren Street Phoenix, AZ 85043 www.liquidenviro.com

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P 5474

NON-HAZARDOUS WASTE MANIFEST

SOLUTI	ONS				Profile Number
					15713
Generator Name	PG&E Topock G Extraction Phone: (760) 3 Emergency: (800	Site 26-3326	Generator Address	15 Mi Southwe Hwy I40 & Pai Needles, C EPA ID#: CA	rk Moabi Rd. A 92363
Waste Type	No	n Hazardous Wa	iste, Liquid (Brine W	Vater)	
material ("Exc solvent or oil as Compensation rule, whether e any costs incur expressly agree	e waste material removed from luded Waste"). The term "haza s defined in or pusuant to the Re and Liability Act, the Federal C xisting as of the date of this agr red by the Transporter or Disp is to defend, indemnify and hold or arising out of any such hazar	rdous material" is source Conservati lean Water Act, or eement or subsequ osal Facility in han harmless the Tran	defined as any one or ion and Recovery Act, t r any other federal, stat ently enacted. I also ac dling or proper disposa	more pollutant, toxic substa he Comprehensive Environ e or local environmental law knowledge that the Generat l of any hazardous waste an	nce, hazardous substance, mental Response v, regulation, ordinance, or or shall be responsible for ad that the Generator
Generator Rep. Name (please print)	Charles Les	172	Generator Rep. Signature	Chtra p	9
Transporter Name	MP Environmental Services		Transporter Address	3045 S. 51st Ave. Phoenix, AZ 85043	
		Vahlal	e Information		
Truck #		Tank#	einformation	Inspection Paper	work Verified By:
	782		75		E.c.

Waste	Totaliz		Start	Finish	Date	Time
Removed (Gallons)	5200	Readings (Gallons)			- 7-41 217 h	
the servicing	the information above vehicle. I am aware th st comply with proper I	at falsification	of this manifest m	ay result in prose	cution.	
Driver Name			Dri		1 1	

Disposal Facility	Liquid Environmental Solutions of Arizona	Address	5159 West Van Buren Street Phoenix, AZ 85043
Waste Received (Gallons)		Date	Time
Facility Rep. Name (please print)		Facility Rep. Signature	



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NON-HAZARDOUS WASTE MANIFEST

SOLUTIO	ONS		Profile Number
			15713
Generator Name	PG&E Topock Groundwater Extraction Site Phone: (760) 326-3326 Emergency: (800) 833-7602	Generator Address	15 Mi Southwest of Needles Hwy I40 & Park Moabi Rd. Needles, CA 92363 EPA ID#: CAR000151118
Waste Type	Non Hazardous Was	ste, Liquid (Brine Wat	er)
solvent or oil as Compensation a rule, whether ex any costs incurre expressly agrees	defined in or pusuant to the Resource Conservation nd Liability Act, the Federal Clean Water Act, or	on and Recovery Act, the any other federal, state o ntly enacted. I also ackno ling or proper disposal of	r local environmental law, regulation, ordinance, or owledge that the Generator shall be responsible for f any hazardous waste and that the Generator
Generator Rep. Name (please print)	Chilles LEnte	Generator Rep. Signature	Phan for
Transporter Name	MP Environmental Services	Transporter Address	3045 S. 51st Ave. Phoenix, AZ 85043
Truck #	Venicle Tank#	Information	Inspection Paperwork Verified By

			ehicle Inform	nation				
Fruck # 7,82		Tank#	Tank# 3346		Inspection Paperwo	Inspection Paperwork Verified By:		
Waste		Totalizer	Start	Finish	Date	Time		
Removed (Gallons)		Readings (Gallons)			n/n/se			
and the second sec	the information above vehicle. I am aware th		The second se		removal by the Genera	ator is contained in		
Driver mus	t comply with proper	PPE requireme	nts. Including; glo	oves, safety vest	t, hard hat, steel toes sh	oes & safety glasses		
Driver Name			107325	iver	14114/1	~		

(please print)

Signature

Disposal Facility	Liquid Environmental Solutions of Arizona	Address	5159 West Van Buren Street Phoenix, AZ 85043
Waste Received (Gallons)		Date	Time
Facility Rep. Name (please print)		Facility Rep. Signature	



NON-HAZARDOUS WASTE MANIFEST

SOLUTI						[	Profile Number
							15713
Generator Name	PG&E Topo Extra Phone: (7 Emergency:	Generator Address		15 Mi Southwest of Needles Hwy 140 & Park Moabi Rd. Needles, CA 92363 EPA ID#: CAR000151118			
Waste Type		Non Ha	azardous Waste,	Liquid (Brine V	/ater)		
material ("Exc solvent or oil a Compensation rule, whether of any costs incur expressly agree	e waste material removed luded Waste"). The term s defined in or pusuant to and Liability Act, the Fed existing as of the date of the red by the Transporter or es to defend, indemnify and or arising out of any such	"hazardou the Resour eral Clean is agreeme Disposal I d hold har	as material" is defi ree Conservation au Water Act, or any ent or subsequently Facility in handling mless the Transpor	ned as any one or nd Recovery Act, t other federal, stat enacted. I also ac or proper dispose	more pol he Comp e or loca knowled il of any	lutant, toxic substar orehensive Environn I environmental law ge that the Generate hazardous waste an	nce, hazardous substance, nental Response , regulation, ordinance, or or shall be responsible for d that the Generator
Generator Rep. Name (please print)	Constan Sten			Generator Rep. Signature	dian thinks		
Transporter Name	MP Environmental Services			Transporter Address	3045 S. 51st Ave. Phoenix, AZ 85043		
			Vehicle Ir	formation		_	
Truck #		Ta	nk#			Inspection Paper	work Verified By:
Waste Removed (Gallons)	4300	Totalizer Readings (Gallons	s 0835	<u>_Fi</u>	nish	Date 4-16-20	Time           0835
the servicing	the information above i vehicle. I am aware that	at falsifica	ation of this mani	fest may result i	n prosec	cution.	
Driver mus	t comply with proper P	PE requir	rements. Includi	ng; gloves, safety	vest, h	ard hat, steel toes	shoes & safety glasses
and the second second							

Name	Driver Signature	
------	---------------------	--

Disposal Facility	Liquid Environmental Solutions of Arizona	Address	5159 West Van Buren Street Phoenix, AZ 85043
Waste Received (Gallons)		Date	Time
Facility Rep. Name (please print)		Facility Rep. Signature	

WHITE - Transporter YELLOW - Second Generator GOLDENROD - Disposal Facility PINK - Generator Liquid Environmental Solutions of Arizona Phoenix, AZ 85043

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Appendix B Third Quarter 2020 Laboratory Analytical Reports July 21, 2020

Mark Fesler/RDD CH2M HILL 155 Grand Avenue, Suite 1000 Oakland, CA 94612 TEL: (530) 229-3273 FAX: (510) 622-9129

Workorder No.: N041246

RE: PG&E Topock, D3184A1.EV.05-OM-TS

Attention: Mark Fesler/RDD

Enclosed are the results for sample(s) received on July 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,

Nonny Intercas

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.



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CLIENT:CH2M HILLProject:PG&E Topock, D3184A1.EV.05-OM-TSLab Order:N041246

# **CASE NARRATIVE**

Date: 21-Jul-20

### 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:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria in QC samples N041246-001AMS and N041246-001AMSD possibly due to matrix interference. Post Spike (PS) passed criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.

Analytical Comments for EPA 6010B:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N041216-001A-MS and N041216-001A-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.



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CLIENT:	CH2M HILL
Project:	PG&E Topock, D3184A1.EV.05-OM-TS
Lab Order:	N041246
<b>Contract No:</b>	IM3PLANT-AR

### Work Order Sample Summary

Lab Sample ID Client Sample ID	Matrix	<b>Collection Date</b>	Date Received	Date Reported
N041246-001A Phase Separator-604-Sludge	Soil	7/7/2020 1:25:00 PM	7/7/2020	7/21/2020
N041246-001B Phase Separator-604-Sludge	Soil	7/7/2020 1:25:00 PM	7/7/2020	7/21/2020
N041246-001C Phase Separator-604-Sludge	Soil	7/7/2020 1:25:00 PM	7/7/2020	7/21/2020



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# ANALYTICAL RESULTS

Print Date:	21-Jul-20
-------------	-----------

CLIENT:	CH2M HILL		Client Sample ID: Phase Separator-604-Sludge						
Lab Order:	N041246		Collection Date: 7/7/2020 1:25:00 PM						
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: SOIL						
Lab ID:	N041246-001								
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed		
ANIONS BY	ION CHROMATOGR	APHY							
			EF	PA 300.0					
RunID: NV0	0922-IC8_200713A	QC Batch: R145725		PrepD	ate:		Analyst: <b>RAB</b>		
Fluoride		41 0.67	6.9		mg/Kg-dry	2	7/13/2020 09:57 A		

Qualifiers:

В

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



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**CLIENT:** CH2M HILL

#### Work Order: N041246

#### **Project:** PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 300\_S

Sample ID: MB-R145725	SampType: <b>MBLK</b>	TestCode: 300_S Units: mg/k	g Prep Date:	RunNo: 145725
Client ID: PBS	Batch ID: R145725	TestNo: EPA 300.0	Analysis Date: 7/13/2020	SeqNo: 3845483
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	ND	1.0		
Sample ID: LCS-R145725	SampType: LCS	TestCode: 300_S Units: mg/#	g Prep Date:	RunNo: 145725
Client ID: LCSS	Batch ID: <b>R145725</b>	TestNo: EPA 300.0	Analysis Date: 7/13/2020	SeqNo: 3845484
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	12.959	1.0 12.50 0	104 90 110	
Sample ID: N041246-001ADUP	SampType: <b>DUP</b>	TestCode: 300_S Units: mg/k	g-dry Prep Date:	RunNo: 145725
Client ID: ZZZZZZ	Batch ID: R145725	TestNo: EPA 300.0	Analysis Date: 7/13/2020	SeqNo: 3845487
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	37.533	6.9	40.64	7.95 20
Sample ID: N041246-001AMS	SampType: <b>MS</b>	TestCode: 300_S Units: mg/#	g-dry Prep Date:	RunNo: 145725
Client ID: ZZZZZZ	Batch ID: R145725	TestNo: EPA 300.0	Analysis Date: 7/13/2020	SeqNo: 3845488
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	73.210	6.9 43.42 40.64	75.0 80 120	S
Sample ID: N041246-001AMSD	SampType: <b>MSD</b>	TestCode: 300_S Units: mg/k	g-dry Prep Date:	RunNo: 145725
Client ID: ZZZZZZ	Batch ID: R145725	TestNo: EPA 300.0	Analysis Date: <b>7/13/2020</b>	SeqNo: 3845489
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	74.622	7.0 43.49 40.64	78.1 80 120 73.21	1.91 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

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ELAP Cert 2676 | NV Cert NV00922

ORELAP/NELAP Cert 4046

Calculations are based on raw values

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

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### CLIENT: CH2M HILL

Work Order: N041246

Project: PG&E Topock, D3184A1.EV.05-OM-TS

## ANALYTICAL QC SUMMARY REPORT

TestCode: 300\_S

Sample ID: N041246-001APS	SampType: <b>MS</b>	TestCoo	de: 300_S	Units: mg/L-dry	/	Prep Da	te:		RunNo: 14	5725	
Client ID: ZZZZZZ	Batch ID: R145725	TestN	lo: EPA 300.0	1		Analysis Da	te: 7/13/20	20	SeqNo: 384	15495	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Fluoride	127.780	6.9	86.85	40.64	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 rangeR RPD outside accepted recovery limits

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EPA ID CA01638

Calculations are based on raw values

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

CH2M HILL

N041246-001

PG&E Topock, D3184A1.EV.05-OM-TS

N041246

**CLIENT:** 

**Project:** 

Lab ID:

Lab Order:

# ANALYTICAL RESULTS

Print Date: 21-Jul-20

### Client Sample ID: Phase Separator-604-Sludge Collection Date: 7/7/2020 1:25:00 PM Matrix: SOIL

analyses	Result	MDL	PQL	Qual U	nits	DF	Date Analyzed
TOTAL METALS BY ICP							
	EPA 3050B		EP	A 6010B			
RunID: NV00922-ICP2_200708B	QC Batch: 799	85		PrepDate:	7/8	3/2020	Analyst: <b>DJ</b>
Antimony	29	1.1	6.9	mg	/Kg-dry	1	7/8/2020 11:24 AM
Barium	86	1.1	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Beryllium	ND	0.75	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Cadmium	3.8	0.92	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Chromium	2800	1.1	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Cobalt	8.5	0.99	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Copper	210	3.1	6.9	mg	/Kg-dry	1	7/8/2020 11:24 AM
Lead	ND	1.0	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Manganese	710	1.8	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Molybdenum	12	1.0	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Nickel	62	1.2	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Selenium	ND	2.1	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Silver	ND	2.2	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Thallium	ND	1.2	6.9	mg	/Kg-dry	1	7/8/2020 09:13 PM
Vanadium	44	0.77	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM
Zinc	45	1.0	3.5	mg	/Kg-dry	1	7/8/2020 11:24 AM

Qualifiers:

- 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

В

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 ELAP
 Cert 2921

 Conalism"
 EPA ID CA01638

**Date:** 21-Jul-20

CLIENT: CH2M HILL

Work Order: N041246

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 6010\_SPGE

Sample ID: MB-79985	SampType: <b>MBLK</b>	TestCode: 6010_SPGE	Units: mg/Kg		Prep Date	7/8/2020	)	RunNo: 145	607	
Client ID: PBS	Batch ID: 79985	TestNo: EPA 6010B	EPA 3050B		Analysis Date	: 7/8/2020	0	SeqNo: 383	9565	
Analyte	Result	PQL SPK value S	PK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	2.0								
Barium	ND	1.0								
Beryllium	ND	1.0								
Cadmium	ND	1.0								
Chromium	ND	1.0								
Cobalt	ND	1.0								
Copper	ND	2.0								
Lead	ND	1.0								
Manganese	ND	1.0								
Molybdenum	ND	1.0								
Nickel	ND	1.0								
Selenium	ND	1.0								
Silver	ND	1.0								
Vanadium	ND	1.0								
Zinc	ND	1.0								
Sample ID: LCS1-79985	SampType: LCS	TestCode: 6010_SPGE	Units: mg/Kg		Prep Date	: 7/8/2020	)	RunNo: 145	607	
Client ID: LCSS	Batch ID: 79985	TestNo: EPA 6010B	EPA 3050B		Analysis Date	: 7/8/2020	)	SeqNo: 383	9566	
Analyte	Result	PQL SPK value S	PK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	25.655	2.0 25.00	0	103	85	115				
Barium	25.692	1.0 25.00	0	103	85	115				
Beryllium	25.392	1.0 25.00	0	102	85	115				
Cadmium	24.547	1.0 25.00	0	98.2	85	115				
Chromium	25.265	1.0 25.00	0	101	85	115				
		1.0 25.00	0	105	85	115				
Cobalt	26.314	1.0 25.00	0	105	05	110				
Cobalt Copper	26.314 25.319	2.0 25.00	0	103	85 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



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#### CLIENT: CH2M HILL

#### Work Order: N041246

Project: PG&E Topock, D3184A1.EV.05-OM-TS

## ANALYTICAL QC SUMMARY REPORT

### TestCode: 6010\_SPGE

Sample ID: LCS1-79985	SampType: LCS	TestCo	de: 6010_SPGE	Units: mg/Kg		Prep Date	e: 7/8/2020	)	RunNo: 145	5607	
Client ID: LCSS	Batch ID: 79985	Test	No: EPA 6010B	EPA 3050B		Analysis Date	e: 7/8/2020	D	SeqNo: 383	39566	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Manganese	50.139	1.0	50.00	0	100	85	115				
Molybdenum	24.919	1.0	25.00	0	99.7	85	115				
Nickel	25.051	1.0	25.00	0	100	85	115				
Selenium	24.537	1.0	25.00	0	98.1	85	115				
Silver	25.928	1.0	25.00	0	104	85	115				
Vanadium	24.930	1.0	25.00	0	99.7	85	115				
Zinc	25.701	1.0	25.00	0	103	85	115				
Sample ID: N041216-001A-MS	SampType: <b>MS</b>	TestCo	de: 6010_SPGE	Units: <b>mg/Kg</b>		Prep Date	e: 7/8/2020	)	RunNo: 145	5607	
Client ID: ZZZZZZ	Batch ID: 79985	Test	No: EPA 6010B	EPA 3050B		Analysis Date	e: 7/8/2020	)	SeqNo: 383	39570	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qua
Antimony	17.376	2.0	24.93	0	69.7	75	125				S
Barium	83.667	1.0	24.93	66.53	68.7	75	125				S
Beryllium	21.797	1.0	24.93	0	87.5	75	125				
Cadmium	23.201	1.0	24.93	0.4831	91.1	75	125				
Chromium	40.144	1.0	24.93	18.46	87.0	75	125				
Cobalt	31.970	1.0	24.93	8.853	92.7	75	125				
Copper	39.534	2.0	24.93	15.25	97.4	75	125				
Lead	46.642	1.0	24.93	25.10	86.4	75	125				
Manganese	376.853	1.0	49.85	351.4	51.1	75	125				S
Molybdenum	23.632	1.0	24.93	0	94.8	75	125				
Nickel	36.178	1.0	24.93	11.36	99.6	75	125				
		1.0	24.93	0	78.1	75	125				
Selenium	19.476	1.0									
Selenium Silver	19.476 22.936	1.0	24.93	0	92.0	75	125				
					92.0 97.1	75 75	125 125				

#### 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

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R RPD outside accepted recovery limits

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ORELAP/NELAP Cert 4046

Calculations are based on raw values

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

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#### **CLIENT:** CH2M HILL

Work Order: N041246

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

## ANALYTICAL QC SUMMARY REPORT

TestCode: 6010\_SPGE

Sample ID: N041216-001A-MS	<b>D</b> SampType: <b>MSD</b>	TestCoo	le: 6010_SPGE	Units: mg/Kg		Prep Dat	e: 7/8/202	0	RunNo: 145	5607	
Client ID: ZZZZZZ	Batch ID: 79985	TestN	lo: EPA 6010B	EPA 3050B		Analysis Dat	e: 7/8/202	0	SeqNo: 383	89571	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	16.528	2.0	24.99	0	66.1	75	125	17.38	5.00	20	S
Barium	95.044	1.0	24.99	66.53	114	75	125	83.67	12.7	20	
Beryllium	21.714	1.0	24.99	0	86.9	75	125	21.80	0.384	20	
Cadmium	23.068	1.0	24.99	0.4831	90.4	75	125	23.20	0.574	20	
Chromium	41.043	1.0	24.99	18.46	90.4	75	125	40.14	2.22	20	
Cobalt	31.629	1.0	24.99	8.853	91.2	75	125	31.97	1.07	20	
Copper	41.007	2.0	24.99	15.25	103	75	125	39.53	3.66	20	
Lead	48.733	1.0	24.99	25.10	94.6	75	125	46.64	4.38	20	
Manganese	401.458	1.0	49.98	351.4	100	75	125	376.9	6.32	20	
Molybdenum	23.159	1.0	24.99	0	92.7	75	125	23.63	2.02	20	
Nickel	36.269	1.0	24.99	11.36	99.7	75	125	36.18	0.251	20	
Selenium	19.474	1.0	24.99	0	77.9	75	125	19.48	0.0128	20	
Silver	23.062	1.0	24.99	0	92.3	75	125	22.94	0.546	20	
Vanadium	55.776	1.0	24.99	31.61	96.7	75	125	55.81	0.0579	20	
Zinc	73.768	1.0	24.99	54.32	77.8	75	125	72.01	2.42	20	
Sample ID: MB-79985	SampType: MBLK	TestCoo	le: 6010_SPGE	Units: mg/Kg		Prep Dat	e: 7/8/202	0	RunNo: 145	632	
Client ID: PBS	Batch ID: 79985	TestN	lo: EPA 6010B	EPA 3050B		Analysis Dat	e: 7/8/202	0	SeqNo: 384	0220	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	ND	2.0									
Sample ID: LCS1-79985	SampType: LCS	TestCoo	de: 6010_SPGE	Units: mg/Kg		Prep Dat	e: 7/8/202	0	RunNo: 145	632	
Client ID: LCSS	Batch ID: 79985	TestN	lo: EPA 6010B	EPA 3050B		Analysis Dat	e: 7/8/202	0	SeqNo: <b>384</b>	0221	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	24.590	2.0	25.00	0	98.4	85	115				

#### Qualifiers:

B Analyte detected in the associated Method Blank

- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out

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R RPD outside accepted recovery limits

ORELAP/NELAP Cert 4046

Calculations are based on raw values

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

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#### CLIENT: CH2M HILL

Work Order: N041246

Project: PG&E Topock, D3184A1.EV.05-OM-TS

## ANALYTICAL QC SUMMARY REPORT

### TestCode: 6010\_SPGE

Sample ID: N041216-001A-MS Client ID: ZZZZZZ	SampType: <b>MS</b> Batch ID: <b>79985</b>	TestCode: 6010_SPG TestNo: EPA 6010E	5 5	A	Prep Date: <b>7/8/20</b> nalysis Date: <b>7/8/20</b>		RunNo: <b>145</b> SeqNo: <b>384</b>		
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Thallium	20.622	2.0 24.93	0	82.7	75 125				
Sample ID: N041216-001A-MSD Client ID: ZZZZZZ	SampType: MSD Batch ID: 79985	TestCode: 6010_SPG TestNo: EPA 6010E	5 5	A	Prep Date: 7/8/20		RunNo: <b>145</b> SeqNo: <b>384</b>		
		TestNo: EPA 6010E			nalysis Date: <b>7/8/20</b>		SeqNo: 384		Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



- CALIFORNIA | P:562.219.7435 F:562.219.7436 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 ELAP Cert 2921 EPA ID CA01638
- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

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

CLIENT: CH2M HILL

Work Order: N041246

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 6010\_SPGE

Sample ID: N041216-001A-PS	SampType: <b>PS</b>	TestCoo	de: 6010_SPGE	Units: mg/Kg		Prep Date	e:		RunNo: 145	5607	
Client ID: ZZZZZZ	Batch ID: 79985	TestN	lo: EPA 6010B	EPA 3050B		Analysis Date	e: <b>7/8/2020</b>		SeqNo: 383	9569	
Analyte	Result	PQL	SPK value	PK Ref Val	%REC	LowLimit	HighLimit R	PD Ref Val	%RPD	RPDLimit	Qual
Antimony	22.439	2.0	24.95	0	89.9	80	120				
Barium	89.212	1.0	24.95	66.53	90.9	80	120				
Beryllium	20.777	1.0	24.95	0	83.3	80	120				
Cadmium	23.943	1.0	24.95	0.4831	94.0	80	120				
Chromium	39.925	1.0	24.95	18.46	86.0	80	120				
Cobalt	31.415	1.0	24.95	8.853	90.4	80	120				
Copper	39.202	2.0	24.95	15.25	96.0	80	120				
Lead	47.832	1.0	24.95	25.10	91.1	80	120				
Manganese	384.203	1.0	49.90	351.4	65.8	80	120				S
Molybdenum	22.969	1.0	24.95	0	92.1	80	120				
Nickel	34.978	1.0	24.95	11.36	94.7	80	120				
Selenium	18.783	1.0	24.95	0	75.3	80	120				S
Silver	22.384	1.0	24.95	0	89.7	80	120				
Vanadium	53.159	1.0	24.95	31.61	86.4	80	120				
Zinc	71.817	1.0	24.95	54.32	70.1	80	120				S
Sample ID: N041216-001A-PS	SampType: <b>PS</b>	TestCoo	de: 6010_SPGE	Units: mg/Kg		Prep Date	e:		RunNo: 145	632	
Client ID: ZZZZZZ	Batch ID: 79985	TestN	lo: EPA 6010B	EPA 3050B		Analysis Date	e: 7/8/2020		SeqNo: <b>384</b>	0224	
Analyte	Result	PQL	SPK value	PK Ref Val	%REC	LowLimit	HighLimit R	PD Ref Val	%RPD	RPDLimit	Qual
Thallium	21.385	2.0	24.95	0	85.7	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

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

# ANALYTICAL RESULTS

Print Date: 21-Jul-20

CLIENT:	<b>b Order:</b> N041246			Client Sample ID: Phase Separator-604-Sludge Collection Date: 7/7/2020 1:25:00 PM					
Project: PG&E Topock, D3184A1.EV.05-OM-TS			Matrix: SOIL						
Lab ID:	N041246-001								
Analyses		Result MDL	PQL	Qual U	nits	DF	Date Analyzed		
TOTAL MET	ALS BY ICPMS								
	I	EPA 3050B	EP	PA 6020					
RunID: NV0	0922-ICP8_200716C	QC Batch: 80077		PrepDate:	7/16	/2020	Analyst: CEI		
Arsenic		17 0.28	0.87	mg/	Kg-dry	1	7/16/2020 11:46 PM		

Qualifiers:

В

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

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CLIENT: CH2M HILL

Work Order: N041246

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 6020\_S\_PGE\_TPK

Sample ID: MB-80 Client ID: PBS	0077 SampType: MBLK Batch ID: 80077	TestCode: 6020_S_PG TestNo: EPA 6020	E Units: mg/Kg EPA 3050B	Prep Date: Analysis Date:		RunNo: 145846 SeqNo: 3852178	
Analyte	Result	PQL SPK value	SPK Ref Val %	6REC LowLimit Hi	ghLimit RPD Ref Val	%RPD RPDLimit	Qual
Arsenic	ND	0.25					
Sample ID: LCS-& Client ID: LCSS Analyte	0077 SampType: LCS Batch ID: 80077 Result	TestCode: <b>6020_S_PG</b> TestNo: <b>EPA 6020</b> PQL SPK value	EPA 3050B	Prep Date: Analysis Date: 6REC LowLimit Hi		RunNo: <b>145846</b> SeqNo: <b>3852179</b> %RPD RPDLimit	Qual
Arsenic	5.254	0.25 5.000	0	105 85	115		
Sample ID: N0412 Client ID: ZZZZ		TestCode: 6020_S_PG TestNo: EPA 6020	E Units: mg/Kg-dry EPA 3050B	Prep Date: Analysis Date:		RunNo: <b>145846</b> SeqNo: <b>3852183</b>	
			EPA 3050B	Analysis Date:			Qual
Client ID: ZZZZ	ZZ Batch ID: 80077	TestNo: <b>EPA 6020</b>	EPA 3050B SPK Ref Val %	Analysis Date:	7/16/2020	SeqNo: 3852183	Qual
Client ID: ZZZZ	ZZ Batch ID: 80077 Result 32.963 46-001B-MSD SampType: MSD	TestNo: <b>EPA 6020</b> PQL SPK value	EPA 3050B SPK Ref Val % 16.84	Analysis Date: 6REC LowLimit Hi 93.1 75	7/16/2020 ghLimit RPD Ref Val 125 7/16/2020	SeqNo: 3852183	Qual
Client ID: ZZZZ Analyte Arsenic Sample ID: N0412	ZZ Batch ID: 80077 Result 32.963 46-001B-MSD SampType: MSD	TestNo:         EPA 6020           PQL         SPK value           0.87         17.33           TestCode:         6020_S_PG	EPA 3050B SPK Ref Val % 16.84 E Units: mg/Kg-dry EPA 3050B	Analysis Date: 6REC LowLimit Hi 93.1 75 7 Prep Date: Analysis Date:	7/16/2020 ghLimit RPD Ref Val 125 7/16/2020	SeqNo: 3852183 %RPD RPDLimit RunNo: 145846	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

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

# ANALYTICAL RESULTS

Print Date: 21-Jul-20

CLIENT: Lab Order Project:	CH2M HILL r: N041246 PG&E Topock, D3184A1.EV.05-OM-TS			Client Sample ID: Phase Separator-604-Sludge Collection Date: 7/7/2020 1:25:00 PM Matrix: SOIL					
Lab ID:	N041246-001	,	IVI	atrix: SC	ЛL				
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed		
HEXAVAL	ENT CHROMIUM BY	C EPA 3060A		EPA 7199					
RunID: <b>N</b>	V00922-IC6_200709A	QC Batch: 80003		PrepD	)ate:	7/9/2020	Analyst: <b>RAB</b>		
Hexavale	nt Chromium	58 1.0	3.5		mg/Kg-dr	y 5	7/9/2020 03:45 PN		

Qualifiers:

В

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



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**CLIENT:** CH2M HILL

#### Work Order: N041246

#### PG&E Topock, D3184A1.EV.05-OM-TS **Project:**

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 7199\_S\_PGE

Sample ID: MB-80003	SampType: <b>MBLK</b>	TestCode: 7199_S_PGE Units: mg/Kg Prep Date: 7/9/2020	RunNo: 145675
Client ID: PBS	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020	SeqNo: 3842489
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-80003	SampType: LCS	TestCode: 7199_S_PGE Units: mg/Kg Prep Date: 7/9/2020	RunNo: 145675
Client ID: LCSS	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020	SeqNo: 3842490
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	3.733	0.20 4.000 0 93.3 80 120	
Sample ID: N041251-001A-REP Client ID: ZZZZZZ	SampType: DUP Batch ID: 80003	TestCode:         7199_S_PGE         Units:         mg/Kg-dry         Prep         Date:         7/9/2020           TestNo:         EPA 3060A         Analysis         Date:         7/9/2020	RunNo: 145675 SeqNo: 3842492
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.22 0	0 20
Sample ID: N041251-001A-DUP Client ID: ZZZZZZ	SampType: DUP Batch ID: 80003	TestCode:         7199_S_PGE         Units:         mg/Kg-dry         Prep         Date:         7/9/2020           TestNo:         EPA 7199         EPA 3060A         Analysis         Date:         7/9/2020	RunNo: 145675 SeqNo: 3842493
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.22 0	0 20
Sample ID: N041251-001A-MS Client ID: ZZZZZZ	SampType: <b>MS</b> Batch ID: <b>80003</b>	TestCode: 7199_S_PGE         Units: mg/Kg-dry         Prep Date:         7/9/2020           TestNo: EPA 7199         EPA 3060A         Analysis Date:         7/9/2020	RunNo: 145675 SeqNo: 3842494
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	4.190	0.22 4.364 0 96.0 75 125	

#### Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- ASSET LABORATORIES "Serving Clients with Passion and Professionalism"
  - CALIFORNIA | P:562.219.7435 F:562.219.7436 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 ELAP Cert 2921 EPA ID CA01638

R

E Value above quantitation range

RPD outside accepted recovery limits

Calculations are based on raw values

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**ORELAP/NELAP Cert 4046** 

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

Work Order: N041246

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 7199\_S\_PGE

Sample ID: N041251-001A-MSD	SampType: <b>MSD</b>	TestCode: 7199_S_PGE Units: mg/Kg-dry Prep Date: 7/9/2020	RunNo: 145675
Client ID: ZZZZZZ	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020	SeqNo: 3842495
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	4.136	0.22 4.357 0 94.9 75 125 4.190	1.28 20
Sample ID: N041251-001A-MS I	SampType: <b>MS</b>	TestCode: 7199_S_PGE Units: mg/Kg-dry Prep Date: 7/9/2020	RunNo: 145675
Client ID: ZZZZZZ	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020	SeqNo: 3842496
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	647.617	11 715.6 0 90.5 75 125	
Sample ID: N041250-001A-REP	SampType: <b>DUP</b>	TestCode: 7199_S_PGE Units: mg/Kg-dry Prep Date: 7/9/2020	RunNo: 145675
Client ID: ZZZZZZ	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020	SeqNo: 3842502
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.25 0	0 20
Sample ID: N041246-001C-REP	SampType: <b>DUP</b>	TestCode: 7199_S_PGE Units: mg/Kg-dry Prep Date: 7/9/2020	RunNo: 145675
Client ID: ZZZZZZ	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020	SeqNo: 3842503
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	57.625	3.5 57.80	0.305 20
Sample ID: N041248-001A-REP	SampType: <b>DUP</b>	TestCode: 7199_S_PGE Units: mg/Kg-dry Prep Date: 7/9/2020	RunNo: 145675
Client ID: ZZZZZZ	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020	SeqNo: 3842504
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	ND	0.21 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

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Work Order: N041246

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

TestCode: 7199\_S\_PGE

Sample ID: N041282-001B-REP	SampType: <b>DUP</b>	TestCode: 7199_S_PGE Units: mg/Kg-dry Prep Date: 7/9/2020 RunNo: 145675	
Client ID: ZZZZZZ	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020 SeqNo: 3842520	
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qu	ual
Hexavalent Chromium	ND	0.20 0 0 20	
Sample ID: N041282-002A-REP	SampType: <b>DUP</b>	TestCode: 7199_S_PGE Units: mg/Kg-dry Prep Date: 7/9/2020 RunNo: 145675	
Client ID: ZZZZZZ	Batch ID: 80003	TestNo: EPA 7199 EPA 3060A Analysis Date: 7/9/2020 SeqNo: 3842522	
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qu	ual
Hexavalent Chromium	ND	0.21 0 0 20	
Sample ID: N041283-001A-REP	SampType: <b>DUP</b>	TestCode: 7199_S_PGE Units: mg/Kg-dry Prep Date: 7/9/2020 RunNo: 145675	
Sample ID: N041283-001A-REP Client ID: ZZZZZZ	SampType: DUP Batch ID: 80003	TestCode: 7199_S_PGE         Units: mg/Kg-dry         Prep Date:         7/9/2020         RunNo:         145675           TestNo: EPA 7199         EPA 3060A         Analysis Date:         7/9/2020         SeqNo:         3842526	
			ual
Client ID: ZZZZZZ	Batch ID: 80003	TestNo:         EPA 7199         EPA 3060A         Analysis Date:         7/9/2020         SeqNo:         3842526	ual
Client ID: ZZZZZZ	Batch ID: 80003 Result	TestNo: EPA 7199       EPA 3060A       Analysis Date:       7/9/2020       SeqNo:       3842526         PQL       SPK value       SPK Ref Val       %REC       LowLimit       HighLimit       RPD       RPD       RPDLimit       Question	ual
Client ID: ZZZZZZ Analyte Hexavalent Chromium	Batch ID: 80003 Result ND	TestNo: EPA 7199       EPA 3060A       Analysis Date:       7/9/2020       SeqNo:       3842526         PQL       SPK value       SPK Ref Val       %REC       LowLimit       HighLimit       RPD       RPDLimit       Qu         0.21       0       0       20	ual
Client ID: ZZZZZZ Analyte Hexavalent Chromium Sample ID: N041251-001A-PS	Batch ID: 80003 Result ND SampType: MS	TestNo:       EPA 7199       EPA 3060A       Analysis Date:       7/9/2020       SeqNo:       3842526         PQL       SPK value       SPK Ref Val       %REC       LowLimit       HighLimit       RPD Ref Val       %RPD       RPDLimit       Qu         0.21       0       0       20       0       20       1         TestCode:       7199_S_PGE       Units:       mg/Kg-dry       Prep Date:       RunNo:       145675	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



E Value above quantitation range

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R RPD outside accepted recovery limits

Calculations are based on raw values

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

# **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT: Lab Order:	CH2M HILL N041246		(	Client Sample ID: Phase Separator-604-Sludge						
Project:	PG&E Topock,		Collection Date: 7/7/2020 1:25:00 PM Matrix: SOIL							
Lab ID:	N041246-001									
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed			
TOTAL MERC	CURY BY COLD VA	POR TECHNIQUE								
			EF	PA 7471A						
RunID: NV00	922-AA2_200708A	QC Batch: 79986		PrepDa	ate:	7/8/2020	Analyst: <b>DJ</b>			
Mercury		ND 0.094	0.35		mg/Kg-dr	ту 1	7/8/2020 10:51 AM			

Qualifiers:

В

Analyte detected in the associated Method Blank

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



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21

**CLIENT:** CH2M HILL

Work Order: N041246

#### **Project:** PG&E Topock, D3184A1.EV.05-OM-TS

## ANALYTICAL QC SUMMARY REPORT

#### TestCode: 7471\_S\_PGE

Sample ID: <b>MB-79986</b> Client ID: <b>PBS</b>	SampType: <b>MBLK</b> Batch ID: <b>79986</b>	TestCode: 7471_S_PGE Units: mg/Kg TestNo: EPA 7471A	Prep Date: <b>7/8/2020</b> Analysis Date: <b>7/8/2020</b>	RunNo: 145605 SeqNo: 3839498
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	ND	0.10		
Sample ID: LCS-79986 Client ID: LCSS Analyte Mercury	SampType: LCS Batch ID: <b>79986</b> Result 0.434	TestCode:         7471_S_PGE         Units:         mg/Kg           TestNo:         EPA 7471A           PQL         SPK value         SPK Ref Val           0.10         0.4167         0	Prep Date: 7/8/2020 Analysis Date: 7/8/2020 %REC LowLimit HighLimit RPD Ref Val	RunNo: <b>145605</b> SeqNo: <b>3839499</b> %RPD RPDLimit Qual
Sample ID: N041216-002A-MS Client ID: ZZZZZZ	SampType: <b>MS</b> Batch ID: <b>79986</b>	TestCode: 7471_S_PGE Units: mg/Kg TestNo: EPA 7471A	Prep Date: <b>7/8/2020</b> Analysis Date: <b>7/8/2020</b>	RunNo: <b>145605</b> SeqNo: <b>3839504</b>
Client ID: ZZZZZZ	Batch ID: 79986	TestNo: EPA 7471A	Analysis Date: 7/8/2020	SeqNo: 3839504
Client ID: ZZZZZZ Analyte	Batch ID: <b>79986</b> Result	TestNo: <b>EPA 7471A</b> PQL SPK value SPK Ref Val	Analysis Date: <b>7/8/2020</b> %REC LowLimit HighLimit RPD Ref Val	SeqNo: 3839504
Client ID: ZZZZZZ Analyte Mercury Sample ID: N041216-002A-MSD	Batch ID: <b>79986</b> Result 0.474 SampType: <b>MSD</b>	TestNo:         EPA         7471A           PQL         SPK value         SPK Ref Val           0.10         0.4160         0           TestCode:         7471_S_PGE         Units: mg/Kg	Analysis Date:     7/8/2020       %REC     LowLimit     HighLimit     RPD Ref Val       114     75     125   Prep Date: 7/8/2020	SeqNo: <b>3839504</b> %RPD RPDLimit Qual RunNo: <b>145605</b>

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

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

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EPA ID CA01638

# ANALYTICAL RESULTS

Print Date: 21-Jul-20

CLIENT: Lab Order: Project:	•	D3184A1.EV.05-OM-TS	Client Sample ID: Phase Separator-604-Sludge Collection Date: 7/7/2020 1:25:00 PM Matrix: SOIL						
Lab ID:	N041246-001								
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed		
PERCENT	MOISTURE			20040					
				D2216					
RunID: N	V00922-WC_200708B	QC Batch: R145610		PrepD	ate:		Analyst: LR		
Percent M	loisture	71.21 0.1000	0.1000		wt%	1	7/8/2020 09:00 AN		

Qualifiers:

В

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



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**CLIENT:** CH2M HILL

Work Order: N041246

#### PG&E Topock, D3184A1.EV.05-OM-TS **Project:**

### ANALYTICAL QC SUMMARY REPORT

#### **TestCode: PMOIST**

Sample ID: MB-R145610 Client ID: PBS	SampType: MBLK Batch ID: R145610	TestCode: <b>PMOIST</b> TestNo: <b>D2216</b>	Units: <b>wt%</b>	Prep Date: Analysis Date: <b>7/8/2020</b>	RunNo: <b>145610</b> SeqNo: <b>3839781</b>
Analyte	Result	PQL SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture	ND	0.1000			
Sample ID: N041233-001ADUP Client ID: ZZZZZZ	SampType: <b>DUP</b> Batch ID: <b>R145610</b>	TestCode: <b>PMOIST</b> TestNo: <b>D2216</b>	Units: wt%	Prep Date: Analysis Date: <b>7/8/2020</b>	RunNo: <b>145610</b> SeqNo: <b>3839783</b>
Analyte	Result	PQL SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture	0.147	0.1000		0.1565	6.46 30
Sample ID: N041251-001ADUP Client ID: ZZZZZZ	SampType: <b>DUP</b> Batch ID: <b>R145610</b>	TestCode: PMOIST TestNo: D2216	Units: <b>wt%</b>	Prep Date: Analysis Date: <b>7/8/2020</b>	RunNo: <b>145610</b> SeqNo: <b>3839794</b>
Analyte	Result	PQL SPK value	SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Percent Moisture	8.041	0.1000		8.385	4.19 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

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R RPD outside accepted recovery limits

Calculations are based on raw values

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

JACOBS Ch2m				•	CHAIN OF CUSTODY RECORD	Page	1_OF_1
Project Name PG&E Topock	Container:	Glass Jar(8 oz)	Glass Jar(8 oz)	4 oz jar			
Location PG&E Topock Project Number D3164A1.EV.05-OM-TS	Preservatives:	none	none	4°C			
Project Manager Scott O'Donnell	Filtered:	NA	NA	NA			
Sample Manager Shawn Duffy	Holding Time:	NÁ	NA	180			
Task Order Project IM3PLANT-ARAR-WDR-604-SLUDG Turnaround Time 10 Days Shipping Date: 7/7/2020 COC Number: IM3-604S DATE	E TIME Matrix	Anions (E300_Soil) F only	Metals (6010B_Soil) Title 22, Mercury, Mn	Metals (7199)		Number of Containers	COMMENTS
Phase Separator-604-Sludge 7.7.20	(325 Soil	X	X	X	N041246-01	3	
					TOTAL NUMBER OF CONTAINERS	3	

Signatures	Date/Time	Shipping Details		Special Instructions:
	7-7-20 0600 Me	ethod of Shipment: FedEx	ATTN:	
Sampled by	1.7.20 1325			
	(-/-a) 1070	nice: yes/ no 4.1 °C 1/2/	Sample Custody	
Received by Manutin A Bay >	17/20 C 1632 Air	rbilf No:	and	Personal Operation
Pelinguished by	17/2 00 1840 Lat	b Name: ASSET Laboratories	Marion Cartin	Report Copy to Mark Fester
Received by	Lai	b Phone: (702) 307-2659		(530) 229-3273

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:	7/7/2020				Workorder:	N041246		
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:	None		
Cooling process:	✓ Ice	Ice Pack	Dry Ice	Other	None None			
		Si	ample Receip	ot Checklist				
1. Shipping container/cooler in g	ood conditio				Yes 🔽	No 🗌	Not Present	
2. Custody seals intact, signed,	dated on shi	ippping container/	cooler?		Yes	Νο	Not Present	$\checkmark$
3. Custody seals intact on samp	le bottles?				Yes	No 🗌	Not Present	
4. Chain of custody present?					Yes 🗹	No 🗌		
5. Sampler's name present in CO	C?				Yes 🗹	No 🗌		
6. Chain of custody signed wher	n relinquishe	ed and received?			Yes 🗹	No 🗌		
7. Chain of custody agrees with	sample labe	ls?			Yes 🗹	No 🗌		
8. Samples in proper container/b	oottle?				Yes 🗹	No 🗌		
9. Sample containers intact?					Yes 🗹	No 🗌		
10. Sufficient sample volume for	indicated te	est?			Yes 🗹	No 🗌		
11. All samples received within h	nolding time?	?			Yes 🗹	No 🗌		
12. Temperature of rep sample of	or Temp Bla	nk within acceptal	ole limit?		Yes 🗹	No 🗌	NA	
13. Water - VOA vials have zero	headspace	?			Yes	No 🗌	NA	$\checkmark$
14. Water - pH acceptable upon Example: pH > 12 for (CN		or Metals			Yes	No 🗌	NA	
15. Did the bottle labels indicate	correct pres	servatives used?			Yes	No 🗌	NA	$\checkmark$
16. Were there Non-Conformand Wa	ce issues at as Client not	-			Yes 🗌 Yes 🗌	No 🗌 No 🗌	NA NA	
Comments:								

For: YRJ 7/9/2020 MBC Checklist Completed By:

Reviewed By:

MBC

WORK O	RDER Summary		08-Jul-20				
Client ID: Project: Comments:	CH2HI01 PG&E Topock, D3184A	1.EV.05-OM-TS			er: N041246 ed: 7/7/2020		
Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage
N041246-001A	Phase Separator-604-Sludge	7/7/2020 1:25:00 PM	7/21/2020	Soil	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	WS WS
N041246-001B			7/21/2020		EPA 3050B	SOPREP TOTAL METALS	WS WS
			7/21/2020		EPA 6010B	TOTAL METALS BY ICP	WS WS
			7/21/2020			MERCURY PREP	WS WS
			7/21/2020		EPA 7471A	TOTAL MERCURY BY COLD VAPOR TECHNIQUE	ws
			7/21/2020		D2216	PERCENT MOISTURE	WS
N041246-001C			7/21/2020		EPA 3060A	Prep for Hexavalend Chromium	WS
			7/21/2020		EPA 7199	Hexavalent Chromium by IC	WS WS
N041246-002A	FOLDER	7/21/2020	7/21/2020		Folder	Folder	
			7/21/2020		Folder	Level IV Report	
			7/21/2020		Folder	Folder	

# List of Analysts

## **ASSET Laboratories Work Order: N041246**

NAME	TEST METHOD
Claire Ignacio	EPA 6020
Lilia Ramit	ASTM D2216
Ria Abes	EPA 300.0, EPA 7199
Diane Jetajobe	EPA 6010B, EPA 7471A



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July 21, 2020

Mark Fesler/RDD CH2M HILL 155 Grand Avenue, Suite 1000 Oakland, CA 94612 TEL: (530) 229-3273 FAX: (510) 622-9129

Workorder No.: N041247

RE: PG&E Topock, D3184A1.EV.05-OM-TS

Attention: Mark Fesler/RDD

Enclosed are the results for sample(s) received on July 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,

Nonz Intercas

Nancy Sibucao Laboratory Director

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 CLIENT:
 CH2M HILL

 Project:
 PG&E Topock, D3184A1.EV.05-OM-TS

 Lab Order:
 N041247

### **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:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Analytical comments for EPA 200.8:

Matrix Spike (MS) is outside recovery criteria for Chromium in QC sample N041247-001E-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.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N041247-001E-MS and N041247-001E-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.

Analytical comments for EPA 218.6:

Dilution was necessary for sample N041247-003 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.



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CLIENT:	CH2M HILL
Project:	PG&E Topock, D3184A1.EV.05-OM-TS
Lab Order:	N041247
<b>Contract No:</b>	IM3PLANT-AR

**Date:** 21-Jul-20

### Work Order Sample Summary

Lak Samala ID Climt Samala ID	M - 4	Collection D (	Dete Dente 1	Data Damast 1
Lab Sample ID Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N041247-001A SC-100B-WDR-604	Water	7/7/2020 1:05:00 PM	7/7/2020	7/21/2020
N041247-001B SC-100B-WDR-604	Water	7/7/2020 1:05:00 PM	7/7/2020	7/21/2020
N041247-001C SC-100B-WDR-604	Water	7/7/2020 1:05:00 PM	7/7/2020	7/21/2020
N041247-001D SC-100B-WDR-604	Water	7/7/2020 1:05:00 PM	7/7/2020	7/21/2020
N041247-001E SC-100B-WDR-604	Water	7/7/2020 1:05:00 PM	7/7/2020	7/21/2020
N041247-001F SC-100B-WDR-604	Water	7/7/2020 1:05:00 PM	7/7/2020	7/21/2020
N041247-002A SC-700B-WDR-604	Water	7/7/2020 12:48:00 PM	7/7/2020	7/21/2020
N041247-002B SC-700B-WDR-604	Water	7/7/2020 12:48:00 PM	7/7/2020	7/21/2020
N041247-002C SC-700B-WDR-604	Water	7/7/2020 12:48:00 PM	7/7/2020	7/21/2020
N041247-002D SC-700B-WDR-604	Water	7/7/2020 12:48:00 PM	7/7/2020	7/21/2020
N041247-002E SC-700B-WDR-604	Water	7/7/2020 12:48:00 PM	7/7/2020	7/21/2020
N041247-002F SC-700B-WDR-604	Water	7/7/2020 12:48:00 PM	7/7/2020	7/21/2020
N041247-003A SC-701-WDR-604	Water	7/7/2020 12:40:00 PM	7/7/2020	7/21/2020
N041247-003B SC-701-WDR-604	Water	7/7/2020 12:40:00 PM	7/7/2020	7/21/2020
N041247-003C SC-701-WDR-604	Water	7/7/2020 12:40:00 PM	7/7/2020	7/21/2020
N041247-003D SC-701-WDR-604	Water	7/7/2020 12:40:00 PM	7/7/2020	7/21/2020



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#### ANALYTICAL RESULTS Print Date: 21-Jul-20

					Int Dutter 21		
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-604				
Lab Order:	N041247			Collection Date: 7	/7/2020 1:05:0	00 PM	
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	S Matrix: WATER				
Lab ID:	N041247-001						
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed	
SPECIFIC C	ONDUCTANCE						
			EP	A 120.1			
RunID: NVC	00922-WC_200708D	QC Batch: R145614		PrepDate:		Analyst: LR	
Specific Co	onductance	7000 0.10	0.10	umhos/	cm 1	7/8/2020 10:25 AN	

Qualifiers:

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
- E Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified

DO Surrogate Diluted Out

В

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#### ANALYTICAL RESULTS Print Date: 21-Jul-20

					Time Duc	v		
CLIENT	C: CH2M HILL		(	Client Sample ID: SC-700B-WDR-604				
Lab Ord	ler: N041247			Collection Da	nte: 7/7/2020	12:48:	00 PM	
Project:	PG&E Topock,	D3184A1.EV.05-OM-7	ſS	Matrix: WATER				
Lab ID:	N041247-002							
Analyses	5	Result MD	L PQL	Qual	Units	DF	Date Analyzed	
SPECIF	IC CONDUCTANCE							
			EF	PA 120.1				
RunID:	NV00922-WC_200708D	QC Batch: R145614		PrepDate	:		Analyst: LR	
Specifi	c Conductance	6900 0.1	0 0.10	ur	mhos/cm	1	7/8/2020 10:25 AN	

Qualifiers:

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



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### **ANALYTICAL RESULTS** Print Date: 21-Jul-20

CLIENT:	CH2M HILL		C	Client Sample ID: SC-701-WDR-604				
Lab Orde	r: N041247			Collection Date: 7/	7/2020 12:40	0:00 PM		
Project:	PG&E Topock,	D3184A1.EV.05-OM-T	Matrix: WATER					
Lab ID:	N041247-003							
Analyses		Result MDI	. PQL	Qual Units	DF	Date Analyzed		
SPECIFIC	CONDUCTANCE							
			EP	A 120.1				
RunID: N	NV00922-WC_200708D	QC Batch: R145614		PrepDate:		Analyst: LR		
Specific	Conductance	50000 0.10	0.10	umhos/c	m 1	7/8/2020 10:25 AM		

Qualifiers:

Analyte detected in the associated Method Blank

- Holding times for preparation or analysis exceeded Η
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range ND Not Detected at the Reporting Limit

CALIFORNIA | P:562.219.7435 F:562.219.7436

Results are wet unless otherwise specified



В

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Date: 21-Jul-20

**CLIENT:** CH2M HILL

Work Order: N041247

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 120.1\_WPGE

Sample ID: N041247-003ADUP	SampType: <b>DUP</b>	TestCo	de: 120.1_WP	GE Units: umhos	s/cm	Prep Da	te:		RunNo: 14	5614	
Client ID: ZZZZZZ	Batch ID: R145614	TestN	lo: EPA 120.1			Analysis Da	te: 7/8/202	20	SeqNo: 383	39844	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	49900.000	0.10						50000	0.200	2	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



Calculations are based on raw values CALIFORNIA | P:562.219.7435 F:562.219.7436

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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

E Value above quantitation range

RPD outside accepted recovery limits

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

## **ANALYTICAL RESULTS**

					111	It Date: 21 0		
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-604 Collection Date: 7/7/2020 1:05:00 PM					
Lab Order:	N041247							
Project:	PG&E Topock,	PG&E Topock, D3184A1.EV.05-OM-TS			Matrix: WATER			
Lab ID:	N041247-001							
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed	
TOTAL FILTE	RABLE RESIDUE							
			SN	12540C				
RunID: NV00	922-WC_200708J	QC Batch: 80001		PrepDa	te:	7/8/2020	Analyst: LR	
Total Dissolve Filterable)	ed Solids (Residue,	4600 50	50		mg/L	1	7/8/2020 01:03 PM	

Print Date: 21-Jul-20

Qualifiers:

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



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## ANALYTICAL RESULTS

		Time Duce 21 0m 20							
CLIENT:	CH2M HILL		Client Sample ID: SC-700B-WDR-604						
Lab Order:	N041247			Collection	Date: 7/	7/2020 12:48	:00 PM		
Project:	PG&E Topock,	Matrix: WATER							
Lab ID:	N041247-002								
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed		
TOTAL FILTE	RABLE RESIDUE								
			SN	12540C					
RunID: NV00	922-WC_200708J	QC Batch: 80001		PrepDa	ate:	7/8/2020	Analyst: LR		
Total Dissolve Filterable)	ed Solids (Residue,	4500 50	50		mg/L	1	7/8/2020 01:03 PM		

Print Date: 21-Jul-20

Qualifiers:

- 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



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## ANALYTICAL RESULTS

CLIENT:	CH2M HILL		Client Sample ID: SC-701-WDR-604 Collection Date: 7/7/2020 12:40:00 PM					
Lab Order:	N041247							
Project:	PG&E Topock, D3184A1.EV.05-OM-TS			Ma	atrix: W	ATER		
Lab ID:	N041247-003							
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed	
TOTAL FILTE	RABLE RESIDUE							
			SN	12540C				
RunID: NV009	922-WC_200708J	QC Batch: 80001		PrepD	ate:	7/8/2020	Analyst: LR	
Total Dissolve Filterable)	ed Solids (Residue,	38000 500	500		mg/L	1	7/8/2020 01:03 PM	

Print Date: 21-Jul-20

Qualifiers:

- 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



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**CLIENT:** CH2M HILL

**Project:** 

Work Order: N041247

PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 160.1\_2540C\_W

Sample ID: LCS-80001 Client ID: LCSW	SampType: LCS Batch ID: 80001	TestCode: 160.1_2540C_ Units: mg/L TestNo: SM2540C	Prep Date: <b>7/8/2020</b> Analysis Date: <b>7/8/2020</b>	RunNo: <b>145638</b> SeqNo: <b>3840492</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Reside	ue, Filtera 974.000	10 1000 0	97.4 80 120	
Sample ID: <b>MB-80001</b> Client ID: <b>PBW</b>	SampType: MBLK Batch ID: 80001	TestCode: <b>160.1_2540C_</b> Units: <b>mg/L</b> TestNo: <b>SM2540C</b>	Prep Date: <b>7/8/2020</b> Analysis Date: <b>7/8/2020</b>	RunNo: <b>145638</b> SeqNo: <b>3840493</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Reside	ue, Filtera ND	10		
Sample ID: N041247-003ADL Client ID: ZZZZZZ	JP SampType: DUP Batch ID: 80001	TestCode: 160.1_2540C_ Units: mg/L TestNo: SM2540C	Prep Date: 7/8/2020 Analysis Date: 7/8/2020	RunNo: <b>145638</b> SeqNo: <b>3840499</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Reside	ue, Filtera 39800.000	500	38400	3.58 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

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

S Spike/Surrogate outside of limits due to matrix interference

H Holding times for preparation or analysis exceeded

## **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT: Lab Order:	CH2M HILL N041247			Client Sample ID: SC-100B-WDR-604 Collection Date: 7/7/2020 1:05:00 PM Matrix: WATER				
Project:		D3184A1.EV.05-	OM-TS					
Lab ID:	N041247-001							
Analyses		Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL META	LS BY ICP							
				EP	A 200.7			
RunID: NV00	922-ICP2_200710A	QC Batch: 80	019		PrepDa	ite:	7/9/2020	Analyst: <b>DJ</b>
Aluminum		150	40	50		µg/L	1	7/10/2020 08:10 AM
Boron		920	74	100		µg/L	1	7/10/2020 08:10 AM
Iron		ND	18	20		µg/L	1	7/10/2020 08:10 AM

Qualifiers:

В

Analyte detected in the associated Method Blank

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified

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## **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT: Lab Order:	CH2M HILL N041247			Client Sample ID: SC-700B-WDR-604 Collection Date: 7/7/2020 12:48:00 PM				
Project:	PG&E Topock,	D3184A1.EV.05-C	OM-TS		Matrix: WATER			
Lab ID:	N041247-002							
Analyses		Result	MDL	PQL	Qual Un	its DF	Date Analyzed	
TOTAL META	LS BY ICP							
				EPA	A 200.7			
RunID: NV009	922-ICP2_200710A	QC Batch: 800	19		PrepDate:	7/9/2020	Analyst: <b>DJ</b>	
Aluminum		ND	40	50	µg/L	1	7/10/2020 08:15 AM	
Boron		860	74	100	μg/L	1	7/10/2020 08:15 AM	
Iron		23	18	20	µg/L	1	7/10/2020 08:15 AM	

Qualifiers:

В

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference
- DO Surrogate Diluted Out

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Value above quantitation range ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Е

**CLIENT:** CH2M HILL

Work Order: N041247

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 200.7\_WPGEPPB

Sample ID: LCS-80019	SampType: LCS	TestCode: 200.7_WPGE Units: µg/L	Prep Date: <b>7/9/2020</b>	RunNo: 145662
Client ID: LCSW	Batch ID: 80019	TestNo: EPA 200.7	Analysis Date: 7/10/2020	SeqNo: 3841513
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Aluminum	9708.627	50 10000 0	97.1 85 115	
Boron	4666.052	100 5000 0	93.3 85 115	
Iron	110.272	20 100.0 0	110 85 115	
Sample ID: N041245-001A-MS	SampType: <b>MS</b>	TestCode: 200.7_WPGE Units: µg/L	Prep Date: 7/9/2020	RunNo: 145662
Client ID: ZZZZZZ	Batch ID: 80019	TestNo: <b>EPA 200.7</b>	Analysis Date: 7/10/2020	SeqNo: 3841517
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Aluminum	10510.832	50 10000 60.32	105 75 125	
Boron	5535.822	100 5000 1067	89.4 75 125	
Iron	160.125	20 100.0 69.19	90.9 75 125	
Sample ID: N041245-001A-MSD	SampType: MSD	TestCode: 200.7_WPGE Units: µg/L	Prep Date: 7/9/2020	RunNo: 145662
Client ID: ZZZZZZ	Batch ID: 80019	TestNo: EPA 200.7	Analysis Date: <b>7/10/2020</b>	SeqNo: 3841518
			•	
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Analyte Aluminum	Result 10504.221	PQL SPK value SPK Ref Val 50 10000 60.32	%REC LowLimit HighLimit RPD Ref Val	% RPD RPDLimit Qual
			-	
Aluminum	10504.221	50 10000 60.32	104 75 125 10510	0.0629 20
Aluminum Boron	10504.221 5506.264	501000060.3210050001067	104         75         125         10510           88.8         75         125         5536	0.0629 20 0.535 20
Aluminum Boron Iron	10504.221 5506.264 162.350	501000060.321005000106720100.069.19	104751251051088.875125553693.275125160.1	0.0629200.535201.3820
Aluminum Boron Iron Sample ID: MB-80019	10504.221 5506.264 162.350 SampType: <b>MBLK</b>	50         10000         60.32           100         5000         1067           20         100.0         69.19   TestCode: 200.7_WPGE Units: μg/L	104         75         125         10510           88.8         75         125         5536           93.2         75         125         160.1	0.0629 20 0.535 20 1.38 20 RunNo: <b>145662</b>
Aluminum Boron Iron Sample ID: MB-80019 Client ID: PBW	10504.221 5506.264 162.350 SampType: <b>MBLK</b> Batch ID: <b>80019</b>	50         10000         60.32           100         5000         1067           20         100.0         69.19   TestCode: 200.7_WPGE Units: μg/L TestNo: EPA 200.7	104     75     125     10510       88.8     75     125     5536       93.2     75     125     160.1   Prep Date: 7/9/2020 Analysis Date: 7/10/2020	0.0629 20 0.535 20 1.38 20 RunNo: <b>145662</b> SeqNo: <b>3841521</b>
Aluminum Boron Iron Sample ID: MB-80019 Client ID: PBW Analyte	10504.221 5506.264 162.350 SampType: <b>MBLK</b> Batch ID: <b>80019</b> Result	50         10000         60.32           100         5000         1067           20         100.0         69.19   TestCode: 200.7_WPGE Units: μg/L TestNo: EPA 200.7 PQL SPK value SPK Ref Val	104     75     125     10510       88.8     75     125     5536       93.2     75     125     160.1   Prep Date: 7/9/2020 Analysis Date: 7/10/2020	0.0629 20 0.535 20 1.38 20 RunNo: <b>145662</b> SeqNo: <b>3841521</b>

#### Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out

- Е Value above quantitation range
- R RPD outside accepted recovery limits

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ELAP Cert 2676 | NV Cert NV00922

**ORELAP/NELAP Cert 4046** 

Calculations are based on raw values

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



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## **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT: Lab Order:	CH2M HILL N041247		Client Sample ID: SC-100B-WDR-604 Collection Date: 7/7/2020 1:05:00 PM				
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS		Matrix: V	WATER		
Lab ID:	N041247-001						
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed	
HEXAVALEN	CHROMIUM BY I	2	ED	A 218.6			
RunID: NV009	922-IC7_200708C	QC Batch: <b>R145652</b>	<b>_</b> 1	PrepDate:		Analyst: <b>RAB</b>	
Hexavalent Cl	hromium	400 1.7	10	μg/L	50	7/9/2020 03:42 AM	
TOTAL META	LS BY ICPMS						
			EP	A 200.8			
RunID: NV009	922-ICP8_200710E	QC Batch: 80038		PrepDate:	7/10/2020	Analyst: CEI	
Chromium		410 0.65	5.0	μg/L	5	7/10/2020 09:35 PM	

Qualifiers:

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 rangeND Not Detected at the Reporting Limit

Results are wet unless otherwise specified



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## **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT:	CH2M HILL						
Lab Order:	N041247			Collection Date: 7/7/2020 12:48:00 PM			
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER				
Lab ID:	N041247-002						
Analyses		Result MDL	PQL	Qual Unit	ts DF	Date Analyzed	
HEXAVALEN	T CHROMIUM BY I	C					
			EP.	A 218.6			
RunID: NV00	922-IC7_200708C	QC Batch: R145652		PrepDate:		Analyst: <b>RAB</b>	
Hexavalent C	Chromium	ND 0.033	0.20	μg/L	1	7/9/2020 04:10 AM	
TOTAL META	LS BY ICPMS						
			EP.	A 200.8			
RunID: NV00	922-ICP8_200710E	QC Batch: 80038		PrepDate:	7/10/2020	Analyst: CEI	
Chromium		ND 0.13	1.0	µg/L	1	7/10/2020 10:49 PM	

Qualifiers:

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 rangeND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

DO Surrogate Dilu

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 EPA ID CA01638

## **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT: Lab Order:	CH2M HILL N041247			Client Sample ID: SC-701-WDR-604 Collection Date: 7/7/2020 12:40:00 PM					
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	05-OM-TS Matrix: WATER						
Lab ID:	N041247-003								
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed			
HEXAVALEN	T CHROMIUM BY I	C							
			EP	A 218.6					
RunID: NV00	922-IC7_200709A	QC Batch: R145681		PrepDate:		Analyst: <b>RAB</b>			
Hexavalent C	hromium	ND 0.33	2.0	µg/L	10	7/9/2020 11:32 AM			
TOTAL META	LS BY ICPMS								
			EP	A 200.8					
RunID: NV00	922-ICP8_200710E	QC Batch: 80038		PrepDate:	7/10/2020	Analyst: CEI			
Chromium		1.7 0.13	1.0	µg/L	1	7/10/2020 11:12 PM			

Qualifiers:

В

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
- E Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified

DO Surrogate Diluted Out

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**CLIENT:** CH2M HILL

Work Order: N041247

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

## ANALYTICAL QC SUMMARY REPORT

#### TestCode: 200.8\_W\_CRPGE\_TPK

Sample ID: <b>MB-80038</b> Client ID: <b>PBW</b>	SampType: MBLK Batch ID: 80038	TestCode: 200.8_W_CR Units: µg/L TestNo: EPA 200.8	Prep Date: <b>7/10/2020</b> Analysis Date: <b>7/10/2020</b>	RunNo: <b>145710</b> SeqNo: <b>3844507</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Chromium	ND	1.0		
Sample ID: LCS-80038 Client ID: LCSW Analyte	SampType: LCS Batch ID: 80038 Result	TestCode: 200.8_W_CR Units: µg/L TestNo: EPA 200.8 PQL SPK value SPK Ref Val	Prep Date: 7/10/2020 Analysis Date: 7/10/2020 %REC LowLimit HighLimit RPD Ref Val	RunNo: <b>145710</b> SeqNo: <b>3844508</b> %RPD RPDLimit Qual
Chromium	10.186	1.0 10.00 0	102 85 115	
Sample ID: N041247-001E-MS Client ID: ZZZZZZ	SampType: <b>MS</b> Batch ID: <b>80038</b>	TestCode: 200.8_W_CR Units: µg/L TestNo: EPA 200.8	Prep Date: 7/10/2020 Analysis Date: 7/10/2020	RunNo: <b>145710</b> SeqNo: <b>3844521</b>
		= =		
Client ID: ZZZZZZ	Batch ID: 80038	TestNo: EPA 200.8	Analysis Date: 7/10/2020	SeqNo: 3844521
Client ID: ZZZZZZ Analyte	Batch ID: 80038 Result 429.699	TestNo: <b>EPA 200.8</b> PQL SPK value SPK Ref Val	Analysis Date: <b>7/10/2020</b> %REC LowLimit HighLimit RPD Ref Val	SeqNo: <b>3844521</b> %RPD RPDLimit Qual
Client ID: ZZZZZZ Analyte Chromium Sample ID: N041247-001E-MSD	Batch ID: 80038 Result 429.699 SampType: MSD	TestNo:         EPA 200.8           PQL         SPK value         SPK Ref Val           5.0         10.00         412.9           TestCode:         200.8_W_CR         Units:         µg/L	Analysis Date:       7/10/2020         %REC       LowLimit       HighLimit       RPD Ref Val         168       75       125         Prep Date: 7/10/2020	SeqNo: 3844521 %RPD RPDLimit Qual S RunNo: 145710

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



E Value above quantitation range

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: MB-R145652	SampType: MBLK	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145652
Client ID: PBW	Batch ID: R145652	TestNo: <b>EPA 218.6</b>	Analysis Date: 7/9/2020	SeqNo: 3841124
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-R145652	SampType: LCS	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145652
Client ID: LCSW	Batch ID: R145652	TestNo: <b>EPA 218.6</b>	Analysis Date: <b>7/9/2020</b>	SeqNo: 3841125
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	4.825	0.20 5.000 0	96.5 90 110	
Sample ID: N041247-001CMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145652
Client ID: ZZZZZZ	Batch ID: R145652	TestNo: <b>EPA 218.6</b>	Analysis Date: <b>7/9/2020</b>	SeqNo: 3841127
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	646.935	10 250.0 402.4	97.8 90 110	
Sample ID: N041247-001CMSD	SampType: <b>MSD</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145652
Client ID: ZZZZZZ	Batch ID: R145652	TestNo: <b>EPA 218.6</b>	Analysis Date: 7/9/2020	SeqNo: 3841128
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	649.050	10 250.0 402.4	98.7 90 110 646.9	0.326 20
Sample ID: N041247-002CMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145652
Client ID: ZZZZZZ	Batch ID: R145652	TestNo: EPA 218.6	Analysis Date: 7/9/2020	SeqNo: 3841130
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	1.075	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

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

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Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: N041242-024ADUP	SampType: <b>DUP</b>	TestCo	de: 218.6_WU	I_P Units: µg/L		Prep Da	te:		RunNo: 14	5652	
Client ID: ZZZZZZ	Batch ID: R145652	Test	No: EPA 218.6	6		Analysis Da	ite: 7/9/202	20	SeqNo: 384	41134	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	7.096	0.20						7.198	1.42	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

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: MB-R145681	SampType: <b>MBLK</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145681
Client ID: PBW	Batch ID: R145681	TestNo: <b>EPA 218.6</b>	Analysis Date: 7/9/2020	SeqNo: 3842858
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-R145681	SampType: LCS	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145681
Client ID: LCSW	Batch ID: R145681	TestNo: <b>EPA 218.6</b>	Analysis Date: 7/9/2020	SeqNo: 3842859
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qua
Hexavalent Chromium	4.760	0.20 5.000 0	95.2 90 110	
Sample ID: N041247-003BMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145681
Client ID: ZZZZZZ	Batch ID: R145681	TestNo: <b>EPA 218.6</b>	Analysis Date: 7/9/2020	SeqNo: 3842863
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qua
Hexavalent Chromium	10.069	2.0 10.00 1.036	90.3 90 110	
Sample ID: N041277-007ADUP	SampType: <b>DUP</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145681
Client ID: ZZZZZZ	Batch ID: R145681	TestNo: <b>EPA 218.6</b>	Analysis Date: 7/9/2020	SeqNo: 3842885
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qua
Hexavalent Chromium	1.284	0.20	1.283	0.0623 20
Sample ID: N041280-004AMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 145681
Client ID: ZZZZZZ	Batch ID: <b>R145681</b>	TestNo: EPA 218.6	Analysis Date: 7/9/2020	SeqNo: 3842890
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qua
Hexavalent Chromium	0.994	0.20 1.000 0	99.4 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

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R RPD outside accepted recovery limits

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

Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: N041280-004AMSD	SampType: <b>MSD</b>	TestCo	de: 218.6_WU	_P Units: µg/L		Prep Da	te:		RunNo: 145	5681	
Client ID: ZZZZZZ	Batch ID: R145681	TestNo: EPA 218.6			Analysis Date: 7/9/2020			SeqNo: 3842891			
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	0.9940	3.68	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

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Date: 21-Jul-20

CLIENT: CH2M HILL

Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

## ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.8\_W\_CRPGE\_TPK

Sample ID: N041247-001E-PS	SampType: <b>PS</b>	TestCo	de: 200.8_W_	CR Units: µg/L		Prep Da	te:		RunNo: 14	5710	
Client ID: ZZZZZZ	Batch ID: 80038	TestNo: EPA 200.8			Analysis Date: <b>7/10/2020</b>			SeqNo: 3844518			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	425.272	5.0	10.00	412.9	124	80	120				S

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



Calculations are based on raw values CALIFORNIA | P:562.219.7435 F:562.219.7436 <u>NEVADA</u> | P:702.307.2659 F:77

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E Value above quantitation range

RPD outside accepted recovery limits

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

## **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

Lab ID:	N041247-001					
Project:	PG&E Topock, D3184A1.EV.05-OM-TS	Matrix: WATER				
Lab Order:	N041247	Collection Date: 7/7/2020 1:05:00 PM				
CLIENT:	CH2M HILL	Client Sample ID: SC-100B-WDR-604				

#### TOTAL METALS BY ICPMS

		EPA 200.8							
RunID: NV00922-ICP8_200713C	QC Batch: 800	38		PrepDate:	7/10/2020	Analyst: CEI			
Antimony	ND	0.16	0.50	µg/L	1	7/13/2020 10:41 AM			
Arsenic	0.77	0.081	0.10	μg/L	1	7/10/2020 09:30 PM			
Barium	32	0.15	1.0	μg/L	1	7/13/2020 10:41 AM			
Copper	ND	0.55	1.0	μg/L	1	7/13/2020 10:41 AM			
Lead	ND	0.13	1.0	μg/L	1	7/10/2020 09:30 PM			
Manganese	6.8	0.26	0.50	μg/L	1	7/10/2020 09:30 PM			
Molybdenum	23	0.21	0.50	μg/L	1	7/10/2020 09:30 PM			
Nickel	ND	0.26	1.0	μg/L	1	7/10/2020 09:30 PM			
Zinc	ND	2.3	10	µg/L	1	7/10/2020 09:30 PM			

Qualifiers:

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

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## **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

Lab ID: Analyses	N041247-002 Result MDL	PQL Qual Units DF Date Analyzed
0		
Project:	PG&E Topock, D3184A1.EV.05-OM-TS	Matrix: WATER
Lab Order:	N041247	Collection Date: 7/7/2020 12:48:00 PM
CLIENT:	CH2M HILL	Client Sample ID: SC-700B-WDR-604

#### TOTAL METALS BY ICPMS

	EPA 200.8						
RunID: NV00922-ICP8_200713C	QC Batch: 80038			PrepDate:	7/10/2020	Analyst: CEI	
Antimony	ND	0.16	0.50	μg/L	1	7/13/2020 11:13 AM	
Arsenic	ND	0.081	0.10	μg/L	1	7/10/2020 10:49 PM	
Barium	23	0.15	1.0	μg/L	1	7/13/2020 11:13 AM	
Copper	ND	0.55	1.0	μg/L	1	7/13/2020 11:13 AM	
Lead	ND	0.13	1.0	μg/L	1	7/10/2020 10:49 PM	
Manganese	64	0.26	0.50	µg/L	1	7/10/2020 10:49 PM	
Molybdenum	23	0.21	0.50	µg/L	1	7/10/2020 10:49 PM	
Nickel	ND	0.26	1.0	µg/L	1	7/10/2020 10:49 PM	
Zinc	ND	2.3	10	µg/L	1	7/10/2020 10:49 PM	

Qualifiers:

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 rangeND Not Detected at the Reporting Limit

Results are wet unless otherwise specified



В

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# **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT:	CH2M HILL
Lab Order:	N041247
Project:	PG&E Topock, D3184A1.EV.05-OM-TS
Lab ID:	N041247-003

# Client Sample ID: SC-701-WDR-604 Collection Date: 7/7/2020 12:40:00 PM Matrix: WATER

	11041247-003							
Analyses		Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL M	IETALS BY ICPMS							
				EP	A 200.8			
RunID: N	NV00922-ICP8_200715A	QC Batch: 80	038		Prep[	Date:	7/10/2020	Analyst: CEI
Antimon	у	ND	0.16	0.50		µg/L	1	7/15/2020 10:39 AM
Arsenic		1.7	0.081	0.10		µg/L	1	7/10/2020 11:12 PM
Barium		230	0.75	5.0		µg/L	5	7/13/2020 11:23 AM
Beryllium	n	ND	0.042	0.50		µg/L	1	7/10/2020 11:12 PM
Cadmiur	n	ND	0.053	0.50		µg/L	1	7/10/2020 11:12 PM
Cobalt		ND	0.042	0.50		µg/L	1	7/10/2020 11:12 PM
Copper		3.9	0.55	1.0		µg/L	1	7/13/2020 11:18 AM
Lead		ND	0.13	1.0		µg/L	1	7/10/2020 11:12 PM
Molybde	num	230	1.1	2.5		µg/L	5	7/10/2020 11:16 PM
Nickel		27	0.26	1.0		µg/L	1	7/10/2020 11:12 PM
Seleniun	n	45	0.36	0.50		µg/L	1	7/10/2020 11:12 PM
Silver		ND	0.23	0.50		µg/L	1	7/10/2020 11:12 PM
Thallium		ND	0.19	0.50		µg/L	1	7/10/2020 11:12 PM
Vanadiu	m	3.5	0.28	1.0		µg/L	1	7/13/2020 11:18 AM
Zinc		ND	2.3	10		µg/L	1	7/10/2020 11:12 PM

Qualifiers:

В

Analyte detected in the associated Method Blank

- Holding times for preparation or analysis exceeded Η
- S Spike/Surrogate outside of limits due to matrix interference DO
- Е Value above quantitation range ND Not Detected at the Reporting Limit

Results are wet unless otherwise specified

Surrogate Diluted Out

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CLIENT: CH2M HILL

Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

#### Date: 21-Jul-20

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 200.8\_W\_TPK

Sample ID: <b>MB-80038</b> Client ID: <b>PBW</b>	SampType: MBLK Batch ID: 80038	TestCode: 200.8_W_TP TestNo: EPA 200.8	Units: µg/L	Prep Date: 7/10/2020 Analysis Date: 7/10/2020	RunNo: <b>145710</b> SeqNo: <b>3844593</b>
Analyte	Result	PQL SPK value SPK	K 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			
Nickel	ND	1.0			
Selenium	ND	0.50			
Silver	ND	0.50			
Thallium	ND	0.50			
Zinc	ND	10			

Sample ID: LCS-80038	SampType: LCS	TestCo	de: 200.8_W_	TP Units: µg/L			20	RunNo: 14	5710		
Client ID: LCSW	Batch ID: 80038	Test	No: EPA 200.8	}		Analysis Da	te: 7/10/20	20	SeqNo: 384	14594	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	10.867	0.10	10.00	0	109	85	115				
Beryllium	10.106	0.50	10.00	0	101	85	115				
Cadmium	9.890	0.50	10.00	0	98.9	85	115				
Cobalt	9.628	0.50	10.00	0	96.3	85	115				
Lead	9.645	1.0	10.00	0	96.4	85	115				
Manganese	99.337	0.50	100.0	0	99.3	85	115				
Molybdenum	9.867	0.50	10.00	0	98.7	85	115				
Nickel	10.154	1.0	10.00	0	102	85	115				
Selenium	10.089	0.50	10.00	0	101	85	115				
Silver	10.384	0.50	10.00	0	104	85	115				
Thallium	9.475	0.50	10.00	0	94.7	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



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### CLIENT: CH2M HILL

#### Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 200.8\_W\_TPK

Sample ID: LCS-80038	SampType: LCS	TestCode:	200.8_W_T	Ρ Units: μg/L		Prep Da	te: 7/10/20	20	RunNo: 14	5710	
Client ID: LCSW	Batch ID: 80038	TestNo:	EPA 200.8			Analysis Da	te: 7/10/20	20	SeqNo: 384	4594	
Analyte	Result	PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Zinc	10.355	10	10.00	0	104	85	115				
Sample ID: N041247-001E-MS	SampType: <b>MS</b>	TestCode:	200.8_W_T	Ρ Units: μg/L		Prep Da	te: 7/10/20	20	RunNo: 14	5710	
Client ID: ZZZZZZ	Batch ID: 80038	TestNo:	EPA 200.8			Analysis Da	te: 7/10/20	20	SeqNo: <b>38</b> 4	4606	
Analyte	Result	PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.551	0.10	10.00	0.7655	108	75	125				
Beryllium	7.045	0.50	10.00	0	70.4	75	125				S
Cadmium	9.733	0.50	10.00	0	97.3	75	125				
Cobalt	8.363	0.50	10.00	0.05651	83.1	75	125				
Lead	10.689	1.0	10.00	0	107	75	125				
Manganese	96.698	0.50	100.0	6.810	89.9	75	125				
Molybdenum	34.088	0.50	10.00	23.05	110	75	125				
Nickel	ND	1.0	10.00	0	0	75	125				S
Selenium	13.726	0.50	10.00	4.288	94.4	75	125				
Silver	10.073	0.50	10.00	0	101	75	125				
Thallium	8.725	0.50	10.00	0	87.2	75	125				
Zinc	2.614	10	10.00	0	26.1	75	125				S
Sample ID: N041247-001E-MSD	SampType: MSD	TestCode:	200.8_W_T	Ρ Units: μg/L		Prep Da	te: 7/10/20	20	RunNo: 14	5710	
Client ID: ZZZZZZ	Batch ID: 80038	TestNo:	EPA 200.8			Analysis Da	te: 7/10/20	20	SeqNo: 384	4609	
Analyte	Result	PQL S	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.375	0.10	10.00	0.7655	106	75	125	11.55	1.53	20	
Beryllium	6.963	0.50	10.00	0	69.6	75	125	7.045	1.16	20	S
Cadmium	9.628	0.50	10.00	0	96.3	75	125	9.733	1.08	20	
Cobalt	8.444	0.50	10.00	0.05651	83.9	75	125	8.363	0.966	20	
Lead	10.646	1.0	10.00	0	106	75	125	10.69	0.401	20	
Manganese	96.598	0.50	100.0	6.810	89.8	75	125	96.70	0.104	20	
Molybdenum	34.046	0.50	10.00	23.05	110	75	125	34.09	0.124	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



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## CLIENT: CH2M HILL

#### Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 200.8\_W\_TPK

Sample ID: N041247-001E-MSD	<b>)</b> SampType: <b>MSD</b>	TestCode: 20	0.8_W_TP	Units: µg/L		Prep Dat	e: 7/10/20	20	RunNo: 145	5710	
Client ID: ZZZZZZ	Batch ID: 80038	TestNo: EI	PA 200.8			Analysis Dat	e: 7/10/20	20	SeqNo: 384	4609	
Analyte	Result	PQL SP	K value SP	K 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	13.804	0.50	10.00	4.288	95.2	75	125	13.73	0.564	20	
Silver	10.034	0.50	10.00	0	100	75	125	10.07	0.388	20	
Thallium	8.904	0.50	10.00	0	89.0	75	125	8.725	2.03	20	
Zinc	2.470	10	10.00	0	24.7	75	125	2.614	0	20	S
Sample ID: MB-80038	SampType: MBLK	TestCode: 20	0.8_W_TP	Units: µg/L		Prep Dat	e: 7/10/20	20	RunNo: 145	5731	
Client ID: PBW	Batch ID: 80038	TestNo: El	PA 200.8			Analysis Dat	e: 7/13/20	20	SeqNo: <b>384</b>	15922	
Analyte	Result	PQL SP	K value SP	K Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.50									
Barium	ND	1.0									
Copper	ND	1.0									
Vanadium	ND	1.0									
Sample ID: LCS-80038	SampType: LCS	TestCode: 20	0.8_W_TP	Units: µg/L		Prep Dat	e: <b>7/10/20</b>	20	RunNo: 145	5731	
Client ID: LCSW	Batch ID: 80038	TestNo: El	PA 200.8			Analysis Dat	e: 7/13/20	20	SeqNo: 384	5923	
Analyte	Result	PQL SP	K value SP	K Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
							-				
Antimony	9.932	0.50	10.00	0	99.3	85	115				
Antimony Barium	9.932 9.851	0.50 1.0	10.00 10.00	0 0	99.3 98.5	85 85	115 115				
•											
Barium	9.851	1.0	10.00	0	98.5	85	115				
Barium Copper	9.851 9.752	1.0 1.0	10.00 10.00 10.00	0 0	98.5 97.5	85 85 85	115 115	20	RunNo: <b>145</b>	5731	
Barium Copper Vanadium	9.851 9.752 10.288	1.0 1.0 1.0	10.00 10.00 10.00 00.8_W_TP	0 0 0	98.5 97.5 103	85 85 85	115 115 115 e: <b>7/10/20</b>		RunNo: <b>145</b> SeqNo: <b>384</b>		
Barium Copper Vanadium Sample ID: N041247-001E-MS	9.851 9.752 10.288 SampType: <b>MS</b>	1.0 1.0 1.0 TestCode: <b>20</b> TestNo: <b>E</b>	10.00 10.00 10.00 00.8_W_TP	0 0 Units: <b>µg/L</b>	98.5 97.5 103	85 85 Prep Dat Analysis Dat	115 115 115 e: 7/10/20 e: 7/13/20				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

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#### **CLIENT:** CH2M HILL

#### Work Order: N041247

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 200.8\_W\_TPK

Sample ID: N041247-001E-MS	SampType: MS	TestCoo	de: 200.8_W_	<b>ΤΡ</b> Units: μ <b>g/L</b>		Prep Dat	te: 7/10/20	20	RunNo: 14	5731	
Client ID: ZZZZZZ	Batch ID: 80038	TestN	lo: EPA 200.8	3		Analysis Da	te: 7/13/20	20	SeqNo: 384	45929	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	40.622	1.0	10.00	31.86	87.6	75	125				
Copper	8.663	1.0	10.00	0	86.6	75	125				
Vanadium	18.581	1.0	10.00	8.590	99.9	75	125				
Sample ID: N041247-001E-MS	D SampType: MSD	TestCo	de: 200.8_W_	TP Units: µg/L		Prep Dat	te: 7/10/20	20	RunNo: 14	5731	
Sample ID: N041247-001E-MS Client ID: ZZZZZZ	D SampType: MSD Batch ID: 80038		de: 200.8_W_ No: EPA 200.8			Prep Dat Analysis Da			RunNo: 14: SeqNo: 384		
			 No: EPA 200.8		%REC	Analysis Da	te: 7/13/20				Qual
Client ID: ZZZZZZ	Batch ID: 80038	TestN	 No: EPA 200.8	3		Analysis Da	te: 7/13/20	20	SeqNo: 384	45930	Qual
Client ID: <b>ZZZZZZ</b> Analyte	Batch ID: 80038 Result	TestN PQL	 No: EPA 200.8 SPK value	SPK Ref Val	%REC	Analysis Da LowLimit	te: 7/13/20 HighLimit	20 RPD Ref Val	SeqNo: <b>384</b> %RPD	<b>\$5930</b> RPDLimit	Qual
Client ID: ZZZZZZ Analyte Antimony	Batch ID: 80038 Result 11.840	TestN PQL 0.50	No: <b>EPA 200.8</b> SPK value 10.00	3 SPK Ref Val 0.2687	%REC 116	Analysis Da LowLimit 75	te: 7/13/20 HighLimit 125	20 RPD Ref Val 11.78	SeqNo: <b>38</b> 4 %RPD 0.499	<b>45930</b> RPDLimit 20	Qual

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



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E Value above quantitation range

RPD outside accepted recovery limits

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

**CLIENT:** CH2M HILL

Work Order: N041247

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 200.8\_W\_TPK

Sample ID: N041247-001E-PS	SampType: <b>PS</b>	TestCo	de: 200.8_W_	TP Units: µg/L		Prep Da	te:		RunNo: 14	5710	
Client ID: ZZZZZZ	Batch ID: 80038	Test	No: EPA 200.8	}		Analysis Da	te: 7/10/20	20	SeqNo: 384	44603	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	11.585	0.10	10.00	0.7655	108	80	120				
Beryllium	7.145	0.50	10.00	0	71.4	80	120				S
Cadmium	9.819	0.50	10.00	0	98.2	80	120				
Cobalt	8.651	0.50	10.00	0.05651	85.9	80	120				
Lead	10.688	1.0	10.00	0	107	80	120				
Manganese	98.720	0.50	100.0	6.810	91.9	80	120				
Molybdenum	34.517	0.50	10.00	23.05	115	80	120				
Nickel	ND	1.0	10.00	0	0	80	120				S
Selenium	13.718	0.50	10.00	4.288	94.3	80	120				
Silver	10.123	0.50	10.00	0	101	80	120				
Thallium	8.973	0.50	10.00	0	89.7	80	120				
Zinc	2.461	10	10.00	0	24.6	80	120				S
Sample ID: N041247-001E-PS	SampType: <b>PS</b>	TestCo	de: 200.8_W_	TP Units: µg/L		Prep Da	te:		RunNo: 14	5731	
Client ID: ZZZZZZ	Batch ID: 80038	Test	lo: EPA 200.8	5		Analysis Da	te: 7/13/20	20	SeqNo: 384	15928	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	12.338	0.50	10.00	0.2687	121	80	120				S
Barium	41.344	1.0	10.00	31.86	94.8	80	120				
Copper	8.545	1.0	10.00	0	85.5	80	120				
Vanadium	18.685	1.0	10.00	8.590	101	80	120				

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



R RPD outside accepted recovery limits Calculations are based on raw values

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E Value above quantitation range

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

# ANALYTICAL RESULTS Print Date: 21-Jul-20

CLIENT	CH2M	HILL		C	lient Samp	le ID: SC-1	00B-WDR	-604	
Lab Ord	ler: N04124	17		Collection Date: 7/7/2020 1:05:00 PM					
<b>Project:</b>	PG&E	Topock, D3184A1.EV.05-	-OM-TS		Μ	atrix: WAT	ER		
Lab ID:	N04124	7-001							
Analyses	5	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	
TURBID	ΟΙΤΥ								
				SN	1 2130B				
RunID:	NV00922-WC_200	708H QC Batch: R1	45618		PrepD	ate:		Analyst: LR	
Turbid	ity	0.31	0.10	0.10		NTU	1	7/8/2020 03:45 PM	

Qualifiers:

- 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



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# ANALYTICAL RESULTS Print Date: 21-Jul-20

CLIENT:	CH2M HILL		C	lient Sample ID: S	C-700B-WDF	R-604		
Lab Order:	N041247		Collection Date: 7/7/2020 12:48:00 PM					
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS		Matrix: V	VATER			
Lab ID:	N041247-002							
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed		
TURBIDITY								
			SN	1 2130B				
RunID: NV0	0922-WC_200708H	QC Batch: R145618		PrepDate:		Analyst: LR		
Turbidity		0.28 0.10	0.10	NTU	1	7/8/2020 03:45 PM		

Qualifiers:

- 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

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**CLIENT:** CH2M HILL

Work Order: N041247

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 2130\_W

Sample ID: <b>MB-R145618</b> Client ID: <b>PBW</b>	SampType: <b>MBLK</b> Batch ID: <b>R145618</b>	TestCode: 2130_W Units: 1 TestNo: SM 2130B	ITU Prep Date: Analysis Date: 7/8/2020	RunNo: 145618 SeqNo: 3839867
Analyte	Result	PQL SPK value SPK Ref Va	I %REC LowLimit HighLimit RPD Ref Va	I %RPD RPDLimit Qual
Turbidity	ND	0.10		
Sample ID: N041247-002BDUP Client ID: ZZZZZZ	SampType: DUP Batch ID: R145618	TestCode: 2130_W Units: N TestNo: SM 2130B	ITU Prep Date: Analysis Date: 7/8/2020	RunNo: <b>145618</b> SeqNo: <b>3839870</b>
		- · · <b>-</b>	Analysis Date: 7/8/2020	SeqNo: 3839870

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



E Value above quantitation range

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

# ANALYTICAL RESULTS

CLIENT:	CH2M HILL			Client Sample ID: SC-701-WDR-604						
Lab Order	: N041247			Collection Date: 7/7/2020 12:40:00 PM						
Project:	PG&E Topock,	D3184A1.EV.05-OM-	M-TS Matrix: WATER							
Lab ID:	N041247-003									
Analyses		Result MI	DL PQL	Qual	Units	DF	Date Analyzed			
TOTAL ME	ERCURY BY COLD VA	POR TECHNIQUE								
			E	EPA 245.1						
RunID: N	V00922-AA2_200709A	QC Batch: 80009		PrepD	Date:	7/9/2020	Analyst: <b>DJ</b>			
Mercury		ND 0	.13 0.20		µg/L	1	7/9/2020 11:00 AM			

Print Date: 21-Jul-20

Qualifiers:

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 rangeND Not Detected at the Reporting Limit

Results are wet unless otherwise specified



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**CLIENT:** CH2M HILL

Work Order: N041247

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 245.1\_W

Sample ID: <b>MB-80009</b> Client ID: <b>PBW</b>	SampType: MBLK Batch ID: 80009	TestCode: 245.1_W Units: μg/L TestNo: EPA 245.1	Prep Date: <b>7/9/2020</b> Analysis Date: <b>7/9/2020</b>	RunNo: <b>145639</b> SeqNo: <b>3840506</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Mercury	ND	0.20		
Sample ID: <b>LCS-80009</b> Client ID: <b>LCSW</b> Analyte	SampType: LCS Batch ID: 80009 Result	TestCode: 245.1_W Units: µg/L TestNo: EPA 245.1 PQL SPK value SPK Ref Val	Prep Date: <b>7/9/2020</b> Analysis Date: <b>7/9/2020</b> %REC LowLimit HighLimit RPD Ref Val	RunNo: <b>145639</b> SeqNo: <b>3840508</b> %RPD RPDLimit Qual
Mercury	4.310	0.20 5.000 0	86.2 85 115	
Sample ID: N041245-001A-MS Client ID: ZZZZZZ	SampType: <b>MS</b> Batch ID: <b>80009</b>	TestCode: 245.1_W Units: μg/L TestNo: EPA 245.1	Prep Date: <b>7/9/2020</b> Analysis Date: <b>7/9/2020</b>	RunNo: <b>145639</b> SeqNo: <b>3840512</b>
			·	
Client ID: ZZZZZZ	Batch ID: 80009	TestNo: EPA 245.1	Analysis Date: 7/9/2020	SeqNo: 3840512
Client ID: <b>ZZZZZZ</b> Analyte	Batch ID: 80009 Result	TestNo: <b>EPA 245.1</b> PQL SPK value SPK Ref Val	Analysis Date: <b>7/9/2020</b> %REC LowLimit HighLimit RPD Ref Val	SeqNo: 3840512
Client ID: ZZZZZZ Analyte Mercury Sample ID: N041245-001A-MSD	Batch ID: 80009 Result 4.660 SampType: MSD	PQL         SPK value         SPK Ref Val           0.20         5.000         0           TestCode:         245.1_W         Units: µg/L	Analysis Date:       7/9/2020         %REC       LowLimit       HighLimit       RPD Ref Val         93.2       75       125         Prep Date:       7/9/2020	SeqNo: <b>3840512</b> %RPD RPDLimit Qual RunNo: <b>145639</b>

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



E Value above quantitation range

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

# **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT:	CH2M HILL	CH2M HILL Client Sample ID: SC-100B-WDR-604							
Lab Order:	N041247		(	Collection Date: 7/7/2	020 1:05:0	0 PM			
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER						
Lab ID:	N041247-001								
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed			
ANIONS BY IC	ON CHROMATOGE	RAPHY							
			EPA	A 300.0					
RunID: NV009	922-IC8_200709A	QC Batch: R145654		PrepDate:		Analyst: <b>RAB</b>			
Fluoride		2.7 0.048	0.50	mg/L	5	7/9/2020 09:05 PM			
	ON CHROMATOGE	APHY							
	ON CHROMATOGF	АРНҮ	EPA	A 300.0					
ANIONS BY IC	ON CHROMATOGF 922-IC8_200708B	RAPHY QC Batch: R145636	EPA	<b>A 300.0</b> PrepDate:		Analyst: <b>RAB</b>			

Qualifiers:

В

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

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# **ANALYTICAL RESULTS**

Print Date: 21-Jul-20

CLIENT:	CH2M HILL Client Sample ID: SC-700B-WDR-604							
Lab Order:	N041247		(	Collection Date: 7/7/2	020 12:48:	00 PM		
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER					
Lab ID:	N041247-002							
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed		
ANIONS BY IC	ON CHROMATOGR	APHY						
			EPA	A 300.0				
RunID: NV009	922-IC8_200709A	QC Batch: R145654		PrepDate:		Analyst: <b>RAB</b>		
Fluoride		2.5 0.048	0.50	mg/L	5	7/9/2020 09:21 PM		
	ON CHROMATOGR		0.50	mg/L	5	7/9/2020 09:21 PM		
	ON CHROMATOGR			mg/L <b>\ 300.0</b>	5	7/9/2020 09:21 PM		
ANIONS BY IC	DN CHROMATOGR 922-1C8_200708B			Ū.	5	7/9/2020 09:21 PM Analyst: <b>RAB</b>		

Qualifiers:

В

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



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# ANALYTICAL RESULTS

CLIENT:	CH2M HILL		Client Sample ID: SC-701-WDR-604						
Lab Order:	N041247			Collection	Date: 7/7/20	020 12:40:	00 PM		
Project:	PG&E Topock, I	D3184A1.EV.05-OM-TS	Matrix: WATER						
Lab ID:	N041247-003								
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed		
ANIONS BY I	ON CHROMATOGRA	\PHY							
			EP	A 300.0					
RunID: NV00	922-IC8_200709A	QC Batch: <b>R145654</b>		PrepD	ate:		Analyst: <b>RAB</b>		

Print Date: 21-Jul-20

Qualifiers:

В

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



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CLIENT: CH2M HILL

Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 300\_W\_FPGE

Sample ID: MB-R145654_F	SampType: <b>MBLK</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 145654
Client ID: PBW	Batch ID: <b>R145654</b>	TestNo: <b>EPA 300.0</b>	Analysis Date: <b>7/9/2020</b>	SeqNo: 3841239
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	ND	0.10		
Sample ID: LCS-R145654_F	SampType: LCS	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: <b>145654</b>
Client ID: LCSW	Batch ID: R145654	TestNo: <b>EPA 300.0</b>	Analysis Date: 7/9/2020	SeqNo: 3841240
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	1.331	0.10 1.250 0	106 90 110	
Sample ID: N041249-001BDUP	SampType: <b>DUP</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: <b>145654</b>
Client ID: ZZZZZZ	Batch ID: R145654	TestNo: <b>EPA 300.0</b>	Analysis Date: 7/9/2020	SeqNo: 3841248
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	3.223	1.0	3.230	0.217 20
Sample ID: N041249-001BMS	SampType: <b>MS</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: <b>145654</b>
Client ID: ZZZZZZ	Batch ID: R145654	TestNo: <b>EPA 300.0</b>	Analysis Date: 7/9/2020	SeqNo: 3841249
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	15.680	1.0 12.50 3.230	99.6 80 120	
Sample ID: N041249-001BMSD	SampType: <b>MSD</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: <b>145654</b>
Client ID: ZZZZZZ	Batch ID: R145654	TestNo: EPA 300.0	Analysis Date: 7/9/2020	SeqNo: 3841250
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	15.878	1.0 12.50 3.230	101 80 120 15.68	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

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

#### CLIENT: CH2M HILL

#### Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 300\_W\_SO4PGE

Sample ID: LCS-R145636_SO4	SampType: LCS	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 145636		
Client ID: LCSW	Batch ID: R145636	TestNo: <b>EPA 300.0</b>	Analysis Date: 7/8/2020	SeqNo: 3840451		
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: MB-R145636_SO4	SampType: MBLK	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 145636		
Client ID: PBW	Batch ID: R145636	TestNo: <b>EPA 300.0</b>	Analysis Date: 7/8/2020	SeqNo: 3840452		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Sulfate	ND	0.50				
Sample ID: N041241-007BMS	SampType: <b>MS</b>	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 145636		
Client ID: ZZZZZZ	Batch ID: R145636	TestNo: <b>EPA 300.0</b>	Analysis Date: <b>7/8/2020</b>	SeqNo: 3840460		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Sulfate	117.806	5.0 40.00 77.32	101 80 120			
Sample ID: N041241-007BMSD	SampType: <b>MSD</b>	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 145636		
Client ID: ZZZZZZ	Batch ID: R145636	TestNo: <b>EPA 300.0</b>	Analysis Date: 7/8/2020	SeqNo: 3840461		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Sulfate	117.642	5.0 40.00 77.32	101 80 120 117.8	0.139 20		
Sample ID: N041241-002BMS	SampType: <b>MS</b>	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 145636		
Client ID: ZZZZZZ	Batch ID: R145636	TestNo: <b>EPA 300.0</b>	Analysis Date: 7/8/2020	SeqNo: 3840463		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Sulfate	79.710	2.5 20.00 59.38	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

CALIFORNIA | P:562.219.7435 F:562.219.7436

11110 Artesia Blvd., Ste B, Cerritos, CA 90703

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

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

Calculations are based on raw values

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

43

# CLIENT: CH2M HILL

Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

TestCode: 300\_W\_SO4PGE

Sample ID: N041241-001BDUP	SampType: <b>DUP</b>	TestCo	TestCode: 300_W_SO4P Units: mg/L			Prep Da	te:		RunNo: 145636			
Client ID: ZZZZZZ	Batch ID: R145636	Test	No: EPA 300.0	)		Analysis Da	te: 7/8/202	0	SeqNo: 384	10465		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Sulfate	61.322	2.5						60.83	0.806	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

CALIFORNIA | P:562.219.7435 F:562.219.7436

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ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

# **ANALYTICAL RESULTS**

-										
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-604							
Lab Order:	N041247		Collection Date: 7/7/2020 1:05:00 PM							
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	S	Matrix: WATER						
Lab ID:	N041247-001									
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed			
NITRATE/NI	TRITE-N BY CADMI	UM REDUCTION								
			SM4	500-NO3F						
RunID: NV0	0922-WC_200709D	QC Batch: R145646		PrepDa	ate:		Analyst: <b>JBB</b>			
Nitrate/Nitrit	e as N	2.9 0.16	0.25		mg/L	5	7/9/2020 04:12 PN			

Print Date: 21-Jul-20

Qualifiers:

В

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

0

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# **ANALYTICAL RESULTS**

-											
CLIENT	: CH2M HILL		Client Sample ID: SC-700B-WDR-604								
Lab Ord	er: N041247		Collection Date: 7/7/2020 12:48:00 PM								
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER								
Lab ID:	N041247-002										
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed				
NITRAT	E/NITRITE-N BY CADMI	JM REDUCTION									
			SM4	500-NO3F							
RunID:	NV00922-WC_200709D	QC Batch: <b>R145646</b>		PrepDa	ate:		Analyst: <b>JBB</b>				
Nitrate/	Nitrite as N	3.2 0.16	0.25		mg/L	5	7/9/2020 04:15 PI				

Print Date: 21-Jul-20

Qualifiers:

В

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

C

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CLIENT: CH2M HILL

Work Order: N041247

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

## TestCode: 4500N03F\_W\_PGE

Sample ID: MB-R145646	SampType: <b>MBLK</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 145646
Client ID: PBW	Batch ID: R145646	TestNo: <b>SM4500-NO3</b>	Analysis Date: <b>7/9/2020</b>	SeqNo: 3840738
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-R145646	SampType: LCS	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 145646
Client ID: LCSW	Batch ID: R145646	TestNo: SM4500-NO3	Analysis Date: 7/9/2020	SeqNo: 3840739
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	99.5 85 115	
Sample ID: N041247-001DMS	SampType: <b>MS</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 145646
Client ID: ZZZZZZ	Batch ID: R145646	TestNo: <b>SM4500-NO3</b>	Analysis Date: 7/9/2020	SeqNo: 3840741
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Nitrate/Nitrite as N	5.513	0.25 2.500 2.856	106 75 125	
Sample ID: N041247-001DMSD	SampType: <b>MSD</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 145646
Client ID: ZZZZZZ	Batch ID: R145646	TestNo: SM4500-NO3	Analysis Date: 7/9/2020	SeqNo: 3840742
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Nitrate/Nitrite as N	5.485	0.25 2.500 2.856	105 75 125 5.513	0.518 20
Sample ID: N041247-002DDUP	SampType: <b>DUP</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 145646
Client ID: ZZZZZZ	Batch ID: R145646	TestNo: SM4500-NO3	Analysis Date: 7/9/2020	SeqNo: 3840744
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Nitrate/Nitrite as N	3.057	0.25	3.192	4.31 20

#### Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- "Serving Clients with Passion and Professionalism"
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R

E Value above quantitation range

RPD outside accepted recovery limits

Calculations are based on raw values

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**ORELAP/NELAP Cert 4046** 

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

# JACOBS ch2m

# **CHAIN OF CUSTODY RECORD**

# Page 1 OF 1

Project Name PG&E Topock Location PG&E Topock Project Number D3184A1.EV. Project Manager Scott O'Dona Sample Manager Shawn Duffy	nell	Prese	ontainer: rvatives: Filtered: ng Time:	Poly 4°C Lab H2SO4 NA	1 Liter Poly 4°C NA 7	1 Liter Poly 4°C NA 7	1 Liter Poly 4°C NA 7	250 ml Poly 4°C NA	1 Liter Poly 4℃ Lab H2SO4 NA 28	1 Liter Poly 4°C NA 7	500 ml Poły 4°C NA 180	500 ml Poly 4°C NA 180	500 ml Poly 4°C NA 180	1 Liter Poly 4°C NA 7			
Task Order Project IM3PLANT-ARAR-WDF Turnaround Time 10 Days Shipping Date: 7/7/2020 COC Number: IM3-604		TIME	Matrix	AMMONIA (SM4500NH3D)	Anions (E300.0) F & SO4	Anions (E300.0) Flouride	GONDUCTIVITY (E120.1)	E218.6 Lab Filtered	Nitrate/Nitrite (SM4500NO3-E)	TDS (SM2540C)	Total Metals(E200.7 and E200.8)	Total Metals(E200.8)	Total Title22Metals	Turbidity (SM2130)		Number of Containers	COMMENTS
SC-100B-WDR-604	7-7-20	1305		x	x		х	x	х	x	x			x	N041247-01	4	pH - 7.64
SC-700B-WDR-604	7.7-20	1248	Water	х	x		х	x	x	х	x			х	-02	4	pH - 7.38
SC-701-WDR-604	7-7-20	1240	Water			x	х	x		х		x	x		-03	3	pH - 8.15
														ΤC	TAL NUMBER OF CONTAINERS	11	

Approved by Bigmatures Date/Time	Shipping Details		Special Instructions:
Sampled by 7-7-20 0600 7-7-20 1240	Method of Shipment: FedEx	ATTN:	The SC-100B & SC-700B Total metals List:
Relinquished by available the T-1-20 1632	On Ice: yes no duloc	Sample Custody	Cr,Al,Sb,As,Ba,B,Cu,Pb,Mn,Mo,Ni,Fe,Zn
Received by MBURETIN Marger 1/2001632	Airbill No: (P44 2	and	
Relinquished by	Lab Name: ASSET Laboratories Lab Phone: (702) 307-2659	Marlon Cartin	Report Copy to Mark Fesler
			530-229-3273 <b>49</b>
			28. 28. 146.

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:	7/7/2020				Workorder:	N041247		
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:	None		
Cooling process:	✓ Ice	Ice Pack	Dry Ice	Other	None None			
		S	ample Receir	nt Checklis				
1. Shipping container/cooler in	n good conditio				Yes 🗹	No 🗌	Not Present	
2. Custody seals intact, signed	d, dated on sh	ippping container/	cooler?		Yes	No 🗌	Not Present	
3. Custody seals intact on san	nple 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 wh	en relinquishe	ed and received?			Yes 🗹	No 🗌		
7. Chain of custody agrees wit	th sample labe	els?			Yes 🗹	No 🗌		
8. Samples in proper containe	r/bottle?				Yes 🗹	No 🗌		
9. Sample containers intact?					Yes 🗹	No 🗌		
10. Sufficient sample volume t	for indicated te	est?			Yes 🗹	No 🗌		
11. All samples received within	n holding time	?			Yes 🗹	No 🗌		
12. Temperature of rep sample	e or Temp Bla	nk within acceptal	ole limit?		Yes 🗹	No 🗌	NA 🗌	
13. Water - VOA vials have ze	ero headspace	?			Yes	No 🗌	NA 🔽	
14. Water - pH acceptable up Example: pH > 12 for (0	•	or Metals			Yes	No 🗹	NA 🗌	
15. Did the bottle labels indica	te correct pres	servatives used?			Yes	No 🗌	NA 🗹	
16. Were there Non-Conforma	ance issues at	login?			Yes 🗹	No 🗌	NA 🗌	
N	Nas Client no	tified?			Yes	No 🗌	NA 🗹	
omments: Samples for Cr 6+ were lab filtered and then preserved with Ammonium buffer. Samples for Total Metals were lab preserved with HNO3 and for Ammonia/NO3- with H2SO4.								

Checklist Completed By:

For: 7/10/2020 14RT

MBC

Reviewed By:

P

WORK O	<b>RDER Summar</b>	У		08-Jul-20						
Client ID: Project:	CH2HI01 PG&E Topock, D3184	4A1.EV.05-OM-TS	QC Level	I: Level IV		WorkOrd Date Receiv				
Comments:	The SC-100B & SC-7		Data Daa	Madailar	T4 N-	Test News	ma	MG	Ch	<u></u>
Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	HIQ	MS		Storage
N041247-001A	SC-100B-WDR-604	7/7/2020 1:05:00 PM	7/21/2020	Water	SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE			✓	SUB
N041247-001B			7/21/2020		EPA 120.1	SPECIFIC CONDUCTANCE				LSR
			7/21/2020		SM2540C	TOTAL FILTERABLE RESIDUE				LSR
			7/21/2020			Total Dissolved Solids Prep				LSR
			7/21/2020		SM 2130B	TURBIDITY				LSR
			7/21/2020		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				LSR
			7/21/2020		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				LSR
N041247-001C			7/21/2020		EPA 218.6	Hexavalent Chromium by IC				WW
N041247-001D			7/21/2020		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION				WW
N041247-001E			7/21/2020			AQPREP TOTAL METALS: ICP, FLAA				WW
			7/21/2020		EPA 200.7	TOTAL METALS BY ICP				WW
			7/21/2020			AQPREP TOTAL METALS: ICP, FLAA				WW
			7/21/2020		EPA 200.8	TOTAL METALS BY ICPMS				WW
			7/21/2020		EPA 200.8	TOTAL METALS BY ICPMS				WW
N041247-001F										WW
N041247-002A	SC-700B-WDR-604	7/7/2020 12:48:00 PM	7/21/2020		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE			✓	SUB
N041247-002B			7/21/2020		EPA 120.1	SPECIFIC CONDUCTANCE				LSR
			7/21/2020		SM2540C	TOTAL FILTERABLE RESIDUE				LSR
			7/21/2020			Total Dissolved Solids Prep				LSR
			7/21/2020		SM 2130B	TURBIDITY				LSR
			7/21/2020		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				LSR

Page 1 of 3

WORK C	ORDER Summar	У		08-Jul-20					
Client ID: Project: Comments:	CH2HI01 PG&E Topock, D3184 The SC-100B & SC-7		QC Level	I: Level IV			er: N041247 ed: 7/7/2020		
Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage		
N041247-002B	SC-700B-WDR-604	7/7/2020 12:48:00 PM	7/21/2020	Water	EPA 300.0	ANIONS BY ION CHROMATOGRAPHY			
N041247-002C			7/21/2020		EPA 218.6	Hexavalent Chromium by IC	WW		
N041247-002D			7/21/2020		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	U U WW		
N041247-002E			7/21/2020			AQPREP TOTAL METALS: ICP, FLAA	WW		
			7/21/2020		EPA 200.7	TOTAL METALS BY ICP	WW		
			7/21/2020			AQPREP TOTAL METALS: ICP, FLAA	WW		
			7/21/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW		
			7/21/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW		
N041247-002F							WW		
N041247-003A	SC-701-WDR-604	7/7/2020 12:40:00 PM	7/21/2020		EPA 120.1	SPECIFIC CONDUCTANCE			
			7/21/2020		SM2540C	TOTAL FILTERABLE RESIDUE			
			7/21/2020			Total Dissolved Solids Prep			
			7/21/2020		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY			
N041247-003B			7/21/2020		EPA 218.6	Hexavalent Chromium by IC	WW		
N041247-003C			7/21/2020			AQPREP TOTAL METALS: ICP, FLAA	WW		
			7/21/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW		
			7/21/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW		
			7/21/2020		EPA 245.1	TOTAL MERCURY BY COLD VAPOR TECHNIQUE	ww		
			7/21/2020			MERCURY PREP	WW		
N041247-003D							WW		
N041247-004A	FOLDER	7/21/2020	7/21/2020		Folder	Folder			

Page 2 of 3

WORK C	ORDER Summar	у					08-Jul-20		
Client ID: Project:	CH2HI01 PG&E Topock, D3184	QC Level	I: Level IV		<b>WorkOrder:</b> N041247 <b>Date Received:</b> 7/7/2020				
Comments:									
Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage		
N041247-004A	FOLDER	7/21/2020	7/21/2020		Folder	Level IV Report			
			7/21/2020		Folder	Folder			

3151-3153 W Post Rd., Las Vegas, NV 89118 www.atl-labs.com

TEL: 7023072659 FAX: 7023072691

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

QC Level: Level IV

Subcontractor:			
BC Labs	TEL: (661) 327-4911	Field Sampler: SIGNED	
4100 Atlas Court	FAX: (661) 327-1918		
Bakersfield, CA 93308	Acct #:	09-Jul-2	20

				Requested Tests				
Sample ID	Matrix	Date Collected	Bottle Type	SM4500-NH3D				
N041247-001A / SC-100B-WDR-604	Water	7/7/2020 1:05:00 PM	32OZP	1				
N041247-002A / SC-700B-WDR-604	Water	7/7/2020 12:48:00 PM	32OZP	1				

General Comments: Please email sample receipt acknowledgement to the PM. Please cc sonny.lorenzo@assetlaboratories.com

Please use PO#:N41247A 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.

		Date/Time	GSO #: 549640528	Date/Time
Relinquished by:	YRJ	7/8/2020 1630	Received by:	
Relinquished by:			Received by:	

# List of Analysts

# **ASSET Laboratories Work Order: N041247**

NAME TEST METHOD					
Claire Ignacio	EPA 200.8				
Lilia Ramit	EPA 120.1, SM 2540C, SM 2130B				
Ria Abes	EPA 218.6, EPA 300.0				
Diane Jetajobe	EPA 200.7, EPA 245.1				
Julia Bundalian	SM 4500-NO3F				



CALIFORNIA 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 P: 562.219.7435 F: 562.219.7436

NEVADA 3151 W. Post Rd., Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691

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Date of Report: 07/15/2020

Marlon B. Cartin

ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

Client Project:N041247BCL Project:Level IV + labSpec7BCL Work Order:2019716Invoice ID:B385744

Enclosed are the results of analyses for samples received by the laboratory on 7/9/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval Client Service Rep

Stuart Buttram Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

11 001 000	1-3153 W Post Rd., Las Vegas,	NV 89118	C	HAIN-O		DY RECORI	Page 1 of 1	
TEL	v.all-labs.com .: 7023072659 FAX: 7	023072691			20	)-19714		
					QC Level: L	.evel IV		
Subcontractor: BC Labs 4100 Atlas Court			327-4911		Field Sampler: S	IGNED		
Bakersfield, CA 9	3308	Acct #:	327-1918				09-Jul-20	
	Comple 10					Requested Tests		
	Sample ID SC-1008-WDR-604	Matrix Water	Date Collected	Bottle Type	SM4500-NH3D			
and the second se	SC-7008-WDR-604	Water	7/7/2020 1:05:00 PM 7/7/2020 12:48:00 PM	320ZP 320ZP	1			
General Comments:	Please email sample receipt		he PM. Please cc son					
General Comments:	Please email sample receipt Please use PO#:N41247A Marion at (702)-307-2659. P	Please email Invoice lease e-mail results t	s and Account Receivable St: o reports.lv@assetlaboratories	tements to elvirat .com by: Standar	®assetlaboratorias.com			
General Comments:	Please email sample receipt Please use PO#:N41247A Marion at (702)-307-2659. P	Please email Invoice lease e-mail results t	s and Account Receivable St	tements to elvirat .com by: Standar	®assetlaboratorias.com			
General Comments:	Please email sample receipt Please use PO#:N41247A Marion at (702)-307-2659. P Please analyze for Ammonia	Please email Invoice lease e-mail results t	is and Account Receivable Sta o reports.lv@assetlaboratorier DD Requirement Labspec7 eq	tements to elvirat .com by: Standar	@assetlaboratories.com d TAT.		Date/Time	
General Comments: Relinquished by:	Please email sample receipt Please use PO#:N41247A Marion at (702)-307-2659. P	Please email Invoice lease e-mail results t by SM4500NH3D. E	is and Account Receivable St. o reports.lv@assetlaboratories DD Requirement Labspec7 ec Date/Time 20 1630	tements to ehira; .com by: Standar lata.	@assetlaboratories.com d TAT.	L For questions, call	Date/Time -9-70 1010	

Page 3 of 11



#### Chain of Custody and Cooler Receipt Form for 2019716 Page 2 of 2

Submission #: 20 19719 SHIPPING INFOR Fed Ex  UPS  Ontrac BC Lab Field Service  Other Refrigerant: Ice DX Blue Ice						1		and the second se	ge _ ((	Of
Fed Ex  UPS Ontrac BC Lab Field Service Other										1
Pofrigorants los N. Dive los D	ry -	SHIPPING CONTAINER     FREE LIQUID       Ice Chest [X]     None     Box     YES     No       Other     (Specify)     W     / S								
Refrigerant: Ice DK Blue Ice	] Non	e 🗆	Other D	Com	nents:					
Custody Seals Ice Chest	Contain			of⊠ Com						
	All samples	containe	r Intant2	Yes & No	-					-
						Descr	iption(s) m		Yes D No	
QYES INO	mperature:	(A) L	L'9	: PE *° /	(C) 4	meter ID: . 7	- <u>7-74</u> °C		me <u>79-70</u> Init_TKJ	1010
SAMPLE CONTAINERS					SAMPL	E NUMBER	s			
	1	2	3	4	5	6	7	8	9	10
OT PE UNPRES for / for / for PE UNPRES	-A-	17	19							
oz Cr*										
OT INORGANIC CHEMICAL METALS										
NORGANIC CHEMICAL METALS 402 / 802 / 1602										
T CYANIDE										
T NITROGEN FORMS	A	A				·				
T TOTAL SULFIDE		- M								
DI AUTRATE / NITRITE										
T TOTAL ORGANIC CARBON										
T CHEMICAL OXYGEN DEMAND										
A PHENOLICS										
mI VOA VIAL TRAVEL BLANK										
ml VOA VIAL										
Т ЕРА 1664										
ODOR										
ADIOLOGICAL ·								-		
CTERIOLOGICAL										
ml VOA VIAL- 504							1			
EPA 508/608/8080										
EPA 515.1/8150										
'EPA 525										
EPA 525 TRAVEL BLANK										
ni EPA 547										
nl BPA 531.1										
EPA 548										
EPA 549						-				
EPA 8015M										
EPA 8270										
/ 1602 / 3202 AMBER										
/ 1692 / 3202 JAR										
L SLEEVE										
VIAL										
STIC BAG			-							
LAR BAG										
ROUS IRON										
ORE										
RTKIT										
MA CANISTER										
		1								
le Numbering Completed By:	9АЛ			Date/Time:	71a)	20	2231			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report apply to the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

# Reported:07/15/2020 16:05Project:Level IV + labSpec7Project Number:N041247Project Manager:Marlon B. Cartin

# Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Informati	on				
2019716-01	COC Number:		Receive Date:	07/09/2020 10:10		
	Project Number:		Sampling Date:	07/07/2020 13:05		
	Sampling Location:		Sample Depth:			
	Sampling Point:	N041247-001A / SC-100B-WDR-604	Lab Matrix:	Water		
	Sampled By:		Sample Type:	Water		
2019716-02	COC Number:		Receive Date:	07/09/2020 10:10		
	Project Number:		Sampling Date:	07/07/2020 12:48		
	Sampling Location:		Sample Depth:			
	Sampling Point:	N041247-002A / SC-700B-WDR-604	Lab Matrix:	Water		
	Sampled By:		Sample Type:	Water		



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118 
 Reported:
 07/15/2020 16:05

 Project:
 Level IV + labSpec7

 Project Number:
 N041247

Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

BCL Sample ID:	2019716-01	Client Sampl	Client Sample Name: N041247-001A / SC-100B-WDR-604, 7/7/2020 1				1:05:00PM	
Constituent		Result	Units	RL	Method	MB Bias	Lab Quals	Run #
Ammonia as N (Distille	d)	ND	mg/L	0.20	SM-4500-NH3G	ND		1

			Run					
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	Prep Method
1	SM-4500-NH3G	07/13/20 09:30	07/14/20 10:54	JMH2	SC-2	1.033	B082166	SM 4500-NH3G



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118 
 Reported:
 07/15/2020 16:05

 Project:
 Level IV + labSpec7

 Project Number:
 N041247

Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

BCL Sample ID:	2019716-02	Client Sampl	e Name:	N041247-002	A / SC-700B-WDR-604, 7	7/7/2020 12	12:48:00PM			
Constituent		Result	Units	RL	Method	MB Bias	Lab Quals	Run #		
Ammonia as N (Distille	d)	ND	mg/L	0.20	SM-4500-NH3G	ND		1		

			Run				QC	
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	Prep Method
1	SM-4500-NH3G	07/13/20 09:30	07/14/20 10:56	JMH2	SC-2	1.034	B082166	SM 4500-NH3G



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

Reported: 07/15/2020 16:05 Project: Level IV + labSpec7 Project Number: N041247 Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

# **Quality Control Report - Method Blank Analysis**

Constituent	QC Sample ID	MB Result	Units	RL	Lab Quals
QC Batch ID: B082166					
Ammonia as N (Distilled)	B082166-BLK1	ND	mg/L	0.20	

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ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

Reported: 07/15/2020 16:05 Project: Level IV + labSpec7 Project Number: N041247 Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

# **Quality Control Report - Laboratory Control Sample**

							Control Limits			<u>i</u>	
Constituent	QC Sample ID	Туре	Result	Spike Level	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals	
QC Batch ID: B082166											
Ammonia as N (Distilled)	B082166-BS1	LCS	1.9486	2.0000	mg/L	97.4		85 - 115			

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118 Reported:07/15/2020 16:05Project:Level IV + labSpec7Project Number:N041247Project Manager:Marlon B. Cartin

# Water Analysis (General Chemistry)

# **Quality Control Report - Precision & Accuracy**

						Control Limits						
		Source	Source		Spike			Percent		Percent	Lab	
Constituent	Туре	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals	
QC Batch ID: B082166	Use	d client samp	ole: N									
Ammonia as N (Distilled)	DUP	2019264-01	ND	ND		mg/L			20			
	MS	2019264-01	ND	2.3182	2.3576	mg/L		98.3		80 - 120		
	MSD	2019264-01	ND	2.4024	2.3576	mg/L	3.6	102	20	80 - 120		

August 18, 2020

Mark Fesler/RDD CH2M HILL 155 Grand Avenue, Suite 1000 Oakland, CA 94612 TEL: (530) 229-3273

Workorder No.: N041593

RE: PG&E Topock, D3184A1.EV.05-OM-TS

Attention: Mark Fesler/RDD

FAX: (510) 622-9129

Enclosed are the results for sample(s) received on July 29, 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.

The attached report is the final hard copy pertaining to the subcontracted tests for the above project.

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,

Nanny Intercas

Nancy Sibucao Laboratory Director

This cover letter is an integral part of this analytical report.



CALIFORNIA | P:562.219.7435 F:562.219.7436 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 ELAP Cert 2921 EPA ID CA01638

7/29/2020

8/18/2020

CLIENT: Project: Lab Order:	CH2M HILL PG&E Topock, D3184 N041593	4A1.EV.05-OM-TS	Work	Order Sample	e Summary
<b>Contract No:</b>	IM3Plant-ARA				
Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported

7/29/2020 9:50:00 AM

N041593-001A Phase Sep-604-Sludge\_Bio Soil

"Serving Clients with Passion and Professionalism"

ASSET LABORATORIES

CALIFORNIA | P:562.219.7435 F:562.219.7436 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 ELAP Cert 2921 EPA ID CA01638

Chain of Cu	stody Record	COC Number	: IN	13-604			J	A	)E	S	(	h	21	N		-				 Pa	ige 1	of 1
Project Name Project Project Number Project Manager Sample Manager	Shawn Duffy	-		Э&Е Торо	ck	Ĩ																
Turnaround Time	10 Days					Field	Ř	Bio		1		1	1	ļ			ļ					
PO Number	D3184A1					7	ň	a a	1					Ì								
Sample ID		Sample Date/Time 1	уре	Matrix	Preservative	Itered	tainers	say														
Phase Sep-604-	Sludge_Bio		Ν	Soil							NO	41	593	-01			1					$\rightarrow$
96hr Acute					4'C		1															러
					Total Contain	ers:	1															_

MS = Matrix Spike SD = Matrix Spike Dupilca	te			······································
Signetures	Date/Time	Shipping Details	ATTN:	Special Instructions:
Sampled by	7-29-20 0950	Shipment Method: FedEx 4.5°C		Sub to Aquatic Bioassay and
Relinquished by	7-29-20 1000	Airbill No: ont2	Sample Custody	Consult
Received by		Lab Name: ASSET Laboratories	and	
Relinquished by Brown	7-29-20/4:45	Lab Phone: (702) 307-2659	Marion Cartin	Report Copy to
leceived by	7-29-20140	· <		Mark Fesler
filing: I Stor	7-29-20170	On Ice: yes / no Cooler Temp5		(530) 229-3273
	une +/29/	20		
- pourcer pro	une +/29/	0		
1 4"	- / ·			

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:	7/29/2020				Workorder:	N041593	
Rep sample Temp (Deg C):	4.5				IR Gun ID:	2	
Temp Blank:	Yes	🗌 No					
Carrier name:	ASSET						
Last 4 digits of Tracking No.:	NA			Packing	g Material Used:	None	
Cooling process:	✓ Ice	lce Pack	Dry Ice	Other	None None		
		6	mula Dessi	at Chaokilia			
1. Obienien eenteinen/eeelenin e			ample Receij	DI CHECKIIS		No 🗌	
1. Shipping container/cooler in g							Not Present
2. Custody seals intact, signed,	dated on shi	ppping container/	cooler?		Yes 🗌	No 🗌	Not Present
3. Custody seals intact on samp	le bottles?				Yes 🗌	No 🗌	Not Present 🗹
4. Chain of custody present?					Yes 🖌	No	
5. Sampler's name present in Co	C?				Yes 🗹	No 🗌	
6. Chain of custody signed when	n relinquishe	d and received?			Yes 🗹	No 🗌	
7. Chain of custody agrees with	sample labe	ls?			Yes	No 🗹	
8. Samples in proper container/b	oottle?				Yes 🗹	No 🗌	
9. Sample containers intact?					Yes 🗹	No 🗌	
10. Sufficient sample volume for	indicated te	est?			Yes 🗹	No 🗌	
11. All samples received within h	nolding time?	?			Yes 🗹	No 🗌	
12. Temperature of rep sample of	or Temp Blai	nk within acceptat	ole limit?		Yes 🗹	No 🗌	NA 🗌
13. Water - VOA vials have zero	headspace	?			Yes	No 🗌	NA 🔽
14. Water - pH acceptable upon	•				Yes	No 🗌	NA 🔽
Example: pH > 12 for (CN	I,S); pH<2 fc	or Metals					_
15. Did the bottle labels indicate	correct pres	servatives used?			Yes	No 🗌	NA 🔽
16. Were there Non-Conforman		-			Yes 🗹	No 🗌	
W	as Client not	tified?			Yes 🗹	No 🗔	NA 📖
Comments: See Corresponde	nce.						

Checklist Completed By:

YRJ 7/30/2020

YR

Reviewed By:

MBC

# Mary Ann Balilu (maryann.balilu@assetlaboratoriesph.com)

From:	Fesler, Mark/RDD <mark.fesler@jacobs.com></mark.fesler@jacobs.com>
Sent:	Wednesday, July 29, 2020 6:30 PM
То:	Yoandra Rodriguez
Cc:	maryann.balilu@assetlaboratoriesph.com; sonny.lorenzo@assetlaboratories.com
Subject:	RE: [EXTERNAL] PG&E Topock, D3184A1.EV.05-OM-TS (ASSET Labs No. N41593)

Yes, use date/time from sample label

Mark Fesler | Jacobs | Environmental Scientist/Talent Supervisor O: 1 530 229 3273 | M: 530 524 8041 | <u>mark.fesler@jacobs.com</u> 2525 Airpark Dr | Redding CA 96001 | USA

-----Original Message-----From: Yoandra Rodriguez [<u>mailto:yoandra@assetlaboratories.com</u>] Sent: Wednesday, July 29, 2020 6:11 PM To: Fesler, Mark/RDD <<u>Mark.Fesler@jacobs.com</u>> Cc: <u>maryann.balilu@assetlaboratoriesph.com</u>; <u>sonny.lorenzo@assetlaboratories.com</u> Subject: [EXTERNAL] PG&E Topock, D3184A1.EV.05-OM-TS (ASSET Labs No. N41593)

Hello Mark,

Please kindly confirm if the collection date and time for the sample on the attached COC is 7/29/2020 at 9:50 am as per labels.

Thanks,

--

This email has been checked for viruses by Avast antivirus software. <u>https://urldefense.com/v3/\_https://www.avast.com/antivirus\_\_;!!B5cixuoO7ltTeg!USwqKz63Ev8xUdL3wX\_DktcUoLV3</u> <u>hZBMtWDkn4rDLGy2USHArfdCoABB0mP9om-s3Q\$</u>

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WORK C	ORDER Summary						<i>30-Jul-20</i> <b>WorkOrder:</b> N041593				
Client ID: Project: Comments:	1	i&E Topock, D3184A1.EV.05-OM-TS QC Level: Level IV b to Aquatic Bioassay and consult									
Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage				
N041593-001A	Phase Sep-604-Sludge_Bio	7/29/2020 9:50:00 AM	8/12/2020	Soil	Bioassay	Bioassay	SUB				
N041593-002A	FOLDER	8/12/2020	8/12/2020		Folder	Folder					
			8/12/2020		Folder	Level IV Report					
			8/12/2020		Folder	WO has been subbed.					
			8/12/2020		Folder	Folder					

ASSET L
 3151-3153 W P
www.atl-labs.com
TEL: 70230726

153 W Post Rd., Las Vegas, NV 89118 -labs.com 023072659 FAX: 7023072691

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

QC Level: Level IV

				Requested Tests	
Subcontractor: Aquatic Testing Lab	TEL: FAX: Acct #:	(805) 650-0546	Field Sampler:	SIGNED	30-Jul-20

					Requested rests
Sample ID	Matrix	Date Collected	Bottle Type	Bioassay	
N041593-001A /	Soil	7/29/2020 9:50:00 AM	40ZG	1	

General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N41593A 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 Bioassay 96hr Acute. EDD Requirement Labspec7 edata.

			GSO #: 549897629	Date/Time
Relinquished by: Relinquished by:	YLJ	7/30/2020 1430	_ Received by: Received by:	

# LABORATORY REPORT

August 6, 2020

Asset Laboratories

3151-3153 W. Post Rd.

Las Vegas, NV 89118

Date:

**Client:** 



"dedicated to providing quality aquatic toxicity testing"

4350 Transport Street, Unit 107 Ventura, CA 93003 (805) 650-0546 FAX (805) 650-0756 CA ELAP Cert. No.: 1775

 Laboratory No.:
 A-20073102-001

 Sample ID.:
 N041593-001A

**Sample Control:** The sample was received by ATL in a chilled state and with the chain of custody record attached.

Date Sampled:	07/29/20
Date Received:	07/31/20
Date Tested:	08/02/20 to 08/06/20

**Sample Analysis:** The following analyses were performed on your sample:

CCR Title 22 Fathead Minnow Hazardous Waste Screen Bioassay (Polisini & Miller 1988).

Attached are the test data generated from the analysis of your sample. All testing was conducted under the direct supervision of Joseph A. LeMay.

**Result Summary:** 

<u>Sample ID.</u> N041593-001A <u>Results</u> LC50 > 750 mg/l

**Quality Control:** 

Reviewed and approved by:

Laboratory Director

# FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY



# Lab No.: <u>A 20073102-001</u>

Client/ID: Asset NO41593-001A

### TEST SUMMARY

# Species: Pimephales promelas.

Fish weight (gm): av:  $\underline{o.22}$ ; min:  $\underline{o.22}$ ; max:  $\underline{o.34}$ . Reference Toxicant: SDS conducted monthly per source. Test chamber volume: 10 liters. Temperature: 20 +/- 2°C. Aeration: none/minimum (>4.0 mg/l DO). Number of replicates: 2. Dilution water: Soft reconstituted water (40-48 mg/l CaCO<sub>3</sub>). Source: <u>Themes</u> <u>Fisk</u>. Regulations: CCR Title 22. Test Protocol: California F&G/DHS 1988. Endpoints: Survival at 96 hrs. Test type: Static. Feeding: None. Number of fish per chamber: <u>10</u>. Photoperiod: 16/8 hrs light/dark.

	F							TEST	DAT	<u> </u>										
	1	AITIA	L		24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	8-2-	-ટ્યડ-	1100	8-3	8-3-2020 (130 5			8-4	्ट्राट	1	100	8.5	-22	<u>ہ</u>	110	8-6-2020 110			lo	
Analyst:		2	]			per				2				2		2				
	°C	DO	pН	°C	DO	pН	# D	°C	DO	pН	# D	°C	DO	pН	# D	°C	DO	pН	# D	
Control A	2.5	8.4	7.9	20,2	7, 2	N	U	20.6	7.0	7.8	0	2,3	6.1	7.5	0	20.9	5.2	25	0	
Control B	2.2	8.3	8.0	20,7	21	1,6	6	20.5	7.0	7.6	υ	20,2	6.0	ר .7	0	20,8	5.3	7, 2	0	
400 mg/l A	20.3	8.1	8.2	207	7.0	7.7	U	20.3	6.8	7.9	0	20-3	6.2	7.7	0	2.5	5.2	7.5	0	
400 mg/l B	22,2	7.9	8.2	20,6	2.L	77	-	20,2	7.0	7.8	0	2012	6.0	7.8	0	20.4	5.3	25	0	
750 mg/l A	224	8.2	8-1	202	23	7.8		20.3				20.4		7.7	0	205	-		0	
750 mg/l B	20)	8.2		20.0	1,	25	U	20.3	6.7	7.5	C	2.4	6.0	7.6	0	20.4		7.4	0	
Comments:	Extra	ction	metho								Diss	solved	Oxyge	en (DC	)) read	ings in	ı mg/l	O <sub>2</sub> .		
						ieous	soluti	on)	<u>A</u> .											
	fest Ae					inimun	n neede	d to mair	ntain DC	) > 5.5	mg/L th	rough n	arrow-b	ore glas	s tube at	t < 100	bubbles	per min	ute)	
[				·														;		
			CON	rol				HIC	GH CO	DNCE	NTR	ATIO	N		Tot	tal Nu	mber	· Dea	1	
	All	<u>calinit</u>	y		Hardr	ess		Alk	alinity		Н	lardne	SS		Cont	rol	0	1	20	
Initial	33	mg/l	CaCO <sub>3</sub>	4	m	g∕l CaC	O <sub>3</sub>	33	mg/l C	aCO3	48	/ mg/l	CaCO3		400 n	ng/l	0	1	20	
Final	33	mg/l	CaCO <sub>3</sub>	1 4 ;	<b>)</b> mį	g/l CaC	03	38	mg/l C	aCO3	67	mg/l	CaCO3		750 n	ng/l	0	/	20	

	<b>RESULT</b> (the checked ( $$ ) result applies based on fish survival rates of this test; NA - not applicable)
$\checkmark$	LC50 > 750 mg/l (<40% dead in 750 mg/l conc.)
NA	≥40% dead in 750 mg/l (close to passing - definitive test recommended)
NA	LC50 < 400 mg/l (>60% dead in 400 mg/l conc.)

<b>ASSET</b> Laboratories	3151-3153 W Post Rd., Las Vegas, NV 89118	www.att-labs.com	TEL: 7023072659 FAX: 7023072691	
Ø				

# CHAIN-OF-CUSTODY RECORD Page 1 of 1

QC Level: Level IV

	TEL: (805) 650-0546	FAX: (805) 650-0756	Acct #:
Subcontractor:	Aquatic Testing Lab	4350 Transport St #107	Ventura, CA 93003

Field Sampler: SIGNED

30-Jul-20

		_	
quested Tests			
Rec	Bioassay	+	
	Bottle Type	40ZG	
	Date Collected	7/29/2020 9:50:00 AM	
	Matrix	Soil	
	Sample I	N041593-001A / Phase Sep-604-Sludge_Bio	
		2	

•

	ons, call			Date/ 11me	7-31-20 040	
1y.lorenzo@assetlaboratories.com	@assetlaboratories.com. For questic rd TAT.		97629	~	Reland	
THE P.M. ALWAYS CC: sonr	sceivable Statements to elvira tlaboratories.com by: Standar	c7 edata.	GSO #: 549897629		Received by:	Received by:
PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assettaboratories.com	Please use PO#: N41593A Please email Invoices and Account Receivable Statements to elvira@assettaboratories.com. For questions, call Marion at (702)-307-2659. Please e-mail results to reports.lv@assettaboratories.com by: Standard TAT.	Please analyze for Bioassay 96hr Acute. EDD Requirement Labspec7 edata.	Data	Date/ I HILE	7/30/2020 1430	
PLEASE EMAIL SAMPLE RE	Please use PO#:N41593A   Marlon at (702)-307-2659. Ple	Please analyze for Bioassay 9		<u>بال</u>	340	
General Comments:					Relinquished by:	Relinquished by:

August 18, 2020

Mark Fesler/RDD CH2M HILL 155 Grand Avenue, Suite 1000 Oakland, CA 94612 TEL: (530) 229-3273

FAX: (510) 622-9129

Workorder No.: N041660

RE: PG&E Topock, D3184A1.EV.05-OM-TS

Attention: Mark Fesler/RDD

Enclosed are the results for sample(s) received on August 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,

Nonny Interes

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.



CALIFORNIA | P:562.219.7435 F:562.219.7436 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 ELAP Cert 2921 EPA ID CA01638

CLIENT:CH2M HILLProject:PG&E Topock, D3184A1.EV.05-OM-TSLab Order:N041660

# **CASE NARRATIVE**

### SAMPLE RECEIVING/GENERAL COMMENTS:

Samples were received intact with proper chain of custody documentation.

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

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

Samples were analyzed within method holding time.

Subcontracted Analyses:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 200.7:

Dilution was necessary for 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 Iron in QC samples N041660-001C-MS1 and N041660-001C-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.

Analytical Comments for EPA 200.8:

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N041660-001C-MS and N041660-001C-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.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N041660-001C-MS and N041660-001C-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.

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 Cert 2921

 EPA ID
 CA01638

CLIENT:	CH2M HILL
Project:	PG&E Topock, D3184A1.EV.05-OM-TS
Lab Order:	N041660
<b>Contract No:</b>	IM3PLANT-AR

# Work Order Sample Summary

Lab Sample ID Client Sample ID	Matrix	<b>Collection Date</b>	Date Received	Date Reported
N041660-001A SC-100B-WDR-605	Water	8/4/2020 8:20:00 AM	8/4/2020	8/18/2020
N041660-001B SC-100B-WDR-605	Water	8/4/2020 8:20:00 AM	8/4/2020	8/18/2020
N041660-001C SC-100B-WDR-605	Water	8/4/2020 8:20:00 AM	8/4/2020	8/18/2020
N041660-001D SC-100B-WDR-605	Water	8/4/2020 8:20:00 AM	8/4/2020	8/18/2020
N041660-002A SC-700B-WDR-605	Water	8/4/2020 8:30:00 AM	8/4/2020	8/18/2020
N041660-002B SC-700B-WDR-605	Water	8/4/2020 8:30:00 AM	8/4/2020	8/18/2020
N041660-002C SC-700B-WDR-605	Water	8/4/2020 8:30:00 AM	8/4/2020	8/18/2020
N041660-002D SC-700B-WDR-605	Water	8/4/2020 8:30:00 AM	8/4/2020	8/18/2020
N041660-002E SC-700B-WDR-605	Water	8/4/2020 8:30:00 AM	8/4/2020	8/18/2020
N041660-002F SC-700B-WDR-605	Water	8/4/2020 8:30:00 AM	8/4/2020	8/18/2020



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### **ANALYTICAL RESULTS** Print Date: 18-Aug-20

					Time Dutter 10	1118 20		
CLIENT:	CH2M HILL		C	Client Sample ID: SC-100B-WDR-605				
Lab Order:	N041660			<b>Collection Date:</b>	8/4/2020 8:20	:00 AM		
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS		Matrix: WATER				
Lab ID:	N041660-001							
Analyses		Result MDL	PQL	Qual Un	its DF	Date Analyzed		
SPECIFIC O	CONDUCTANCE							
			EP	PA 120.1				
RunID: NV	00922-WC_200805A	QC Batch: R146348		PrepDate:		Analyst: LR		
Specific Co	onductance	7200 0.10	0.10	umho	os/cm 1	8/5/2020 09:50 AN		

Qualifiers:

В

Analyte detected in the associated Method Blank

- Н Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



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### ANALYTICAL RESULTS Print Date: 18-Aug-20

					111111	uter 10 1		
CLIENT:	CH2M HILL		(	Client Sample ID: SC-700B-WDR-605				
Lab Order:	N041660			Collection D	ate: 8/4/20	20 8:30:0	0 AM	
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS		Matrix: WATER				
Lab ID:	N041660-002							
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed	
SPECIFIC	CONDUCTANCE							
			EF	PA 120.1				
RunID: N	/00922-WC_200805A	QC Batch: R146348		PrepDat	te:		Analyst: <b>LR</b>	
Specific C	onductance	7100 0.10	0.10	1	umhos/cm	1	8/5/2020 09:50 AM	

Qualifiers:

В

- 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



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**Date:** 18-Aug-20

CLIENT: CH2M HILL

Work Order: N041660

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 120.1\_WPGE

Sample ID: N041660-001ADUP	SampType: <b>DUP</b>	TestCo	de: 120.1_WP	GE Units: umh	os/cm	Prep Da	te:		RunNo: 146	6348	
Client ID: ZZZZZZ	Batch ID: R146348	Test	No: EPA 120.4	1		Analysis Da	te: 8/5/202	20	SeqNo: 388	82084	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	7130.000	0.10						7150	0.280	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

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R RPD outside accepted recovery limits

Calculations are based on raw values

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

### ANALYTICAL RESULTS Print Date: 18-Aug-20

					111	It Date. 10 1	1115 20
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-605				
Lab Order:	N041660			Collection D	ate: 8/	4/2020 8:20:0	00 AM
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER				
Lab ID:	N041660-001						
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTE	RABLE RESIDUE						
			SN	12540C			
RunID: NV00	922-WC_200805G	QC Batch: 80464		PrepDat	te:	8/5/2020	Analyst: LR
Total Dissolve Filterable)	ed Solids (Residue,	4400 50	50	I	mg/L	1	8/5/2020 01:03 PM

Qualifiers:

В

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



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# **ANALYTICAL RESULTS**

					111	In Date. 10 2	1115 20
CLIENT:	CH2M HILL		Client Sample ID: SC-700B-WDR-605				
Lab Order:	N041660	N041660			Date: 8/	4/2020 8:30:0	00 AM
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER				
Lab ID:	N041660-002						
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL FILTE	RABLE RESIDUE						
			SN	12540C			
RunID: NV00	922-WC_200805G	QC Batch: 80464		PrepDa	ate:	8/5/2020	Analyst: LR
Total Dissolve Filterable)	ed Solids (Residue,	4500 50	50		mg/L	1	8/5/2020 01:03 PM

Print Date: 18-Aug-20

Qualifiers:

В

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

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CLIENT: CH2M HILL

Work Order: N041660

# ANALYTICAL QC SUMMARY REPORT

### Project: PG&E Topock, D3184A1.EV.05-OM-TS

### TestCode: 160.1\_2540C\_W

Sample ID: LCS-80464 Client ID: LCSW	SampType: LCS Batch ID: 80464	TestCode: 160.1_2540C Units: mg/L TestNo: SM2540C	Prep Date: <b>8/5/2020</b> Analysis Date: <b>8/5/2020</b>	RunNo: <b>146382</b> SeqNo: <b>3883553</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Reside	ue, Filtera 978.000	10 1000 0	97.8 80 120	
Sample ID: <b>MB-80464</b> Client ID: <b>PBW</b>	SampType: MBLK Batch ID: 80464	TestCode: 160.1_2540C Units: mg/L TestNo: SM2540C	Prep Date: <b>8/5/2020</b> Analysis Date: <b>8/5/2020</b>	RunNo: <b>146382</b> SeqNo: <b>3883554</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Reside	ue, Filtera ND	10		
Sample ID: N041660-001ADU Client ID: ZZZZZZ	JP SampType: DUP Batch ID: 80464	TestCode: 160.1_2540C Units: mg/L TestNo: SM2540C	Prep Date: 8/5/2020 Analysis Date: 8/5/2020	RunNo: <b>146382</b> SeqNo: <b>3883556</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Reside	ue, Filtera 4505.000	50	4370	3.04 5

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



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Е

R

Value above quantitation range

RPD outside accepted recovery limits

Calculations are based on raw values

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ELAP Cert 2676 | NV Cert NV00922

**ORELAP/NELAP Cert 4046** 

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

# **ANALYTICAL RESULTS**

Print Date: 18-Aug-20

CLIENT:	CH2M HILL			Client Sample ID: SC-100B-WDR-605					
Lab Order:	N041660			Collection Date: 8/4/2020 8:20:00 AM					
Project:	PG&E Topock,	D3184A1.EV.05-	OM-TS	Matrix: WATER					
Lab ID:	N041660-001								
Analyses		Result	MDL	PQL	Qual Unit	s DF	Date Analyzed		
TOTAL META	LS BY ICP								
				EP/	A 200.7				
RunID: NV00	922-ICP2_200809A	QC Batch: 805	509		PrepDate:	8/7/2020	Analyst: <b>DJ</b>		
Aluminum		ND	200	250	µg/L	5	8/9/2020 09:15 AM		
Boron		780	370	500	µg/L	5	8/9/2020 09:15 AM		
Iron		ND	89	100	µg/L	5	8/9/2020 09:15 AN		

Qualifiers:

В

- 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

DO Surrogate Diluted

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# **ANALYTICAL RESULTS**

Print Date: 18-Aug-20

CLIENT:	CH2M HILL			Client Sample ID: SC-700B-WDR-605				
Lab Order:	N041660				Collection Date: 8	8/4/2020 8:30:0	0 AM	
Project:	PG&E Topock,	D3184A1.EV.05-	OM-TS	Matrix: WATER				
Lab ID:	N041660-002							
Analyses		Result	MDL	PQL	Qual Units	s DF	Date Analyzed	
TOTAL META	LS BY ICP							
				EP/	A 200.7			
RunID: NV00	922-ICP2_200809A	QC Batch: 805	509		PrepDate:	8/7/2020	Analyst: <b>DJ</b>	
Aluminum		ND	200	250	µg/L	5	8/9/2020 10:54 AM	
Boron		900	370	500	µg/L	5	8/9/2020 10:54 AM	
Iron		ND	89	100	µg/L	5	8/9/2020 10:54 AM	

Qualifiers:

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



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**CLIENT:** CH2M HILL

Work Order: N041660

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.7\_WPGEPPB

Sample ID: N041660-001C-MS1	SampType: <b>MS</b>	TestCode	: 200.7_WP	GE Units: µg/L		Prep Da	te: 8/7/202	20	RunNo: 146	6471	
Client ID: ZZZZZZ	Batch ID: 80509	TestNo	EPA 200.7	7		Analysis Da	te: 8/9/202	20	SeqNo: 388	37530	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9461.769	250	10000	0	94.6	75	125				
Boron	5634.243	500	5000	777.6	97.1	75	125				
Iron	ND	100	100.0	0	0	75	125				S
Sample ID: MB-80509	SampType: MBLK	TestCode	: 200.7_WP	GE Units: µg/L		Prep Da	te: 8/7/202	20	RunNo: 146	6471	
Client ID: PBW	Batch ID: 80509	TestNo	EPA 200.7	7		Analysis Da	te: 8/9/202	20	SeqNo: 388	37533	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	50									
Boron	ND	100									
Iron	ND	20									
Sample ID: LCS1-80509	SampType: LCS	TestCode	: 200.7_WP	GE Units: µg/L		Prep Da	te: 8/7/202	20	RunNo: 146	6471	
Client ID: LCSW	Batch ID: 80509	TestNo	EPA 200.7	7		Analysis Da	te: 8/9/202	20	SeqNo: 388	37534	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9915.140	50	10000	0	99.2	85	115				
Boron	4751.007	100	5000	0	95.0	85	115				
Iron	87.963	20	100.0	0	88.0	85	115				
Sample ID: N041660-001C-MSD	SampType: MSD	TestCode	: 200.7_WP	GE Units: µg/L		Prep Da	te: 8/7/202	20	RunNo: 146	6471	
Client ID: ZZZZZZ	Batch ID: 80509	TestNo	EPA 200.7	,		Analysis Da	te: 8/9/202	20	SeqNo: 388	37535	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Analyte	Result 9927.333	PQL 250	SPK value	SPK Ref Val	%REC 99.3	LowLimit 75	HighLimit 125	RPD Ref Val 9462	%RPD 4.80	RPDLimit 20	Qual
-											Qual

### Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out

- Е Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

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



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Date: 18-Aug-20

CLIENT: CH2M HILL

Work Order: N041660

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.7\_WPGEPPB

Sample ID: N041660-001C-PS	SampType: <b>PS</b>	TestCoo	de: 200.7_WP	GE Units: µg/L		Prep Da	te:		RunNo: 146	6471	
Client ID: ZZZZZZ	Batch ID: 80509	TestN	lo: EPA 200.7	7		Analysis Da	te: 8/9/2020	0	SeqNo: 388	37529	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9681.926	250	10000	0	96.8	80	120				
Boron	5773.944	500	5000	777.6	99.9	80	120				
Iron	ND	100	100.0	0	0	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 rangeR RPD outside accepted recovery limits

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Calculations are based on raw values

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

# **ANALYTICAL RESULTS**

Print Date: 18-Aug-20

CLIENT:	CH2M HILL		С	lient Sample ID: S	C-100B-WDR	2-605	
Lab Order:	N041660			Collection Date: 8/	/4/2020 8:20:0	00 AM	
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER				
Lab ID:	N041660-001						
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed	
HEXAVALEN	T CHROMIUM BY I	C					
			EP	A 218.6			
RunID: NV00	922-IC7_200805A	QC Batch: R146357		PrepDate:		Analyst: <b>RAB</b>	
Hexavalent C	hromium	440 1.7	10	µg/L	50	8/5/2020 12:30 PM	
TOTAL META	LS BY ICPMS						
			EP	A 200.8			
	922-ICP8_200807C	QC Batch: 80508		PrepDate:	8/7/2020	Analyst: CEI	
RunID: NV00							

Qualifiers:

В

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



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# **ANALYTICAL RESULTS**

Print Date: 18-Aug-20

CLIENT:	CH2M HILL		С	lient Sample ID: S	C-700B-WDR	2-605
Lab Order:	N041660			Collection Date: 8/	/4/2020 8:30:0	00 AM
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS		Matrix: W	ATER	
Lab ID:	N041660-002					
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed
HEXAVALEN	T CHROMIUM BY IC	2				
			EP.	A 218.6		
RunID: NV00	922-IC7_200805A	QC Batch: R146357		PrepDate:		Analyst: <b>RAB</b>
Hexavalent C	hromium	ND 0.033	0.20	μg/L	1	8/5/2020 12:58 PM
TOTAL META	LS BY ICPMS					
			EP	A 200.8		
RunID: NV00	922-ICP8_200807C	QC Batch: 80508		PrepDate:	8/7/2020	Analyst: CEI
Chromium		ND 0.13	1.0	µg/L	1	8/7/2020 12:25 PM

Qualifiers:

В

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



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**CLIENT:** CH2M HILL

Work Order: N041660

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.8\_W\_CRPGE\_TPK

Sample ID: MB-80508 Client ID: PBW	SampType: <b>MBLK</b> Batch ID: <b>80508</b>	TestCode: 200.8_W_CR Units: µg/L TestNo: EPA 200.8	Prep Date: 8/7/2020 Analysis Date: 8/7/2020	RunNo: <b>146492</b> SeqNo: <b>3888770</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Chromium	0.197	1.0		
Sample ID: LCS-80508 Client ID: LCSW Analyte	SampType: LCS Batch ID: 80508 Result	TestCode: <b>200.8_W_CR</b> Units: µg/L TestNo: <b>EPA 200.8</b> PQL SPK value SPK Ref Val	Prep Date: 8/7/2020 Analysis Date: 8/7/2020 %REC LowLimit HighLimit RPD Ref Val	RunNo: <b>146492</b> SeqNo: <b>3888771</b> %RPD RPDLimit Qual
Chromium	9.878	1.0 10.00 0	98.8 85 115	
Sample ID: N041660-001C-MS Client ID: ZZZZZZ	SampType: <b>MS</b> Batch ID: <b>80508</b>	TestCode: 200.8_W_CR Units: µg/L TestNo: EPA 200.8	Prep Date: 8/7/2020 Analysis Date: 8/7/2020	RunNo: <b>146492</b> SeqNo: <b>3888778</b>
		= =	•	
Client ID: ZZZZZZ	Batch ID: 80508	TestNo: EPA 200.8	Analysis Date: 8/7/2020	SeqNo: <b>3888778</b>
Client ID: ZZZZZZ	Batch ID: <b>80508</b> Result 425.814	TestNo: <b>EPA 200.8</b> PQL SPK value SPK Ref Val	Analysis Date: <b>8/7/2020</b> %REC LowLimit HighLimit RPD Ref Val	SeqNo: <b>3888778</b> %RPD RPDLimit Qual
Client ID: ZZZZZZ Analyte Chromium Sample ID: N041660-001C-MSD	Batch ID: <b>80508</b> Result 425.814 SampType: <b>MSD</b>	TestNo:         EPA 200.8           PQL         SPK value         SPK Ref Val           5.0         10.00         422.3           TestCode:         200.8_W_CR         Units:         µg/L	Analysis Date:     8/7/2020       %REC     LowLimit     HighLimit     RPD Ref Val       35.1     75     125   Prep Date: 8/7/2020	SeqNo: 3888778 %RPD RPDLimit Qual S RunNo: 146492

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



E Value above quantitation range

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

### **CLIENT:** CH2M HILL

Work Order: N041660

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

# ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: MB-R146357	SampType: MBLK	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 146357
Client ID: PBW	Batch ID: R146357	TestNo: EPA 218.6	Analysis Date: 8/5/2020	SeqNo: 3882241
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-R146357	SampType: LCS	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 146357
Client ID: LCSW	Batch ID: R146357	TestNo: EPA 218.6	Analysis Date: 8/5/2020	SeqNo: 3882242
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	5.019	0.20 5.000 0	100 90 110	
Sample ID: N041667-004ADUP	SampType: <b>DUP</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 146357
Client ID: ZZZZZZ	Batch ID: R146357	TestNo: EPA 218.6	Analysis Date: 8/5/2020	SeqNo: 3882253
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	0.516	0.20	0.5072	1.78 20
Sample ID: N041660-001BMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 146357
Client ID: ZZZZZZ	Batch ID: R146357	TestNo: EPA 218.6	Analysis Date: 8/5/2020	SeqNo: 3882255
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	688.770	10 250.0 437.8	100 90 110	
Sample ID: N041660-001BMSD	SampType: <b>MSD</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 146357
Client ID: ZZZZZZ	Batch ID: R146357	TestNo: EPA 218.6	Analysis Date: 8/5/2020	SeqNo: 3882256
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	690.135	10 250.0 437.8	101 90 110 688.8	0.198 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



- Е Value above quantitation range
  - R RPD outside accepted recovery limits

ORELAP/NELAP Cert 4046

Calculations are based on raw values

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

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# CLIENT: CH2M HILL

Work Order: N041660

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: N041660-002CMS	SampType: <b>MS</b>	TestCoo	de: 218.6_WU	<b>Ι_P</b> Units: μg/L		Prep Da	te:		RunNo: 146	6357	
Client ID: ZZZZZZ	Batch ID: <b>R146357</b>	TestN	No: EPA 218.6	6		Analysis Da	te: 8/5/202	0	SeqNo: 388	32258	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	1.126	0.20	1.000	0.08330	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

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ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Date: 18-Aug-20

CLIENT: CH2M HILL

Work Order: N041660

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.8\_W\_CRPGE\_TPK

Sample ID: N041660-001C-PS	SampType: <b>PS</b>	TestCo	de: 200.8_W_	CR Units: µg/L		Prep Da	te:		RunNo: 146	6492	
Client ID: ZZZZZZ	Batch ID: 80508	TestN	No: EPA 200.8	3		Analysis Da	te: 8/7/202	:0	SeqNo: 388	38776	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	419.380	5.0	10.00	422.3	-29.2	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

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ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

# **ANALYTICAL RESULTS**

Print Date: 18-Aug-20

Result MDL	PQL	Qual	Units	DF	Date Analyzed
N041660-001					
PG&E Topock, D3184A1.EV.05-OM-TS		Μ	atrix: WAT	ER	
N041660		Collection	Date: 8/4/2	020 8:20:0	0 AM
CH2M HILL		Client Samp	le ID: SC-1	00B-WDR	-605
-	N041660 PG&E Topock, D3184A1.EV.05-OM-TS	N041660 PG&E Topock, D3184A1.EV.05-OM-TS	N041660CollectionPG&E Topock, D3184A1.EV.05-OM-TSM	N041660Collection Date: 8/4/20PG&E Topock, D3184A1.EV.05-OM-TSMatrix: WAT	N041660Collection Date: 8/4/2020 8:20:0PG&E Topock, D3184A1.EV.05-OM-TSMatrix: WATER

			EPA	200.8		
RunID: NV00922-ICP8_200809A	QC Batch: 805	508		PrepDate:	8/7/2020	Analyst: CEI
Antimony	ND	0.16	0.50	µg/L	1	8/9/2020 04:07 PM
Arsenic	ND	0.081	0.10	µg/L	1	8/9/2020 04:07 PM
Barium	32	0.15	1.0	µg/L	1	8/7/2020 11:34 AM
Copper	ND	0.55	1.0	µg/L	1	8/7/2020 11:34 AM
Lead	ND	0.13	1.0	µg/L	1	8/7/2020 11:34 AM
Manganese	7.1	0.26	0.50	µg/L	1	8/7/2020 11:34 AM
Molybdenum	23	0.21	0.50	µg/L	1	8/7/2020 11:34 AM
Nickel	ND	0.26	1.0	µg/L	1	8/7/2020 11:34 AM
Zinc	ND	2.3	10	μg/L	1	8/7/2020 11:34 AM

Qualifiers:

В

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



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-

# **ANALYTICAL RESULTS**

Print Date: 18-Aug-20

Analyses	Result MDL	PQL Qual Units DF Date Analy	zed
Lab ID:	N041660-002		
Project:	PG&E Topock, D3184A1.EV.05-OM-TS	Matrix: WATER	
Lab Order:	N041660	Collection Date: 8/4/2020 8:30:00 AM	
CLIENT:	CH2M HILL	Client Sample ID: SC-700B-WDR-605	

### TOTAL METALS BY ICPMS

			EPA	200.8		
RunID: NV00922-ICP8_200809A	QC Batch: 805	508		PrepDate:	8/7/2020	Analyst: CEI
Antimony	ND	0.16	0.50	µg/L	1	8/9/2020 04:30 PM
Arsenic	ND	0.081	0.10	µg/L	1	8/9/2020 04:30 PM
Barium	24	0.15	1.0	µg/L	1	8/7/2020 12:25 PM
Copper	ND	0.55	1.0	µg/L	1	8/7/2020 12:25 PM
Lead	ND	0.13	1.0	µg/L	1	8/7/2020 12:25 PM
Manganese	63	0.26	0.50	µg/L	1	8/7/2020 12:25 PM
Molybdenum	19	0.21	0.50	µg/L	1	8/7/2020 12:25 PM
Nickel	ND	0.26	1.0	µg/L	1	8/7/2020 12:25 PM
Zinc	ND	2.3	10	µg/L	1	8/7/2020 12:25 PM

Qualifiers:

В

Analyte detected in the associated Method Blank

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

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Date: 18-Aug-20

CLIENT: CH2M HILL

Work Order: N041660

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.8\_W\_TPK

Sample ID: MB-80508	SampType: <b>MBLK</b>	TestCode: 200	.8_W_TP Units: µg/L		Prep Date	e: 8/7/2020	RunNo: 146492	
Client ID: PBW	Batch ID: 80508	TestNo: EP	A 200.8		Analysis Date	e: 8/7/2020	SeqNo: 3888860	
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						
Lead	ND	1.0						
Manganese	ND	0.50						
Molybdenum	ND	0.50						
Nickel	ND	1.0						
Zinc	ND	10						
Sample ID: LCS-80508	SampType: LCS	TestCode: 200	.8_W_TP Units: µg/L		Prep Date	e: 8/7/2020	RunNo: 146492	
Client ID: LCSW	Batch ID: 80508	TestNo: EPA	A 200.8		Analysis Date	e: 8/7/2020	SeqNo: 3888861	
Analyte	Result	PQL SPK	value SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Barium	10.263	1.0	10.00 0	103	85	115		
Copper	10.026	1.0	10.00 0	100	85	115		
Lead	9.806	1.0	10.00 0	98.1	85	115		
Manganese	101.339	0.50	100.0 0	101	85	115		
Molybdenum	9.857	0.50	10.00 0	98.6	85	115		
Nickel	10.037	1.0	10.00 0	100	85	115		
Zinc	10.024	10	10.00 0	100	85	115		
Sample ID: N041660-001C-MS	SampType: <b>MS</b>	TestCode: 200	.8_W_TP Units: µg/L		Prep Date	e: 8/7/2020	RunNo: 146492	
Client ID: ZZZZZZ	Batch ID: 80508	TestNo: EPA	A 200.8		Analysis Date	e: 8/7/2020	SeqNo: 3888867	
Analyte	Result	PQL SPK	value SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qual
		1.0	10.00 32.29	101	75	125		
Barium	42.392	1.0	10.00 32.29	101	10	120		
Barlum Copper	42.392 8.370		10.00 <u>52.29</u>	83.7	75	125		
		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



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### CLIENT: CH2M HILL

### Work Order: N041660

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.8\_W\_TPK

Sample ID: N041660-001C-MS	SampType: <b>MS</b>	TestCode: 200	0.8_W_TP	Units: µg/L		Prep Date	8/7/202	0	RunNo: 146	492	
Client ID: ZZZZZZ	Batch ID: 80508	TestNo: EP	A 200.8			Analysis Date	8/7/202	0	SeqNo: 388	8867	
Analyte	Result	PQL SPK	value SPł	K Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Molybdenum	33.686	0.50	10.00	23.06	106	75	125				
Nickel	ND	1.0	10.00	0	0	75	125				S
Zinc	ND	10	10.00	0	0	75	125				S
Sample ID: N041660-001C-MSD	SampType: <b>MSD</b>	TestCode: 200	0.8_W_TP	Units: µg/L		Prep Date	: 8/7/202	0	RunNo: 146	492	
Client ID: ZZZZZZ	Batch ID: 80508	TestNo: EP	A 200.8			Analysis Date	8/7/202	0	SeqNo: 388	8869	
Analyte	Result	PQL SPK	value SPł	K Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Barium	42.371	1.0	10.00	32.29	101	75	125	42.39	0.0496	20	
Copper	8.595	1.0	10.00	0	86.0	75	125	8.370	2.66	20	
Lead	10.464	1.0	10.00	0	105	75	125	10.42	0.411	20	
Manganese	105.180	0.50	100.0	7.084	98.1	75	125	105.9	0.690	20	
Molybdenum	33.983	0.50	10.00	23.06	109	75	125	33.69	0.878	20	
Nickel	ND	1.0	10.00	0	0	75	125	0	0	20	S
Zinc	2.440	10	10.00	0	24.4	75	125	0	0	20	S
Sample ID: MB-80508	SampType: <b>MBLK</b>	TestCode: 200	0.8_W_TP	Units: µg/L		Prep Date	8/7/202	0	RunNo: 146	494	
Client ID: PBW	Batch ID: 80508	TestNo: EP	A 200.8			Analysis Date	8/9/202	0	SeqNo: 389	0152	
Analyte	Result	PQL SPK	value SPł	K Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	ND	0.50									
Arsenic	ND	0.10									
Sample ID: LCS-80508	SampType: LCS	TestCode: 200	0.8_W_TP	Units: µg/L		Prep Date	8/7/202	0	RunNo: 146	494	
Client ID: LCSW	Batch ID: 80508	TestNo: EP	A 200.8			Analysis Date	8/9/202	0	SeqNo: 389	0153	
Analyte	Result	PQL SPK	value SPł	K Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	9.763	0.50	10.00	0	97.6	85	115				
Arsenic	9.981	0.10	10.00	0	99.8	85	115				

### Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out

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- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

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

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### CLIENT: CH2M HILL

Work Order: N041660

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.8\_W\_TPK

Sample ID: N041660-001C-MS	SampType: <b>MS</b>	TestCode: 200.8_W_TP Units: µg/L	Prep Date: 8/7/2020	RunNo: 146494
Client ID: ZZZZZZ	Batch ID: 80508	TestNo: EPA 200.8	Analysis Date: 8/9/2020	SeqNo: 3890157
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Antimony	10.502	0.50 10.00 0	105 75 125	
Arsenic	11.157	0.10 10.00 0	112 75 125	
Sample ID: N041660-001C-MSE	D SampType: <b>MSD</b>	TestCode: 200.8_W_TP Units: µg/L	Prep Date: 8/7/2020	RunNo: <b>146494</b>
Sample ID: N041660-001C-MSD Client ID: ZZZZZZ	D SampType: MSD Batch ID: 80508	TestCode: 200.8_W_TP Units: µg/L TestNo: EPA 200.8	Prep Date: <b>8/7/2020</b> Analysis Date: <b>8/9/2020</b>	RunNo: <b>146494</b> SeqNo: <b>3890158</b>
		= =	·	
Client ID: ZZZZZ	Batch ID: 80508	TestNo: EPA 200.8	Analysis Date: <b>8/9/2020</b>	SeqNo: 3890158

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



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- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

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

**CLIENT:** CH2M HILL

Work Order: N041660

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.8\_W\_TPK

Sample ID: N041660-001C-PS	SampType: <b>PS</b>	TestCoo	de: 200.8_W_T	• Units: µg/L		Prep Da	te:	RunNo: 146492	
Client ID: ZZZZZZ	Batch ID: 80508	TestN	lo: EPA 200.8			Analysis Da	te: 8/7/2020	SeqNo: 3888865	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Barium	43.314	1.0	10.00	32.29	110	80	120		
Copper	8.528	1.0	10.00	0	85.3	80	120		
Lead	10.431	1.0	10.00	0	104	80	120		
Manganese	106.471	0.50	100.0	7.084	99.4	80	120		
Molybdenum	33.671	0.50	10.00	23.06	106	80	120		
Nickel	ND	1.0	10.00	0	0	80	120		S
Zinc	3.244	10	10.00	0	32.4	80	120		S
Sample ID: N041660-001C-PS	SampType: <b>PS</b>	TestCoo	de: 200.8_W_TF	• Units: µg/L		Prep Da	te:	RunNo: <b>146494</b>	
Client ID: ZZZZZZ	Batch ID: 80508	TestN	lo: EPA 200.8			Analysis Da	te: 8/9/2020	SeqNo: 3890156	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref Val	%RPD RPDLimit	Qual
Antimony	10.421	0.50	10.00	0	104	80	120		
Arsenic	11.350	0.10	10.00	0	113	80	120		

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



R RPD outside accepted recovery limits

Е

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EPA ID CA01638

Calculations are based on raw values

Value above quantitation range

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

# **ANALYTICAL RESULTS**

ASSET La	aboratories		Print Date: 18-Aug-20						
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-605						
Lab Order:	N041660		Collection Date: 8/4/2020 8:20:00 AM						
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER						
Lab ID:	N041660-001								
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed			
TURBIDITY									
			SN	I 2130B					
RunID: NV0	0922-WC_200805F	QC Batch: R146356		PrepDate:		Analyst: <b>LR</b>			
Turbidity		0.19 0.10	0.10	NTU	1	8/5/2020 03:00 PM			

Qualifiers:

В

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



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### **ANALYTICAL RESULTS**

ASSET Lal	boratories		Print Date: 18-Aug-20					
CLIENT:	CH2M HILL		Client Sample ID: SC-700B-WDR-605					
Lab Order:	N041660			<b>Collection Date:</b>	8/4/2020 8:30:0	00 AM		
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS		Matrix:	WATER			
Lab ID:	N041660-002							
Analyses		Result MDL	PQL	Qual Uni	its DF	Date Analyzed		
TURBIDITY			CI.	1 2130B				
			31					
RunID: NV00	)922-WC_200805F	QC Batch: <b>R146356</b>		PrepDate:		Analyst: LR		
Turbidity		0.67 0.10	0.10	NTU	1	8/5/2020 03:00 PM		

Qualifiers:

В

Analyte detected in the associated Method Blank

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified

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**CLIENT:** CH2M HILL

Work Order: N041660

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 2130\_W

Sample ID: <b>MB-R146356</b> Client ID: <b>PBW</b>	SampType: MBLK Batch ID: R146356	TestCode: 2130_W Units: NTU TestNo: SM 2130B	Prep Date: Analysis Date: <b>8/5/2020</b>	RunNo: <b>146356</b> SeqNo: <b>3882203</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Turbidity	ND	0.10		
Sample ID: N041660-002BDUP	SampType: <b>DUP</b>	TestCode: 2130_W Units: NTU	Prep Date:	RunNo: <b>146356</b>
Sample ID: N041660-002BDUP Client ID: ZZZZZZ	SampType: DUP Batch ID: R146356	TestCode: 2130_W Units: NTU TestNo: SM 2130B	Prep Date: Analysis Date: <b>8/5/2020</b>	RunNo: 146356 SeqNo: 3882206
		···-		

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



Е Value above quantitation range

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

### **ANALYTICAL RESULTS**

Print Date: 18-Aug-20

CLIENT:	CH2M HILL							
Lab Order:	N041660		Collection Date: 8/4/2020 8:30:00 AM					
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	V.05-OM-TS Matrix: WATER					
Lab ID:	N041660-002							
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed		
ANIONS BY I	ON CHROMATOGR	APHY						
			EP	A 300.0				
RunID: NV00	922-IC8_200805B	QC Batch: R146373		PrepDate:		Analyst: <b>RAB</b>		
Fluoride		2.2 0.048	0.50	mg/L	5	8/5/2020 07:50 PM		
ANIONS BY I	ON CHROMATOGR	APHY						
ANIONS BY I	ON CHROMATOGR	АРНҮ	EP	A 300.0				
	ON CHROMATOGF 922-1C8_200805B	<b>APHY</b> QC Batch: <b>R146373</b>	EP/	<b>A 300.0</b> PrepDate:		Analyst: <b>RAB</b>		

Qualifiers:

В

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

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CLIENT: CH2M HILL

Work Order: N041660

#### Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 300\_W\_FPGE

Sample ID: MB-R146373_F	SampType: <b>MBLK</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 146373
Client ID: PBW	Batch ID: R146373	TestNo: EPA 300.0	Analysis Date: 8/5/2020	SeqNo: 3883169
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	ND	0.10		
Sample ID: LCS-R146373_F	SampType: LCS	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 146373
Client ID: LCSW	Batch ID: R146373	TestNo: EPA 300.0	Analysis Date: 8/5/2020	SeqNo: 3883170
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	1.338	0.10 1.250 0	107 90 110	
Sample ID: N041660-002BDUP	SampType: <b>DUP</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 146373
Client ID: ZZZZZZ	Batch ID: R146373	TestNo: <b>EPA 300.0</b>	Analysis Date: 8/5/2020	SeqNo: 3883176
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	2.517	0.50	2.218	12.6 20
Sample ID: N041660-002BMS	SampType: <b>MS</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 146373
Client ID: ZZZZZZ	Batch ID: R146373	TestNo: EPA 300.0	Analysis Date: 8/5/2020	SeqNo: 3883177
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	8.873	0.50 6.250 2.218	106 80 120	
Sample ID: N041660-002BMSD	SampType: MSD	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 146373
Client ID: ZZZZZZ	Batch ID: R146373	TestNo: EPA 300.0	Analysis Date: 8/5/2020	SeqNo: 3883178
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Fluoride	9.057	0.50 6.250 2.218	109 80 120 8.873	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

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**ORELAP/NELAP Cert 4046** 

Calculations are based on raw values

- \*Serving Clients with Passion and Professionalism
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- H Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference

#### **CLIENT:** CH2M HILL

Work Order: N041660

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

### ANALYTICAL QC SUMMARY REPORT

### TestCode: 300\_W\_SO4PGE

Sample ID: MB-R146373_SO4 Client ID: PBW	SampType: MBLK Batch ID: R146373	TestCode: 300_W_SO4P Units: mg/L TestNo: EPA 300.0	Prep Date: Analysis Date: <b>8/5/2020</b>	RunNo: 146373 SeqNo: 3883230
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	ND	0.50		
Sample ID: LCS-R146373_SO4	SampType: LCS	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 146373
Client ID: LCSW	Batch ID: R146373	TestNo: EPA 300.0	Analysis Date: 8/5/2020	SeqNo: 3883231
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	3.969	0.50 4.000 0	99.2 90 110	
Sample ID: N041660-002BDUP	SampType: <b>DUP</b>	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 146373
Client ID: ZZZZZZ	Batch ID: R146373	TestNo: EPA 300.0	Analysis Date: 8/5/2020	SeqNo: 3883237
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	479.440	25	483.6	0.861 20
Sample ID: N041660-002BMS	SampType: <b>MS</b>	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 146373
Client ID: ZZZZZZ	Batch ID: R146373	TestNo: EPA 300.0	Analysis Date: 8/5/2020	SeqNo: 3883238
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	678.500	25 200.0 483.6	97.5 80 120	
Sample ID: N041660-002BMSD	SampType: MSD	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 146373
Client ID: ZZZZZZ	Batch ID: R146373	TestNo: EPA 300.0	Analysis Date: 8/5/2020	SeqNo: 3883239
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	686.160	25 200.0 483.6	101 80 120 678.5	1.12 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
- ASSET LABORATORIES "Serving Clients with Passion and Professionalism"
- Calculations are based on raw values CALIFORNIA | P:562.219.7435 F:562.219.7436 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 ELAP Cert 2921 EPA ID CA01638

Е

R

Value above quantitation range

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

### **ANALYTICAL RESULTS**

ASSET La	aboratories		Print Date: 18-Aug-20							
CLIENT:	CH2M HILL			Client Sample ID: SC-700B-WDR-605						
Lab Order:	N041660				Collection	Date: 8/4/20	020 8:30:0	0 AM		
Project:	PG&E Topock,	D3184A1.EV.05-	OM-TS	Matrix: WATER						
Lab ID:	N041660-002									
Analyses		Result	MDL	PQL	Qual	Units	DF	Date Analyzed		
NITRATE/N	ITRITE-N BY CADMI	UM REDUCTION								
				SM4	500-NO3F					
RunID: NV	00922-WC_200811A	QC Batch: R14	46525		PrepD	ate:		Analyst: <b>JBB</b>		
Nitrate/Nitri	ite as N	3.0	0.16	0.25		mg/L	5	8/11/2020 01:11 PM		

Qualifiers:

В

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



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CLIENT: CH2M HILL

Work Order: N041660

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 4500N03F\_W\_PGE

Sample ID: MB-R146525	SampType: <b>MBLK</b>	TestCode: 4500N03F W Units: mg/L	Prep Date:	RunNo: <b>146525</b>
Client ID: PBW	Batch ID: R146525	TestNo: SM4500-NO3	Analysis Date: 8/11/2020	SegNo: 3891401
Client ID. PBW	Balch ID. R140325	Testino. 3M4500-NO3	Analysis Date. 6/11/2020	Sequo. 303 140 1
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-R146525	SampType: LCS	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 146525
Client ID: LCSW	Batch ID: R146525	TestNo: SM4500-NO3	Analysis Date: 8/11/2020	SeqNo: 3891402
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Nitrate/Nitrite as N	0.471	0.050 0.5000 0	94.2 85 115	
Sample ID: N041672-001DMS	SampType: <b>MS</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 146525
Client ID: ZZZZZZ	Batch ID: R146525	TestNo: SM4500-NO3	Analysis Date: 8/11/2020	SeqNo: 3891404
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Nitrate/Nitrite as N	5.059	0.25 2.500 2.506	102 75 125	
Sample ID: N041672-001DMSD	SampType: <b>MSD</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: <b>146525</b>
Client ID: ZZZZZZ	Batch ID: R146525	TestNo: SM4500-NO3	Analysis Date: 8/11/2020	SeqNo: 3891405
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Nitrate/Nitrite as N	5.385	0.25 2.500 2.506	115 75 125 5.059	6.23 20
Sample ID: N041660-002DDUP	SampType: <b>DUP</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 146525
Client ID: ZZZZZZ	Batch ID: R146525	TestNo: SM4500-NO3	Analysis Date: 8/11/2020	SeqNo: <b>3891407</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Nitrate/Nitrite as N	2.813	0.25	3.022	7.16 20

#### Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
  - ASSET LABORATORIES
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Е

R

Value above quantitation range

RPD outside accepted recovery limits

Calculations are based on raw values

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

### JACOBS ch2m

### CHAIN OF CUSTODY RECORD

### Page 1 OF 1

Project Name PG&E Topock Location PG&E Topock			ontainer:	4°C Lab	1 Liter Poly 4°C	1 Liter Poly 4℃	250 ml Poly 4°C	1 Liter Poly 4°C Lab	1 Liter Poly 4°C	500 ml Poly 4℃	500 mi Poly 4°C	1 Liter Poly 4°C		Τ	
Project Number D3184A1.EV		Prese	vatives:					H2SO4							
Project Manager Scott O'Don			Flitered:		NA	NA	NA	NA	NA	NA	NA	NA			
Sample Manager Shawn Duffy	7	Holdir	ig Time:	28	7	7	1	28	7	180	180	7			
Task Order Project IM3PLANT-ARAR-WDI Turnaround Time 10 Days Shipping Date: 8/4/2020 COC Number: IM3-605	P-605 DATE	TIME	Matrix	AMMONIA (SM4500NH3D)	Anions (E300.0) FI, SO4	CONDUCTIVITY (E120,1)	E218.6 Lab Filtered	Nitrate/Nitrite (SM4500NO3-E)	TDS (SM2540C)	Total Metals(E200.7 and E200.8)	Total Metals(E200.8)	Turbidity (SM2130)		Number of Containers	COMMENTS
SC-100B-WDR-605	8.4.20	0820	Water			X	X		х		X	х	N041660-01	3	oH= 7.45
SC-700B-WDR-605	8-4-20	0830	Water	X	x	X	х	х	x	X		X	-02	4	oH= 7.14
													TOTAL NUMBER OF CONTAINERS	7	

Signatures	Date/Time	Shipping Details		1	On coloi In struction o	
Approved by	8-4-20 0700	Snipping Details		ATTN:	Special Instructions:	
Sampled by	0-4-20 0820	Method of Shipment: FedEx		Alini	SC-700B Total metals List: Cr,Al,Sb,As,Ba,B,Cu,Pb,Mn,Mo,Ni,Fe,Zn	
Relinquished by	> 8-4-20 1922	On Ice: yes / no 46.3 °C	m#2	Sample Custody	01,74,50,75,66,6,60,64,70,811,80,141,76,211	
Received by	8-4-20 1522	Airbill No:		and	Report Copy to	
Relinquished by		Lab Name: ASSET Laboratories		Marton Cartin	Mark Fesler	
Received by Xoandro Kde	Ung 8/4/20 17 30	Lab Phone: (702) 307-2659				27
M+	/					
. *	•			•	1.4	

1.2

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:	8/4/2020				Workorder:	N041660		
Rep sample Temp (Deg C):	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			
		Sa	ample Receip	t Checklist	:			
1. Shipping container/cooler in	good conditic				Yes 🗹	No 🗌	Not Present	
2. Custody seals intact, signed	, dated on sh	ippping container/o	cooler?		Yes	No 🗌	Not Present	$\checkmark$
3. Custody seals intact on sam	ple bottles?				Yes	No 🗌	Not Present	$\checkmark$
4. Chain of custody present?					Yes 🗹	No 🗌		
5. Sampler's name present in C	COC?				Yes 🗹	No 🗌		
6. Chain of custody signed whe	en relinquishe	ed and received?			Yes 🗹	No 🗌		
7. Chain of custody agrees with	n sample labe	els?			Yes 🗹	No 🗌		
8. Samples in proper container,	/bottle?				Yes 🗹	No 🗌		
9. Sample containers intact?					Yes 🗹	No 🗌		
10. Sufficient sample volume for	or indicated te	est?			Yes 🗹	No 🗌		
11. All samples received within	holding time	?			Yes 🗹	No 🗌		
12. Temperature of rep sample	or Temp Bla	ink within acceptab	ble limit?		Yes 🗹	No 🗌	NA	
13. Water - VOA vials have zer	o headspace	?			Yes	No 🗌	NA	$\checkmark$
14. Water - pH acceptable upo Example: pH > 12 for (C	•	or Metals			Yes	No 🗹	NA	
15. Did the bottle labels indicat	e correct pres	servatives used?			Yes	No 🗌	NA	$\checkmark$
16. Were there Non-Conformation Were there Non-Conformation Were there Non-Conformation No	nce issues at /as Client no	-			Yes 🗹 Yes 🗌	No 🗌 No 🗌	NA NA	
		iltered and then pre e lab preserved wi			- with H2SO4.			

Checklist Completed By:

<sub>YR</sub> YRJ 8/5/2020

Reviewed By:

MBC

WORK ORDER Summary 05-Aug-20										
Client ID:CH2HI01Project:PG&E Topock, D3184A1.EV.05-OM-TSComments:The SC-100B & SC-700B Total metals List:		4A1.EV.05-OM-TS	QC Level	I: Level IV		WorkOrder: N041660 Date Received: 8/4/2020				
Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage			
N041660-001A	SC-100B-WDR-605	8/4/2020 8:20:00 AM	8/18/2020	Water	EPA 120.1	SPECIFIC CONDUCTANCE				
			8/18/2020		SM2540C	TOTAL FILTERABLE RESIDUE				
			8/18/2020			Total Dissolved Solids Prep				
			8/18/2020		SM 2130B	TURBIDITY				
N041660-001B			8/18/2020		EPA 218.6	Hexavalent Chromium by IC	WW			
N041660-001C			8/18/2020			AQPREP TOTAL METALS: ICP, FLAA	WW			
			8/18/2020		EPA 200.7	TOTAL METALS BY ICP	WW			
			8/18/2020			AQPREP TOTAL METALS: ICP, FLAA	WW			
			8/18/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW			
			8/18/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW			
N041660-001D							WW			
N041660-002A	SC-700B-WDR-605	8/4/2020 8:30:00 AM	8/18/2020		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	□ □ ✔ SUB			
N041660-002B			8/18/2020		EPA 120.1	SPECIFIC CONDUCTANCE				
			8/18/2020		SM2540C	TOTAL FILTERABLE RESIDUE				
			8/18/2020			Total Dissolved Solids Prep				
			8/18/2020		SM 2130B	TURBIDITY				
			8/18/2020		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				
			8/18/2020		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY				
N041660-002C			8/18/2020		EPA 218.6	Hexavalent Chromium by IC	WW			
N041660-002D			8/18/2020		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	WW			
N041660-002E			8/18/2020			AQPREP TOTAL METALS: ICP, FLAA	WW			

WORK C	RDER Summar	У				05-Aug-20		
Client ID: Project: Comments:	pject: PG&E Topock, D3184A1.EV.05-OM-TS			I: Level IV		WorkOrder: N041660 Date Received: 8/4/2020		
Sample ID	<b>Client Sample ID</b>	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage	
N041660-002E	SC-700B-WDR-605	8/4/2020 8:30:00 AM	8/18/2020	Water	EPA 200.7	TOTAL METALS BY ICP	WW	
			8/18/2020			AQPREP TOTAL METALS: ICP, FLAA	WW	
			8/18/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW	
			8/18/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW	
N041660-002F							WW	
N041660-003A	FOLDER	8/18/2020	8/18/2020		Folder	Folder		
			8/18/2020		Folder	Level IV Report		
			8/18/2020		Folder	Folder		

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TEL: 7023072659 FAX: 7023072691

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

QC Level: Level IV

Subcontractor:					
BC Labs	TEL:	(661) 327-4911	Field Sampl	er: SIGNED	
4100 Atlas Court	FAX:	(661) 327-1918			
Bakersfield, CA 93308	Acct #:				05-Aug-20

					Requested Tests	
Sample ID	Matrix	Date Collected	Bottle Type	SM4500-NH3D		
N041660-002A / SC-700B-WDR-605	Water	8/4/2020 8:30:00 AM	32OZP	1		

#### General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N41660A 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 #: 549972859	
		Date/Time		Date/Time
Relinquished by:	YRJ	8/5/2020 1630	Received by:	
Relinquished by:			Received by:	

### List of Analysts

### **ASSET Laboratories Work Order: N041660**

NAME	TEST METHOD							
Claire Ignacio	EPA 200.8							
Lilia Ramit	EPA 120.1, SM 2540C, SM 2130B							
Ria Abes	EPA 218.6, EPA 300.0							
Diane Jetajobe	EPA 200.7							
Julia Bundalian	SM 4500-NO3F							



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NEVADA 3151 W. Post Rd., Las Vegas, NV 89118 P: 702.307.2659 F: 702.307.2691

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Date of Report: 08/12/2020

Marlon B. Cartin

ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

Client Project:N041660BCL Project:Level IV + labSpec7BCL Work Order:2022624Invoice ID:B388644

Enclosed are the results of analyses for samples received by the laboratory on 8/6/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval Client Service Rep

Stuart Buttram Technical Director

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

	1-3153 W Post Rd., Las Vegas, v.at-labs.com	20-22 (J NV 89118 7023072691	oZY	CHAIN-	OF-CUST(	)DY RECOR	Page I of I	
					QC Level:	Level IV		
Subcontractor: BC Labs 4100 Atlas Court			27-4911 27-1918		Field Sampler:	SIGNED		
Bakersfield, CA 93	308	Acct #:					05-Aug-20	
5	Sample ID	Matrix	Date Collected	Bottle Type	e SM4500-NH3D	Requested Tests	1	
	SC-700B-WDR-605	Water	8/4/2020 8:30:00 AM		1			
						СНК ВҮ		]
General Comments:	PLEASE EMAIL SAMPLE R Please use PO#:N41660A Marton at (702)-307-2659, P Please analyze for Ammonia	Please email Invoices Please e-mail results to	and Account Receivable reports.lv@assetlaborate	Statements to elvir ories.com by: Stand	ra@asset/aboratories.co	xatories.com	1 prover	
General Comments:	Please use PO#:N41660A Marlon at (702)-307-2659, P Please analyze for Ammonia	Please email invoices Please e-mail results to a by SM4500NH3D, ED	and Account Receivable reports.lv@assetlaborato D requirement Labspec7 Date/Time	Statements to elvi: ories.com by: Stand dedata.	ra@asset/aboratories.co	vatories.com	1 prover	

Page 3 of 10



#### Chain of Custody and Cooler Receipt Form for 2022624 Page 2 of 2

BC LABORATORIES INC.			COOLER	RECEIPT	FORM			Pag	78 /	Of /
Submission #: 20-22-67	24							1 43	30	<u>vi</u>
SHIPPING INFORM	the second se				LUDDING	CONTA	INCO	1	Figure 1	
Fed Ex D UPS D Ontrac [	] Han	d Deliver	vΠ		est		Box 🗆		FREE LI	
	S (Specif	n En	S	Oth	er 🗆 (Sp	ecify)			YES D	
								_	W /	3
Refrigerant: Ice⊕≭ Blue Ice □	None	÷ 🗆	Other 🗆	Com	nents:					
	Contain		None	Com	ments:					
Lintact? Yes No C	ntact? Yes	D No D								
All samples received? Yes 🕫 No 🗆 🛛 A	li samples	container:	intact? )	be No	n	Descrip	tion(s) mat	ch COC2	Vec D -No	
	sivity:	15	Contologo	DE		meter ID:	17Li			
										01025
CTES ENO Ter	nperature:	(A) 3	· [	°C /	(0) ?	5.0	•c	Analyst	<u>Init_Tk</u>	)
SAMPLE CONTAINERS					SAMPL	E NUMBERS				
	1	2	3	4	5	6	7	8	9	10
OT PR UNPRES										
402/802/1602 PE UNPRES										
Zoz Cr <sup>4</sup>										
OT INORGANIC CHEMICAL METALS										
NORGANIC CHEMICAL METALS 40x / 80z / 160z										
PT CYANIDE 2PHITROGEN FORMS Q	A					· .			I	
2P-NITROGEN FORMS Q	-4-									
									·	
OZ. NITRATE / NITRITE PT TOTAL ORGANIC CARBON										
T CHEMICAL OXYGEN DEMAND										
TA PHENOLICS										
Oml VOA VIAL TRAVEL BLANK										<u> </u>
Omi YOA YIAL										
YT EPA 1664										
T ODOR										
ADIOLOGICAL										
ACTERIOLOGICAL										
ml VOA VIAL- 504										
T EPA 508/608/8080										
T EPA 515.1/8150				· · ·						
T EPA 525										
T EPA 525 TRAVEL BLANK									-	
ml EPA 547										
ml EPA 531.1										
z EPA 548										
Г RPA 549										
F EPA 8015M										
° EPA 8270										
z/16az/32ez AMBER										
: / 1602 / 3202 JAR										
IL SLEEVE										
B VIAL										
ASTIC BAG										
DLAR BAG	1									
RROUS IRON		1								
CORE										
ARTKIT										
MMA CANISTER										
	and the second se									
ments: 13/4 Full )				Date/Time:	~ /	,				

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ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

# Reported:08/12/2020 15:50Project:Level IV + labSpec7Project Number:N041660Project Manager:Marlon B. Cartin

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Informati	on		
2022624-01	COC Number:		Receive Date:	08/06/2020 10:25
	Project Number:		Sampling Date:	08/04/2020 08:30
	Sampling Location:		Sample Depth:	
	Sampling Point: Sampled By:	N044660-002A / SC-700B-WDR-605 	Lab Matrix: Sample Type:	Water Water



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118 Reported:08/12/2020 15:50Project:Level IV + labSpec7Project Number:N041660Project ManagariMadaga D. Cartin

Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

BCL Sample ID:	2022624-01	Client Sampl	e Name:	MB Lab					
Constituent		Result	Units	RL	Method	MB Bias	Lab Quals	Run #	
Ammonia as N (Distilled	) (t	ND	mg/L	0.20	SM-4500-NH3G	ND		1	

			Run				QC	
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	Prep Method
1	SM-4500-NH3G	08/07/20 13:30	08/11/20 15:52	JMH2	SC-1	1.017	B084298	SM 4500-NH3G



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

Reported: 08/12/2020 15:50 Project: Level IV + labSpec7 Project Number: N041660 Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

### **Quality Control Report - Method Blank Analysis**

Constituent	QC Sample ID	MB Result	Units	RL	Lab Quals
QC Batch ID: B084298					
Ammonia as N (Distilled)	B084298-BLK1	ND	mg/L	0.20	

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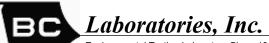
Reported: 08/12/2020 15:50 Project: Level IV + labSpec7 Project Number: N041660 Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

### **Quality Control Report - Laboratory Control Sample**

							Control Limits				
Constituent	QC Sample ID	Туре	Result	Spike Level	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals	
QC Batch ID: B084298											
Ammonia as N (Distilled)	B084298-BS1	LCS	2.1598	2.0000	mg/L	108		85 - 115			

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ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

Reported: 08/12/2020 15:50 Project: Level IV + labSpec7 Project Number: N041660 Project Manager: Marlon B. Cartin

### Water Analysis (General Chemistry)

### **Quality Control Report - Precision & Accuracy**

									<u>Cont</u>	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Туре	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
QC Batch ID: B084298	Use	d client samp	ole: N								
Ammonia as N (Distilled)	DUP	2021741-01	0.36718	0.44069		mg/L	18.2		20		
	MS	2021741-01	0.36718	2.4524	2.3121	mg/L		90.2		80 - 120	
	MSD	2021741-01	0.36718	2.4902	2.3121	mg/L	1.5	91.8	20	80 - 120	

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September 17, 2020

Mark Fesler/RDD CH2M HILL 155 Grand Avenue, Suite 1000 Oakland, CA 94612

TEL: (530) 229-3273 FAX: (510) 622-9129

Workorder No.: N042064

RE: PG&E Topock, D3184A1.EV.05-OM-TS

Attention: Mark Fesler/RDD

Enclosed are the results for sample(s) received on September 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,

Nonny Intercas

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.



CALIFORNIA | P:562.219.7435 F:562.219.7436 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 ELAP Cert 2921 EPA ID CA01638

CLIENT:CH2M HILLProject:PG&E Topock, D3184A1.EV.05-OM-TSLab Order:N042064

### **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:

Ammonia was subcontracted to BC Labs- Bakersfield,CA.

Analytical Comments for EPA 200.7:

Matrix Spike (MS) is outside recovery criteria for Iron in QC sample N042064-001C-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.

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:

Method Blank (MB) has detect greater than 1/2 the reporting limit for Nickel. However, sample result for this analyte was none detect (ND) therefore reanalysis of the sample was not necessary.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for Chromium in QC samples N042067-001B-MS and N042067-001B-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.

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside recovery criteria for some analytes in QC samples N042067-001B-MS and N042067-001B-MSD possibly due to matrix interference. Post

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CLIENT:CH2M HILLProject:PG&E Topock, D3184A1.EV.05-OM-TSLab Order:N042064

**CASE NARRATIVE** 

Spike (PS) and Dilution Test (DT) were performed however, PS failed acceptance criteria. The associated Laboratory Control Sample (LCS) recovery was acceptable.



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CLIENT:	CH2M HILL
Project:	PG&E Topock, D3184A1.EV.05-OM-TS
Lab Order:	N042064
<b>Contract No:</b>	

### Work Order Sample Summary

Lab Sample ID Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
	WIALITA	Concetion Date	Date Received	Date Reported
N042064-001A SC-100B-WDR-607	Water	9/1/2020 9:35:00 AM	9/1/2020	9/17/2020
N042064-001B SC-100B-WDR-607	Water	9/1/2020 9:35:00 AM	9/1/2020	9/17/2020
N042064-001C SC-100B-WDR-607	Water	9/1/2020 9:35:00 AM	9/1/2020	9/17/2020
N042064-001D SC-100B-WDR-607	Water	9/1/2020 9:35:00 AM	9/1/2020	9/17/2020
N042064-002A SC-700B-WDR-607	Water	9/1/2020 9:25:00 AM	9/1/2020	9/17/2020
N042064-002B SC-700B-WDR-607	Water	9/1/2020 9:25:00 AM	9/1/2020	9/17/2020
N042064-002C SC-700B-WDR-607	Water	9/1/2020 9:25:00 AM	9/1/2020	9/17/2020
N042064-002D SC-700B-WDR-607	Water	9/1/2020 9:25:00 AM	9/1/2020	9/17/2020
N042064-002E SC-700B-WDR-607	Water	9/1/2020 9:25:00 AM	9/1/2020	9/17/2020
N042064-002F SC-700B-WDR-607	Water	9/1/2020 9:25:00 AM	9/1/2020	9/17/2020



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 Blvd., Ste B, Cerritos, CA 90703

 ELAP
 Cert 2921

 EPA ID
 CA01638

### ANALYTICAL RESULTS Print Date: 17-Sep-20

			Time Duce: 17 Sep 20							
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-607							
Lab Order:	N042064		Collection Date: 9/1/2020 9:35:00 AM							
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER							
Lab ID:	N042064-001	N042064-001								
Analyses		Result MDL	PQL	Qual Ur	nits D	)F	Date Analyzed			
SPECIFIC	CONDUCTANCE									
			EP	A 120.1						
RunID: N	/00922-WC_200902D	QC Batch: <b>R147106</b>		PrepDate:			Analyst: LR			
Specific C	Conductance	7000 0.10	0.10	umh	os/cm ŕ	1	9/2/2020 11:00 AM			

Qualifiers:

В

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

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### ANALYTICAL RESULTS Print Date: 17-Sep-20

				Time Butter 17 Sep 20							
CLIENT:	CH2M HILL		(	Client Sample ID: SC-700B-WDR-607							
Lab Orde	er: N042064			Collection Date: 9/1/2020 9:25:00 AM							
Project:	PG&E Topock,	D3184A1.EV.05-OM-T	S	Matrix: WATER							
Lab ID:	N042064-002										
Analyses		Result MD	L PQL	Qual	Units	DF	Date Analyzed				
SPECIFIC	C CONDUCTANCE										
			EF	PA 120.1							
RunID: I	NV00922-WC_200902D	QC Batch: <b>R147106</b>		PrepDa	ite:		Analyst: LR				
Specific	: Conductance	6900 0.1	0 0.10		umhos/cm	1	9/2/2020 11:00 AN				

Qualifiers:

В

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
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Date: 17-Sep-20

CLIENT: CH2M HILL

Work Order: N042064

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

### TestCode: 120.1\_WPGE

Sample ID: N042064-001ADUP	SampType: <b>DUP</b>	TestCo	de: 120.1_WP	GE Units: umhos	s/cm	Prep Da	te:		RunNo: 147	7106	
Client ID: ZZZZZZ	Batch ID: R147106	TestN	lo: EPA 120.1	I		Analysis Da	te: 9/2/202	0	SeqNo: 392	24097	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Specific Conductance	7010.000	0.10						7020	0.143	2	

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



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- E Value above quantitation range
- R RPD outside accepted recovery limits

NEVADA | P:702.307.2659 F:702.307.2691

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ELAP Cert 2676 | NV Cert NV00922

ORELAP/NELAP Cert 4046

Calculations are based on raw values

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

### **ANALYTICAL RESULTS**

			11int Date. 17 Sep 20							
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-607							
Lab Order:	N042064		Collection Date: 9/1/2020 9:35:00 AM							
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER							
Lab ID:	N042064-001	N042064-001								
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed			
TOTAL FILTE	RABLE RESIDUE									
			SN	12540C						
RunID: NV00	922-WC_200902H	QC Batch: 82030		PrepDat	e:	9/2/2020	Analyst: LR			
Total Dissolve Filterable)	ed Solids (Residue,	4600 50	50	r	ng/L	1	9/2/2020 01:12 PM			

Print Date: 17-Sep-20

Qualifiers:

В

- 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

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### **ANALYTICAL RESULTS**

			Time Date: 17 Sep 20							
CLIENT:	CH2M HILL		Client Sample ID: SC-700B-WDR-607							
Lab Order:	N042064		Collection Date: 9/1/2020 9:25:00 AM							
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER							
Lab ID:	N042064-002	N042064-002								
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed			
TOTAL FILTE	RABLE RESIDUE									
			SN	12540C						
RunID: NV00	922-WC_200902H	QC Batch: 82030		PrepDate	e:	9/2/2020	Analyst: LR			
Total Dissolve Filterable)	ed Solids (Residue,	4200 50	50	m	ng/L	1	9/2/2020 01:12 PM			

Print Date: 17-Sep-20

Qualifiers:

- Holding times for preparation or analysis exceeded Η
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified

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**CLIENT:** CH2M HILL

Work Order: N042064

### ANALYTICAL QC SUMMARY REPORT

#### **Project:** PG&E Topock, D3184A1.EV.05-OM-TS

#### TestCode: 160.1\_2540C\_W

Sample ID: LCS-82030	SampType: LCS	TestCode: 160.1_2540C Units: mg/L	Prep Date: 9/2/2020	RunNo: 147135
Client ID: LCSW	Batch ID: 82030	TestNo: SM2540C	Analysis Date: 9/2/2020	SeqNo: <b>3924707</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residu	e, Filtera 972.000	10 1000 0	97.2 80 120	
Sample ID: MB-82030	SampType: MBLK	TestCode: 160.1_2540C Units: mg/L	Prep Date: 9/2/2020	RunNo: 147135
Client ID: PBW	Batch ID: 82030	TestNo: SM2540C	Analysis Date: 9/2/2020	SeqNo: <b>3924708</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residu	e, Filtera ND	10		
Sample ID: N042067-001CDU	P SampType: DUP	TestCode: 160.1_2540C Units: mg/L	Prep Date: 9/2/2020	RunNo: 147135
Client ID: ZZZZZZ	Batch ID: 82030	TestNo: SM2540C	Analysis Date: 9/2/2020	SeqNo: 3924718
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Total Dissolved Solids (Residu	e, Filtera 4500.000	50	4540	0.885 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

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

### ANALYTICAL RESULTS Print Date: 17-Sep-20

			Time Ducer 17 Sep 20						
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-607						
Lab Orde	er: N042064		Collection Date: 9/1/2020 9:35:00 AM						
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	TS Matrix: WATER						
Lab ID:	N042064-001								
Analyses		Result MDL	PQL	Qual Unit	s DF	Date Analyzed			
	IETALS BY ICP								
			EP	A 200.7					
RunID: I	NV00922-ICP2_200908A	QC Batch: 82045		PrepDate:	9/3/2020	Analyst: <b>DJ</b>			
Iron		140 18	20	µg/L	1	9/8/2020 07:29 AM			

Qualifiers:

В

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



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### **ANALYTICAL RESULTS**

Print Date: 17-Sep-20

CLIENT:	CH2M HILL			Client Sample ID: SC-700B-WDR-607						
Lab Order:	N042064			Collection Date: 9/1/2020 9:25:00 AM						
Project:	PG&E Topock,	D3184A1.EV.05-0	OM-TS		Matrix:	WATER				
Lab ID:	N042064-002									
Analyses		Result	MDL	PQL	Qual Uni	ts DF	Date Analyzed			
TOTAL META	LS BY ICP									
				EP/	A 200.7					
RunID: NV00	922-ICP2_200908A	QC Batch: 8204	45		PrepDate:	9/3/2020	Analyst: <b>DJ</b>			
Aluminum		ND	40	50	µg/L	1	9/8/2020 07:57 AM			
Boron		1100	74	100	μg/L	1	9/8/2020 07:57 AM			
Iron		55	18	20	µg/L		9/8/2020 07:57 AN			

Qualifiers:

- 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

DO Surrogate D

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**Project:** 

**CLIENT:** CH2M HILL

Work Order: N042064

PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 200.7\_WPGEPPB

Sample ID:	N042064-001C-MS1	SampType: <b>MS</b>	TestCo	de: 200.7 WP	GE Units: µg/L		Prep Dat	e: 9/3/202	0	RunNo: 147	/219	
Client ID:		Batch ID: 82045		No: EPA 200.7			Analysis Dat			SeqNo: 392		
Chefft ID.		Daten 1D. 02040	1630	10. LFA 200.7			Analysis Dat	5. 3/0/202	0	0eq110. 332	.0505	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum		10250.502	50	10000	0	103	75	125				
Boron		6097.297	100	5000	1014	102	75	125				
Iron		139.254	20	100.0	142.4	-3.12	75	125				S
Sample ID:	N042064-001C-MSD	SampType: MSD	TestCo	de: 200.7_WP	GE Units: µg/L		Prep Dat	e: 9/3/202	0	RunNo: 147	/219	
Client ID:	ZZZZZZ	Batch ID: 82045	Test	lo: EPA 200.7			Analysis Dat	e: 9/8/202	0	SeqNo: 392	28310	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum		10077.581	50	10000	0	101	75	125	10250	1.70	20	
Boron		6182.525	100	5000	1014	103	75	125	6097	1.39	20	
Iron		223.705	20	100.0	142.4	81.3	75	125	139.3	46.5	20	R
Sample ID:	MB-82045	SampType: <b>MBLK</b>	TestCo	de: 200.7_WP	GE Units: µg/L		Prep Dat	e: 9/3/202	0	RunNo: 147	/219	
Client ID:	PBW	Batch ID: 82045	Test	lo: EPA 200.7			Analysis Dat	e: 9/8/202	0	SeqNo: 392	28315	
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum		ND	50									
-												
Boron		ND	100									
Boron Iron		ND ND	100 20									
Iron	LCS1-82045		20	de: 200.7_WP	GE Units: µg/L		Prep Dat	e: 9/3/202	0	RunNo: 147	/219	
Iron		ND	20 TestCod	de: 200.7_WP			Prep Dat Analysis Dat			RunNo: 147 SeqNo: 392		
Iron Sample ID:		ND SampType: LCS	20 TestCod	lo: EPA 200.7		%REC	Analysis Dat	e: 9/8/202				Qual
Iron Sample ID: Client ID:		ND SampType: LCS Batch ID: 82045	20 TestCoo TestN	lo: EPA 200.7			Analysis Dat	e: 9/8/202	0	SeqNo: <b>392</b>	28316	Qual
Iron Sample ID: Client ID: Analyte		ND SampType: LCS Batch ID: 82045 Result	20 TestCoo TestN PQL	lo: EPA 200.7 SPK value	SPK Ref Val	%REC	Analysis Dat	e: 9/8/202 HighLimit	0	SeqNo: <b>392</b>	28316	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

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ELAP Cert 2676 | NV Cert NV00922

**ORELAP/NELAP Cert 4046** 

Calculations are based on raw values

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



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15

Date: 17-Sep-20

CLIENT: CH2M HILL

Work Order: N042064

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

### TestCode: 200.7\_WPGEPPB

Sample ID: N042064-001C-PS	SampType: <b>PS</b>	TestCo	de: 200.7_WP	GE Units: µg/L		Prep Da	te:		RunNo: 147	/219		
Client ID: ZZZZZZ	Batch ID: 82045	TestN	TestNo: EPA 200.7			Analysis Date: 9/8/2020				SeqNo: 3928308		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual	
Aluminum	10092.692	50	10000	0	101	80	120					
Boron	6035.667	100	5000	1014	100	80	120					
Iron	173.532	20	100.0	142.4	31.2	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

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

### **ANALYTICAL RESULTS**

Print Date: 17-Sep-20

CLIENT:				Client Sample ID: SC-100B-WDR-607 Collection Date: 9/1/2020 9:35:00 AM				
Lab Order:								
roject: PG&E Topock, D3184A1.EV.05-OM-TS			Matrix: WATER					
Lab ID:	N042064-001							
Analyses		Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALEN		C						
				EPA 218.6				
RunID: NV00	922-IC7_200903A	QC Batch: R14	QC Batch: R147159		PrepDate:			Analyst: QBM
Hexavalent Chromium		420	1.7	10		µg/L	50	9/3/2020 02:55 PM
TOTAL META	LS BY ICPMS							
	EPA 200.8							
RunID: NV00	922-ICP8_200904B	QC Batch: 820	43		PrepD	ate:	9/3/2020	Analyst: CEI
Chromium		420	0.65	5.0		µg/L	5	9/4/2020 03:13 PM

Qualifiers:

В

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



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# **ANALYTICAL RESULTS**

Print Date: 17-Sep-20

CLIENT:	CH2M HILL			C	lient Samp	le ID: SO	C-700B-WDR	-607
Lab Order:	N042064				Collection	Date: 9/	1/2020 9:25:0	0 AM
Project:	PG&E Topock,	D3184A1.EV.05-	OM-TS		Μ	atrix: W	ATER	
Lab ID:	N042064-002							
Analyses		Result	MDL	PQL	Qual	Units	DF	Date Analyzed
HEXAVALEN	CHROMIUM BY IC	C						
				EP	A 218.6			
RunID: NV00	922-IC7_200903A	QC Batch: R1	47159		PrepD	Date:		Analyst: QBM
Hexavalent C	hromium	ND	0.033	0.20		µg/L	1	9/3/2020 03:14 PM
TOTAL META	LS BY ICPMS							
				EP	A 200.8			
RunID: NV00	922-ICP8_200904B	QC Batch: 82	043		PrepD	Date:	9/3/2020	Analyst: CEI
Chromium		ND	0.13	1.0		µg/L	1	9/4/2020 03:17 PM

Qualifiers:

В

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



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**CLIENT:** CH2M HILL

Work Order: N042064

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 200.8\_W\_CRPGE\_TPK

Sample ID: MB-82043 Client ID: PBW	SampType: MBLK Batch ID: 82043	TestCode: 200.8_W_CR Units: µg/L TestNo: EPA 200.8	Prep Date: <b>9/3/2020</b> Analysis Date: <b>9/4/2020</b>	RunNo: <b>147189</b> SeqNo: <b>3927271</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Chromium	ND	1.0		
Sample ID: LCS-82043 Client ID: LCSW Analyte Chromium	SampType: LCS Batch ID: 82043 Result 10.031	TestCode: 200.8_W_CR Units: µg/L TestNo: EPA 200.8 PQL SPK value SPK Ref Val 1.0 10.00 0	Prep Date: 9/3/2020 Analysis Date: 9/4/2020 %REC LowLimit HighLimit RPD Ref Val	RunNo: <b>147189</b> SeqNo: <b>3927274</b> %RPD RPDLimit Qual
Sample ID: N042067-001B-MS Client ID: ZZZZZZ	SampType: <b>MS</b> Batch ID: <b>82043</b>	TestCode: 200.8_W_CR Units: µg/L TestNo: EPA 200.8	Prep Date: 9/3/2020 Analysis Date: 9/4/2020	RunNo: <b>147189</b> SeqNo: <b>3927282</b>
		= =	•	
Client ID: ZZZZZZ	Batch ID: 82043	TestNo: EPA 200.8	Analysis Date: 9/4/2020	SeqNo: <b>3927282</b>
Client ID: ZZZZZZ	Batch ID: <b>82043</b> Result 434.202	TestNo: <b>EPA 200.8</b> PQL SPK value SPK Ref Val	Analysis Date: <b>9/4/2020</b> %REC LowLimit HighLimit RPD Ref Val	SeqNo: <b>3927282</b> %RPD RPDLimit Qual
Client ID: ZZZZZZ Analyte Chromium Sample ID: N042067-001B-MSD	Batch ID: 82043 Result 434.202 SampType: MSD	TestNo:         EPA 200.8           PQL         SPK value         SPK Ref Val           5.0         10.00         418.2           TestCode:         200.8_W_CR         Units:         µg/L	Analysis Date:     9/4/2020       %REC     LowLimit     HighLimit     RPD Ref Val       160     75     125   Prep Date: 9/3/2020	SeqNo: <b>3927282</b> %RPD RPDLimit Qual S RunNo: <b>147189</b>

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



E Value above quantitation range

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Work Order: N042064

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: MB-R147159	SampType: MBLK	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: PBW	Batch ID: R147159	TestNo: <b>EPA 218.6</b>	Analysis Date: <b>9/3/2020</b>	SeqNo: <b>3925539</b>
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-R147159	SampType: LCS	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: LCSW	Batch ID: R147159	TestNo: <b>EPA 218.6</b>	Analysis Date: <b>9/3/2020</b>	SeqNo: <b>3925540</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	4.942	0.20 5.000 0	98.8 90 110	
Sample ID: N042079-001BDUP	SampType: <b>DUP</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: ZZZZZZ	Batch ID: R147159	TestNo: <b>EPA 218.6</b>	Analysis Date: <b>9/3/2020</b>	SeqNo: <b>3925544</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	821.040	20	814.0	0.862 20
Sample ID: N042079-001BMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: ZZZZZZ	Batch ID: R147159	TestNo: <b>EPA 218.6</b>	Analysis Date: 9/3/2020	SeqNo: <b>3925545</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	1339.450	20 500.0 814.0	105 90 110	
Sample ID: N042080-001BMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: ZZZZZZ	Batch ID: R147159	TestNo: EPA 218.6	Analysis Date: 9/3/2020	SeqNo: <b>3925546</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	140.211	2.0 50.00 90.29	99.9 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

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Work Order: N042064

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: N042080-001BMSD	SampType: <b>MSD</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: ZZZZZZ	Batch ID: R147159	TestNo: EPA 218.6	Analysis Date: 9/3/2020	SeqNo: <b>3925547</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	140.010	2.0 50.00 90.29	99.4 90 110 140.2	0.143 20
Sample ID: N042046-001AMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: ZZZZZZ	Batch ID: R147159	TestNo: <b>EPA 218.6</b>	Analysis Date: 9/3/2020	SeqNo: <b>3925550</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	1.948	0.20 1.000 0.9550	99.3 90 110	
Sample ID: N042044-001ADUP	SampType: <b>DUP</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: ZZZZZZ	Batch ID: R147159	TestNo: <b>EPA 218.6</b>	Analysis Date: 9/3/2020	SeqNo: <b>3925552</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	3.712	0.20	3.732	0.527 20
Sample ID: N042064-001BMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: ZZZZZZ	Batch ID: R147159	TestNo: <b>EPA 218.6</b>	Analysis Date: 9/3/2020	SeqNo: <b>3925566</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	678.815	10 250.0 424.2	102 90 110	
Sample ID: N042064-002CMS	SampType: <b>MS</b>	TestCode: 218.6_WU_P Units: µg/L	Prep Date:	RunNo: 147159
Client ID: ZZZZZZ	Batch ID: R147159	TestNo: EPA 218.6	Analysis Date: 9/3/2020	SeqNo: <b>3925568</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Hexavalent Chromium	1.147	0.20 1.000 0.1327	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

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ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Work Order: N042064

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

TestCode: 218.6\_WU\_PGE

Sample ID: N042067-001AMS	SampType: <b>MS</b>	TestCo	de: 218.6_WU	I_P Units: µg/L		Prep Da	te:		RunNo: 147	7159	
Client ID: ZZZZZZ	Batch ID: R147159	Test	No: EPA 218.6	6		Analysis Da	te: 9/3/202	0	SeqNo: 392	25572	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Hexavalent Chromium	680.465	10	250.0	427.7	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

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EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

Date: 17-Sep-20

CLIENT: CH2M HILL

Work Order: N042064

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 200.8\_W\_CRPGE\_TPK

Sample ID: N042067-001B-PS	SampType: <b>PS</b>	TestCo	de: 200.8_W_	CR Units: µg/L		Prep Da	te:		RunNo: 147	189	
Client ID: ZZZZZZ	Batch ID: 82043	TestN	lo: EPA 200.8	1		Analysis Da	te: 9/4/202	0	SeqNo: 392	27280	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chromium	425.767	5.0	10.00	418.2	75.7	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

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R RPD outside accepted recovery limits

Calculations are based on raw values

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

#### ANALYTICAL RESULTS Print Date: 17-Sep-20

					Time Dutter 17	<i>Sep</i> <b>2</b> <i>°</i>			
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-607						
Lab Order:	N042064		Collection Date: 9/1/2020 9:35:00 AM						
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER						
Lab ID:	N042064-001								
Analyses		Result MDL	PQL	Qual U	nits DF	Date Analyzed			
TOTAL MET	ALS BY ICPMS								
			EP	A 200.8					
RunID: NV0	0922-ICP8_200904B	QC Batch: 82043		PrepDate:	9/3/2020	Analyst: CEI			
Manganese		9.9 0.26	0.50	μg/	/L 1	9/4/2020 03:08 PM			

Qualifiers:

В

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



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CH2M HILL

PG&E Topock, D3184A1.EV.05-OM-TS

N042064

**CLIENT:** 

**Project:** 

Lab Order:

### ANALYTICAL RESULTS

Print Date: 17-Sep-20

# Client Sample ID: SC-700B-WDR-607 Collection Date: 9/1/2020 9:25:00 AM Matrix: WATER

Lab ID:	N042064-002							
Analyses		Result	MDL	PQL	Qual	Units	DF	Date Analyzed
TOTAL ME	TALS BY ICPMS							
				EP	A 200.8			
RunID: N	/00922-ICP8_200904B	QC Batch: 820	043		PrepDat	e:	9/3/2020	Analyst: CEI
Antimony		ND	0.16	0.50	ł	ug/L	1	9/4/2020 03:17 PM
Arsenic		ND	0.081	0.10	ł	ug/L	1	9/4/2020 03:17 PM
Barium		17	0.15	1.0	ł	ug/L	1	9/4/2020 03:17 PM
Copper		ND	0.55	1.0	ł	ug/L	1	9/4/2020 03:17 PM
Lead		ND	0.13	1.0	ł	ug/L	1	9/4/2020 03:17 PM
Manganes	se	1.7	0.26	0.50	ł	ug/L	1	9/4/2020 03:17 PM
Molybden	um	22	0.21	0.50	ł	ug/L	1	9/4/2020 03:17 PM
Nickel		ND	0.26	1.0	ł	ug/L	1	9/4/2020 03:17 PM
Zinc		ND	2.3	10	ł	ug/L	1	9/4/2020 03:17 PM

Qualifiers:

В

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



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**CLIENT:** CH2M HILL

Work Order: N042064

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

## ANALYTICAL QC SUMMARY REPORT

#### TestCode: 200.8\_W\_TPK

Sample ID: MB-82043	SampType: MBLK	TestCode: 200.8_W_TP Units: µg/L	Prep Date: 9/3/2020	RunNo: 147189
Client ID: PBW	Batch ID: 82043	TestNo: EPA 200.8	Analysis Date: 9/4/2020	SeqNo: <b>3927324</b>
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		
Copper	ND	1.0		
Lead	ND	1.0		
Manganese	ND	0.50		
Molybdenum	ND	0.50		
Nickel	0.626	1.0		
Zinc	ND	10		
Sample ID: LCS-82043	SampType: LCS	TestCode: 200.8_W_TP Units: µg/L	Prep Date: 9/3/2020	RunNo: 147189
Client ID: LCSW	Batch ID: 82043	TestNo: EPA 200.8	Analysis Date: 9/4/2020	SeqNo: <b>3927327</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Antimony	11.090	0.50 10.00 0	111 85 115	
Arsenic	10.636	0.10 10.00 0	106 85 115	
Barium	10.165	1.0 10.00 0	102 85 115	
Copper	10.253	1.0 10.00 0	103 85 115	
Lead	10.390	1.0 10.00 0	104 85 115	
Manganese	103.920	0.50 100.0 0	104 85 115	
Molybdenum	10.056	0.50 10.00 0	101 85 115	
Nickel	10.539	1.0 10.00 0	105 85 115	
7:	10.868	10 10.00 0	109 85 115	
ZINC				
Zinc Sample ID: N042067-001B-MS	SampType: <b>MS</b>	TestCode: 200.8_W_TP Units: µg/L	Prep Date: 9/3/2020	RunNo: 147189
	SampType: <b>MS</b> Batch ID: <b>82043</b>	TestCode: 200.8_W_TP Units: µg/L TestNo: EPA 200.8	Prep Date: <b>9/3/2020</b> Analysis Date: <b>9/4/2020</b>	RunNo: <b>147189</b> SeqNo: <b>3927334</b>

#### Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit

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DO Surrogate Diluted Out

- E Value above quantitation range
- R RPD outside accepted recovery limits

Calculations are based on raw values

ELAP Cert 2921

EPA ID CA01638

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

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#### Work Order: N042064

Project: PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 200.8\_W\_TPK

Sample ID: N042067-001B-MS	SampType: <b>MS</b>	TestCoo	le: 200.8_W_T	P Units: µg/L		Prep Date	e: 9/3/202	0	RunNo: 147	7189	
Client ID: ZZZZZZ	Batch ID: 82043	TestN	lo: EPA 200.8			Analysis Dat	e: 9/4/202	0	SeqNo: 392	27334	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	11.303	0.50	10.00	0	113	75	125				
Arsenic	10.862	0.10	10.00	0	109	75	125				
Barium	44.017	1.0	10.00	33.77	102	75	125				
Copper	8.832	1.0	10.00	0	88.3	75	125				
Lead	10.619	1.0	10.00	0	106	75	125				
Manganese	117.249	0.50	100.0	20.32	96.9	75	125				
Molybdenum	35.565	0.50	10.00	23.27	123	75	125				
Nickel	ND	1.0	10.00	0	0	75	125				S
Zinc	2.814	10	10.00	0	28.1	75	125				S
Sample ID: N042067-001B-MSD	SampType: <b>MSD</b>	TestCo	le: 200.8_W_T	P Units: µg/L		Prep Date	e: 9/3/202	0	RunNo: 147	7189	
Client ID: ZZZZZZ	Batch ID: 82043	TestN	lo: EPA 200.8			Analysis Dat	e: 9/4/202	0	SeqNo: 392	27336	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	11.403	0.50	10.00	0	114	75	125	11.30	0.881	20	
	11.100	0.00									
Arsenic	11.165	0.10	10.00	0	112	75	125	10.86	2.76	20	
Arsenic Barium			10.00 10.00	0 33.77		75 75	125 125	10.86 44.02	2.76 0.343	20 20	
	11.165	0.10			112						
Barium	11.165 43.866	0.10 1.0	10.00	33.77	112 101	75	125	44.02	0.343	20	
Barium Copper	11.165 43.866 8.712	0.10 1.0 1.0	10.00 10.00	33.77 0	112 101 87.1	75 75	125 125	44.02 8.832	0.343 1.37	20 20	
Barium Copper Lead	11.165 43.866 8.712 10.627	0.10 1.0 1.0 1.0	10.00 10.00 10.00	33.77 0 0	112 101 87.1 106	75 75 75	125 125 125	44.02 8.832 10.62	0.343 1.37 0.0775	20 20 20	
Barium Copper Lead Manganese	11.165 43.866 8.712 10.627 116.517	0.10 1.0 1.0 1.0 0.50	10.00 10.00 10.00 100.0	33.77 0 20.32	112 101 87.1 106 96.2	75 75 75 75	125 125 125 125	44.02 8.832 10.62 117.2	0.343 1.37 0.0775 0.626	20 20 20 20	S
Barium Copper Lead Manganese Molybdenum	11.165 43.866 8.712 10.627 116.517 35.151 ND	0.10 1.0 1.0 0.50 0.50 1.0	10.00 10.00 10.00 100.0 10.00	33.77 0 20.32 23.27 0	112 101 87.1 106 96.2 119	75 75 75 75 75 75 75	125 125 125 125 125	44.02 8.832 10.62 117.2 35.56 0	0.343 1.37 0.0775 0.626 1.17	20 20 20 20 20 20 20	S
Barium Copper Lead Manganese Molybdenum Nickel	11.165 43.866 8.712 10.627 116.517 35.151 ND	0.10 1.0 1.0 0.50 0.50 1.0 TestCoo	10.00 10.00 10.00 100.0 10.00 10.00	33.77 0 20.32 23.27 0	112 101 87.1 106 96.2 119 0	75 75 75 75 75 75 75	125 125 125 125 125 125 125 e: <b>9/3/202</b>	44.02 8.832 10.62 117.2 35.56 0	0.343 1.37 0.0775 0.626 1.17 0	20 20 20 20 20 20 20	S
Barium Copper Lead Manganese Molybdenum Nickel Sample ID: N042067-001B-MSD	11.165 43.866 8.712 10.627 116.517 35.151 ND SampType: <b>MSD</b>	0.10 1.0 1.0 0.50 0.50 1.0 TestCoo	10.00 10.00 10.00 100.0 10.00 10.00 10.00	33.77 0 20.32 23.27 0 P Units: µg/L	112 101 87.1 106 96.2 119 0	75 75 75 75 75 75 Prep Date Analysis Date	125 125 125 125 125 125 25 e: 9/3/202 e: 9/8/202	44.02 8.832 10.62 117.2 35.56 0	0.343 1.37 0.0775 0.626 1.17 0 RunNo: <b>147</b>	20 20 20 20 20 20 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

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ELAP Cert 2676 | NV Cert NV00922

ORELAP/NELAP Cert 4046

Calculations are based on raw values

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

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- CALIFORNIA | P:562.219.7435 F:562.219.7436 11110 Artesia Blvd., Ste B, Cerritos, CA 90703 ELAP Cert 2921 EPA ID CA01638

**CLIENT:** CH2M HILL

Work Order: N042064

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 200.8\_W\_TPK

Sample ID: N042067-001B-PS	SampType: <b>PS</b>	TestCo	de: 200.8_W_	TP Units: µg/L		Prep Dat	te:	RunNo: 147189	
Client ID: ZZZZZZ	Batch ID: 82043	Test	lo: EPA 200.8	3		Analysis Da	te: 9/4/2020	SeqNo: <b>3927332</b>	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit RPD Ref	Val %RPD RPDLimit	Qual
Antimony	11.186	0.50	10.00	0	112	80	120		
Arsenic	11.153	0.10	10.00	0	112	80	120		
Barium	42.726	1.0	10.00	33.77	89.6	80	120		
Copper	8.889	1.0	10.00	0	88.9	80	120		
Lead	10.477	1.0	10.00	0	105	80	120		
Manganese	114.660	0.50	100.0	20.32	94.3	80	120		
Molybdenum	34.581	0.50	10.00	23.27	113	80	120		
Nickel	ND	1.0	10.00	0	0	80	120		S
Zinc	ND	10	100.0	0	0	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

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

# **ANALYTICAL RESULTS**

ASSET La	aboratories		Print Date: 17-Sep-20						
CLIENT:	CH2M HILL		Client Sample ID: SC-100B-WDR-607						
Lab Order:	N042064			Collection Date: 9/1	/2020 9:35:0	00 AM			
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS		Matrix: W	ATER				
Lab ID:	N042064-001								
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed			
TURBIDITY									
			SN	1 2130B					
RunID: NV	00922-WC_200902E	QC Batch: <b>R147107</b>		PrepDate:		Analyst: LR			
Turbidity		0.19 0.10	0.10	NTU	1	9/2/2020 04:45 PM			

Qualifiers:

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



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# **ANALYTICAL RESULTS**

ASSET La	ooratories			Print Date: 17-Sep-20							
CLIENT:	CH2M HILL		C	Client Sample ID: SC-700B-WDR-607							
Lab Order:	N042064			Collection Da	te: 9/1/2	020 9:25:0	0 AM				
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	5	Matr	ix: WAT	ER					
Lab ID:	N042064-002										
Analyses		Result MDL	PQL	Qual	Units	DF	Date Analyzed				
TURBIDITY											
			SN	I 2130B							
RunID: NV00	922-WC_200902E	QC Batch: <b>R147107</b>		PrepDate	:		Analyst: LR				
Turbidity		0.16 0.10	0.10	N	TU	1	9/2/2020 04:45 PM				

Qualifiers:

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



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**CLIENT:** CH2M HILL

Work Order: N042064

PG&E Topock, D3184A1.EV.05-OM-TS **Project:** 

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 2130\_W

Sample ID: <b>MB-R147107</b> Client ID: <b>PBW</b>	SampType: <b>MBLK</b> Batch ID: <b>R147107</b>	TestCode: 2130_W Units: N TestNo: SM 2130B	TU Prep Date: Analysis Date: 9/2/2020	RunNo: <b>147107</b> SeqNo: <b>3924100</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Va	%RPD RPDLimit Qual
Turbidity	ND	0.10		
Sample ID: N042064-001ADUP Client ID: ZZZZZZ	SampType: <b>DUP</b> Batch ID: <b>R147107</b>	TestCode: 2130_W Units: N TestNo: SM 2130B	TU Prep Date: Analysis Date: 9/2/2020	RunNo: <b>147107</b> SeqNo: <b>3924102</b>
		- · · <b>-</b>	Analysis Date: 9/2/2020	SeqNo: 3924102

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



E Value above quantitation range

ELAP Cert 2921

EPA ID CA01638

R RPD outside accepted recovery limits

Calculations are based on raw values

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

# **ANALYTICAL RESULTS**

Print Date: 17-Sep-20

CLIENT: Lab Order:	CH2M HILL N042064		<b>Collection Date:</b> 9/1/2	mple ID: SC-700B-WDR-607 ion Date: 9/1/2020 9:25:00 AM				
Project:	1	D3184A1.EV.05-OM-TS	Matrix: WATER					
Lab ID:	N042064-002							
Analyses		Result MDL	PQL	Qual Units	DF	Date Analyzed		
	922-IC8_200916A	QC Batch: <b>R147359</b>		A 300.0 PrepDate:		Analyst: <b>JBB</b>		
Fluoride ANIONS BY IC	ON CHROMATOGR	2.5 0.048 <b>CAPHY</b>	0.50	mg/L	5	9/16/2020 11:28 AM		
			EP	A 300.0				
RunID: NV00	922-IC8_200916B	QC Batch: R147360		PrepDate:		Analyst: <b>JBB</b>		
Sulfate		450 2.0	25	mg/L	50	9/16/2020 07:29 PM		

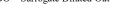
Qualifiers:

В

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



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**CLIENT:** CH2M HILL

Work Order: N042064

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 300\_W\_FPGE

Sample ID: MB1-R147359 F	SampType: <b>MBLK</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: <b>147359</b>		
·	1 31		·			
Client ID: PBW	Batch ID: <b>R147359</b>	TestNo: <b>EPA 300.0</b>	Analysis Date: 9/16/2020	SeqNo: <b>3936337</b>		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Fluoride	ND	0.10				
Sample ID: LCS1-R147359_F	SampType: LCS	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 147359		
Client ID: LCSW	Batch ID: <b>R147359</b>	TestNo: <b>EPA 300.0</b>	Analysis Date: 9/16/2020	SeqNo: <b>3936338</b>		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Fluoride	1.367	0.10 1.250 0	109 90 110			
Sample ID: N042081-001BDUP	SampType: <b>DUP</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 147359		
Client ID: ZZZZZZ	Batch ID: <b>R147359</b>	TestNo: EPA 300.0	Analysis Date: 9/16/2020	SeqNo: <b>3936340</b>		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Fluoride	4.720	0.50	4.775	1.17 20		
Sample ID: N042081-001BMS	SampType: <b>MS</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 147359		
Client ID: ZZZZZZ	Batch ID: R147359	TestNo: EPA 300.0	Analysis Date: 9/16/2020	SeqNo: 3936341		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Fluoride	10.783	0.50 6.250 4.775	96.1 80 120			
Sample ID: N042081-001BMSD	SampType: <b>MSD</b>	TestCode: 300_W_FPGE Units: mg/L	Prep Date:	RunNo: 147359		
Client ID: ZZZZZZ	Batch ID: R147359	TestNo: EPA 300.0	Analysis Date: 9/16/2020	SeqNo: <b>3936342</b>		
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual		
Fluoride	10.851	0.50 6.250 4.775	97.2 80 120 10.78	0.624 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

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EPA ID CA01638

RPD outside accepted recovery limits

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ELAP Cert 2676 | NV Cert NV00922

**ORELAP/NELAP Cert 4046** 

Calculations are based on raw values

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

Work Order: N042064

**Project:** PG&E Topock, D3184A1.EV.05-OM-TS

### ANALYTICAL QC SUMMARY REPORT

#### TestCode: 300\_W\_SO4PGE

Sample ID: MB2-R147360_SO4	SampType: MBLK	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 147360
Client ID: PBW	Batch ID: <b>R147360</b>	TestNo: EPA 300.0	Analysis Date: 9/16/2020	SeqNo: 3936434
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	ND	0.50		
Sample ID: LCS2-R147360_SO4	SampType: LCS	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 147360
Client ID: LCSW	Batch ID: <b>R147360</b>	TestNo: <b>EPA 300.0</b>	Analysis Date: 9/16/2020	SeqNo: 3936435
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	3.937	0.50 4.000 0	98.4 90 110	
Sample ID: N042067-001CDUP	SampType: <b>DUP</b>	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 147360
Client ID: ZZZZZZ	Batch ID: R147360	TestNo: EPA 300.0	Analysis Date: 9/16/2020	SeqNo: 3936437
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	473.380	25	474.0	0.138 20
Sample ID: N042067-001CMS	SampType: <b>MS</b>	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 147360
Client ID: ZZZZZZ	Batch ID: R147360	TestNo: <b>EPA 300.0</b>	Analysis Date: 9/16/2020	SeqNo: <b>3936438</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	675.025	25 200.0 474.0	100 80 120	
Sample ID: N042067-001CMSD	SampType: <b>MSD</b>	TestCode: 300_W_SO4P Units: mg/L	Prep Date:	RunNo: 147360
Client ID: ZZZZZZ	Batch ID: <b>R147360</b>	TestNo: <b>EPA 300.0</b>	Analysis Date: 9/16/2020	SeqNo: <b>3936439</b>
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Sulfate	679.260	25 200.0 474.0	103 80 120 675.0	0.625 20

Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out



- Value above quantitation range E
  - R RPD outside accepted recovery limits

Calculations are based on raw values

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

ELAP Cert 2921

EPA ID CA01638

# **ANALYTICAL RESULTS**

						surver as a	·· <i>P</i> = ·	
CLIENT	CH2M HILL		Client Sample ID: SC-700B-WDR-607					
Lab Ord	ler: N042064			Collection Da	nte: 9/1/2	020 9:25:0	0 AM	
Project:	PG&E Topock,	D3184A1.EV.05-OM-TS	Matrix: WATER					
Lab ID:	N042064-002							
Analyses	1	Result MDL	PQL	Qual	Units	DF	Date Analyzed	
NITRAT	E/NITRITE-N BY CADMIL	JM REDUCTION						
			SM4	500-NO3F				
RunID:	NV00922-WC_200910B	QC Batch: R147263		PrepDate	:		Analyst: <b>JBB</b>	
Nitrate	/Nitrite as N	2.6 0.16	0.25	m	ig/L	5	9/10/2020 12:50 P	

Print Date: 17-Sep-20

Qualifiers:

В

Analyte detected in the associated Method Blank

- Η Holding times for preparation or analysis exceeded
- S Spike/Surrogate outside of limits due to matrix interference DO Surrogate Diluted Out
- Е Value above quantitation range

ND Not Detected at the Reporting Limit Results are wet unless otherwise specified



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CLIENT: CH2M HILL

Work Order: N042064

Project: PG&E Topock, D3184A1.EV.05-OM-TS

# ANALYTICAL QC SUMMARY REPORT

#### TestCode: 4500N03F\_W\_PGE

Sample ID: MB-R147263	SampType: <b>MBLK</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: <b>147263</b>
Client ID: PBW	Batch ID: R147263	TestNo: SM4500-NO3	Analysis Date: 9/10/2020	SeqNo: 3930743
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-R147263	SampType: LCS	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 147263
Client ID: LCSW	Batch ID: R147263	TestNo: SM4500-NO3	Analysis Date: 9/10/2020	SeqNo: <b>3930744</b>
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: N042113-001CMS	SampType: <b>MS</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 147263
Client ID: ZZZZZZ	Batch ID: R147263	TestNo: SM4500-NO3	Analysis Date: <b>9/10/2020</b>	SeqNo: 3930746
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 0.5000 0.1383	85.3 75 125	
Sample ID: N042113-001CMSD	SampType: MSD	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 147263
Client ID: ZZZZZZ	Batch ID: R147263	TestNo: SM4500-NO3	Analysis Date: 9/10/2020	SeqNo: 3930747
Analyte	Result	PQL SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val	%RPD RPDLimit Qual
Nitrate/Nitrite as N	0.618	0.050 0.5000 0.1383	96.0 75 125 0.5648	9.01 20
Sample ID: N042067-001DDUP	SampType: <b>DUP</b>	TestCode: 4500N03F_W Units: mg/L	Prep Date:	RunNo: 147263
Client ID: ZZZZZZ	Batch ID: R147263	TestNo: SM4500-NO3	Analysis Date: 9/10/2020	SeqNo: <b>3930749</b>
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	2.923	4.84 20

#### Qualifiers:

- B Analyte detected in the associated Method Blank
- ND Not Detected at the Reporting Limit
- DO Surrogate Diluted Out
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E

R

Value above quantitation range

RPD outside accepted recovery limits

Calculations are based on raw values

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

CH2HI01 C: 9/15/2020 12:00 AM FOLDER R: 9/1/2020

R: 9/1/2020 1 of 1

N042064-003A

# JACOBS Ch2m

.

#### **CHAIN OF CUSTODY RECORD**

Project Name PG&E Topock		Contai	her: 1 Liter Poly	1 Liter Poly	1 Liter Poly	250 ml Poly	1 Liter Poty	1 Liter Poly	500 ml Poly	500 ml Poly	1 Liter Poly		T	I
Location PG&E Topock Project Number D3184A1.EV		Preservativ	es: H2SO4		4°C	4°C	4°C Lab H2SO4	4°C	4°C	4°C	4°C			
Project Manager Scott O'Doni	nell	Filter	ed: NA	NA	NA	NA	NA	NA	NA	NA	NA			
Sample Manager Shawn Duffy	7	Holding Ta	ne: 28	7	7	t I	28	7	180	180	7			
Task Order Project IM3PLANT-ARAR-WDI Turnaround Time 10 Days Shipping Date: 9/1/2020 COC Number: 607-IM3	DATE	TIME Metr	(Jeriniorshare)	Anions (E300.0) FI, SO4	CONDUCTIVITY (E120.1)	E218.6 Lab Filtered	Nitrate/Nitrite (SM4500NO3-E)	TDS (SM2540C)	Total Metals(E200.7 and E200.8)	Total Metals(E200.8) Gr, Mn, Fe	Turbidity (SM2130)		Number of Containers	COMMENTS
SC-100B-WDR-607	9-1-20	9:35 Wat	ЭГ		X	X		X		Х	х	N042064-01	3	ott=7.03
SC-700B-WDR-607	9-1-20	9:25 Wat	er X	X	x	x	х	x	х		x	-02	4	DH= 6.94
												TOTAL NUMBER OF CONTAINERS	7	

Signatures Date/Time	Shipping Details		Special Instructions:	
Approved by 9-1-20 0700	Method of Shipment: FedEx	ATTN:	SC-700B Total metals List:	
Sampled by 9-1-20 092			Cr,Al,Sb,As,Ba,B,Cu,Pb,Mn,Mo,Ni,Fe,Zn	
		Sample Custody		
Received by Margarill for Alizo @155		and	Report Copy to	
Relinquished by	Linh Name: ASSET Lisboratorios	Marlon Cartin	Mark Fesler	
Received by	Lab Phone: (702) 307-2659			20
				38

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.

		01410000								
Cooler Receive	ed/Opened On:	9/1/2020					orkorder:			
Rep sample Te	emp (Deg C):	1.8				IF	R Gun ID:	2		
Temp Blank:		✓ Yes	🗌 No							
Carrier name:		ASSET								
Last 4 digits of	Tracking No.:	NA			Packing	g Mate	rial Used:	None		
Cooling proces	SS:	✓ Ice	lce Pack	Dry Ice	Other		None			
			<u>Sa</u>	<u>mple Receip</u>	t Checklis	<u>t</u>				
1. Shipping cor	ntainer/cooler in go	ood condition	n?			Yes	$\checkmark$	No 🗌	Not Present	
2. Custody sea	als intact, signed, o	dated on shi	opping container/c	ooler?		Yes		No 🗌	Not Present	$\checkmark$
3. Custody sea	als intact on sampl	e bottles?				Yes		No 🗌	Not Present	$\checkmark$
4. Chain of cus	stody present?					Yes	$\checkmark$	No 🗌		
5. Sampler's na	ame present in CC	C?				Yes	$\checkmark$	No 🗌		
6. Chain of cus	stody signed when	relinquished	d and received?			Yes	$\checkmark$	No 🗌		
7. Chain of cus	stody agrees with s	sample label	s?			Yes		No 🗌		
8. Samples in p	proper container/b	ottle?				Yes		No 🗌		
9. Sample cont	tainers intact?					Yes	$\checkmark$	No 🗌		
10. Sufficient s	ample volume for	indicated tes	st?			Yes		No 🗌		
11. All samples	s received within h	olding time?				Yes	$\checkmark$	No 🗌		
12. Temperatu	re of rep sample o	r Temp Blar	nk within acceptabl	e limit?		Yes	$\checkmark$	No 🗌	NA	
13. Water - VC	A vials have zero	headspace?	?			Yes		No 🗌	NA	$\checkmark$
	acceptable upon					Yes		No 🗹	NA	
	e: pH > 12 for (CN									
15. Did the bot	tle labels indicate	correct pres	ervatives used?			Yes		No 🗌	NA	
16. Were there	Non-Conformanc Wa	e issues at l s Client noti	•			Yes Yes		No 🗌 No 🗌	NA NA	
			tered and then pre: ⊧lab preserved with				H2SO4.			

Checklist Completed By:

YRJ 9/2/2020

For:

MBC

Reviewed By:

Mac

WORK C	<b>DRDER Summar</b>	'Y		02-Sep-20			
Client ID: Project: Comments:	CH2HI01 PG&E Topock, D3184 SC-700B Total metals		QC Leve	I: Level IV			er: N042064 ed: 9/1/2020
Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage
N042064-001A	SC-100B-WDR-607	9/1/2020 9:35:00 AM	9/16/2020	Water	EPA 120.1	SPECIFIC CONDUCTANCE	
			9/16/2020		SM2540C	TOTAL FILTERABLE RESIDUE	
			9/16/2020			Total Dissolved Solids Prep	
			9/16/2020		SM 2130B	TURBIDITY	
N042064-001B			9/16/2020		EPA 218.6	Hexavalent Chromium by IC	WW
N042064-001C			9/16/2020			AQPREP TOTAL METALS: ICP, FLAA	WW
			9/16/2020		EPA 200.7	TOTAL METALS BY ICP	WW
			9/16/2020			AQPREP TOTAL METALS: ICP, FLAA	WW
			9/16/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW
			9/16/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW
N042064-001D							WW
N042064-002A	SC-700B-WDR-607	9/1/2020 9:25:00 AM	9/16/2020		SM4500-NH3D	AMMONIA-N BY ION SELECTIVE ELECTRODE	SUB
N042064-002B			9/16/2020		EPA 120.1	SPECIFIC CONDUCTANCE	
			9/16/2020		SM2540C	TOTAL FILTERABLE RESIDUE	
			9/16/2020			Total Dissolved Solids Prep	
			9/16/2020		SM 2130B	TURBIDITY	
			9/16/2020		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	
			9/16/2020		EPA 300.0	ANIONS BY ION CHROMATOGRAPHY	
N042064-002C			9/16/2020		EPA 218.6	Hexavalent Chromium by IC	WW
N042064-002D			9/16/2020		SM4500-NO3F	NITRATE/NITRITE-N BY CADMIUM REDUCTION	WW
N042064-002E			9/16/2020			AQPREP TOTAL METALS: ICP, FLAA	WW

WORK C	RDER Summar	У				02-Sep-20			
Client ID: Project: Comments:	CH2HI01 PG&E Topock, D3184 SC-700B Total metals		QC Level: Level IV		WorkOre Date Recei	der: N042064 ved: 9/1/2020			
Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld MS Sub Storage		
N042064-002E	SC-700B-WDR-607	9/1/2020 9:25:00 AM	9/16/2020	Water	EPA 200.7	TOTAL METALS BY ICP	WW		
			9/16/2020			AQPREP TOTAL METALS: ICP, FLAA	WW		
			9/16/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW		
			9/16/2020		EPA 200.8	TOTAL METALS BY ICPMS	WW		
N042064-002F							WW		
N042064-003A	FOLDER	9/16/2020	9/16/2020		Folder	Folder			
			9/16/2020		Folder	Level IV Report			
			9/16/2020		Folder	Folder			

3151-3153 W Post Rd., Las Vegas, NV 89118 www.atl-labs.com

TEL: 7023072659 FAX: 7023072691

# **CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

QC Level: Level IV

Subcontractor:					
BC Labs	TEL: (66	1) 327-4911	Field Sampler	r: SIGNED	
4100 Atlas Court	FAX: (66	1) 327-1918			
Bakersfield, CA 93308	Acct #:				03-Sep-20

					Requested Tests	
Sample ID	Matrix	Date Collected	Bottle Type	SM4500-NH3D		
N042064-002A / SC-700B-WDR-607	Water	9/1/2020 9:25:00 AM	32OZP	1		

#### General Comments: PLEASE EMAIL SAMPLE RECEIPT ACKNOWLEDGEMENT TO THE PM. ALWAYS CC: sonny.lorenzo@assetlaboratories.com

Please use PO#:N42064A 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.

[		Date/Time	GSO #: 550309434	Date/Time
Relinquished by:	YRJ	9/3/2020 1630	Received by:	
Relinquished by:			Received by:	

# List of Analysts

# **ASSET Laboratories Work Order: N042064**

NAME	TEST METHOD							
Claire Ignacio	EPA 200.8							
Lilia Ramit	EPA 120.1, SM 2540C, SM 2130B							
Quennie Manimtim	EPA 218.6							
Diane Jetajobe	EPA 200.7							
Julia Bundalian	EPA 300.0, SM 4500-NO3F							





Date of Report: 09/09/2020

Marlon B. Cartin

**ASSET Laboratories- Las Vegas** 3151-3153 W. Post Rd Las Vegas, NV 89118

**Client Project:** N042064 Level IV + labSpec7 **BCL Project:** 2025905 BCL Work Order: B391406 Invoice ID:

Enclosed are the results of analyses for samples received by the laboratory on 9/4/2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Vanessa Sandoval **Client Service Rep** 

Stuart Buttram **Technical Director** 

Certifications: CA ELAP #1186; NV #CA00014; OR ELAP #4032-001; AK UST101

100 3151 WWW	SET Laboratories 1-3153 W Post Rd., Las Vegas, J ad-labs.com 7023072659 FAX: 7		C	main-0	r-custol	DY RECORD	Page I of I
					QC Level: L	evel IV	
Subcontractor: BC Labs 4100 Atlas Court Bakersfield, CA 93	1308	FAX: (661)	327-4911 327-1918		Field Sampler: S	SIGNED	
Jakersheld, CA 9;		Acct #:				8	03-Sep-20
S	Sample ID	Matrix	Date Collected	Bottle Type	SM4500-NH3D	Requested Tests	
N042064-002A / S	SC-700B-WDR-607	Water	9/1/2020 9:25:00 AM	320ZP	1		
					СН	K BY DISTRIBU	
General Comments:	Please use PO#:N42064A Marlon at (702)-307-2659. P	Please email Invoice Please e-mail results t	EDGEMENT TO THE PM. AI ss and Account Receivable St to reports.lv@asseflaboratorie DD Requirement Labspec7 ed	talements to elvirat s.com by: Standar	y.lorenzo@assetlaborat	NS SUB O	
General Comments:	Please use PO#:N42064A Marlon at (702)-307-2659. P	Please email Invoice Please e-mail results t	es and Account Receivable St	tatements to elvira s.com by: Standar data.	ty.lorenzo@assetlaborat @assetlaboratories.com rd TAT.	NS SUB O	
General Comments: Relinquished by: _ Relinquished by: _	Please use PO#:N42064A Marlon at (702)-307-2659. P	Please email Invoici Please e-mail results I a by SM4500NH3D. E	es and Account Receivable St to reports Iv@asseflaboratorie OD Requirement Labspec7 ec Date/Time 20 1630 Rece	talements to elvirat s.com by: Standar	ty.lorenzo@assetlaborat @assetlaboratories.com rd TAT.	tories.com	

BC

Laboratories, Inc. Environmental Testing Laboratory Since 1949



#### Chain of Custody and Cooler Receipt Form for 2025905 Page 2 of 2

BC LABORATORIES INC. Submission #: $2 - 25905$			JUOLER	RECEIPT	FORM			Pag	e	Of
SHIPPING INFORM		d Deliver	χ 🗆 >	Ice Ch	HIPPING ssØXJ er □ (Spe	None 🗆	Box 🗆		FREE LIC YES D I W /	0
Refrigerant: Ice 🕅 Blue Ice 🗆	None		Other 🗆	Com	nents:				Contraction of the local sector	
	Containe	N 10 1 1	None	Com						
All samples received? Yes No D A	l samples (	containers	intact?		0	Deserie	tion(s) mate	+ 0002		
COC Received Emis	sivity:	15_		PE		neter ID:	274_	Date/Tin	ne <u>94-74</u> Init]KJ	
CAMPLE CONTAINING						NUMBERS				
SAMPLE CONTAINERS	1,	2	3	4	5	6	7	8	9	10
QT PE UNPRES	Km							1	-polle base	T
4oz/8oz/16oz PE UNPRES	ų,									
2oz Cr*										
QT INORGANIC CHEMICAL METALS										
INORGANIC CHEMICAL METALS 402 / 802 / 1602										
PT CYANIDE					1					
PT NITROGEN FORMS	A									
PT TOTAL SULFIDE										
202. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT CHEMICAL OXYGEN DEMAND										
PLA PHENOLICS								-		
0ml VOA VIAL TRAVEL BLANK				MACTINE STOLEN						
0ml VOA VIAL										
YT EPA 1664									Anna 11 - 12 - 1	
TODOR			.							
ADIOLOGICAL										
ACTERIOLOGICAL										
0 ml VOA VIAL- 504										
T EPA 508/608/8080										
T EPA 515.1/8150										
T EPA 525										
T EPA 525 TRAVEL BLANK										
Int RPA 547										
0ml BPA 531.1										
mi EPA 531.3										
T EPA 549 T EPA 8015M										
F EPA 8270										
z/16oz/32oz AMBER										
2/160z/320z JAR										
OIL SLEEVE										
BVIAL										
ASTIC BAG										
DLAR BAG										
RROUS IRON										
CORE										
IART KIT			-							
MMA CANISTER										
			1							

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report apply to the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation. 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

#### Reported: 09/09/2020 15:45 Project: Level IV + labSpec7 Project Number: N042064 Project Manager: Marlon B. Cartin

# Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Informati	on		
2025905-01	COC Number:		Receive Date:	09/04/2020 10:15
	Project Number:		Sampling Date:	09/01/2020 09:25
	Sampling Location:		Sample Depth:	
	Sampling Point: Sampled By:	N042064-002A / SC-700B-WDR-607 	Lab Matrix: Sample Type:	Water Water

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ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118 Reported:09/09/202015:45Project:Level IV + labSpec7Project Number:N042064Project ManageriMadage D. Castin

Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

BCL Sample ID:	2025905-01	Client Sample	e Name:	N042064-002	A / SC-700B-WDR-607, 9	)/1/2020	9:25:00AM		
Constituent		Result	Units	RL	Method	MB Bias	Lab Quals	Run #	
Ammonia as N (Distilled	1)	ND	mg/L	0.20	SM-4500-NH3G	ND		1	

			Run					
Run #	Method	Prep Date	Date/Time	Analyst	Instrument	Dilution	Batch ID	Prep Method
1	SM-4500-NH3G	09/05/20 13:00	09/08/20 15:39	JMH2	SC-2	1.026	B086612	SM 4500-NH3G



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

Reported: 09/09/2020 15:45 Project: Level IV + labSpec7 Project Number: N042064 Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

# **Quality Control Report - Method Blank Analysis**

Constituent	QC Sample ID	MB Result	Units	RL	Lab Quals
QC Batch ID: B086612					
Ammonia as N (Distilled)	B086612-BLK1	ND	mg/L	0.20	

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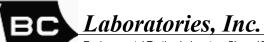
ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118

Reported: 09/09/2020 15:45 Project: Level IV + labSpec7 Project Number: N042064 Project Manager: Marlon B. Cartin

# Water Analysis (General Chemistry)

# **Quality Control Report - Laboratory Control Sample**

							Control Limits				
Constituent	QC Sample ID	Туре	Result	Spike Level	Units	Percent Recovery	RPD	Percent Recovery	RPD	Lab Quals	
QC Batch ID: B086612											
Ammonia as N (Distilled)	B086612-BS1	LCS	2.0578	2.0000	mg/L	103		85 - 115			



ASSET Laboratories- Las Vegas 3151-3153 W. Post Rd Las Vegas, NV 89118 Reported:09/09/2020 15:45Project:Level IV + labSpec7Project Number:N042064Project Manager:Marlon B. Cartin

# Water Analysis (General Chemistry)

# **Quality Control Report - Precision & Accuracy**

									<u>Cont</u>	rol Limits	
		Source	Source		Spike			Percent		Percent	Lab
Constituent	Туре	Sample ID	Result	Result	Added	Units	RPD	Recovery	RPD	Recovery	Quals
	1				40004 0004	100 700		007 00/04	10000	00.05	
QC Batch ID: B086612	Use	d client samp	DIE: Y - DES	cription: NU	42064-002A	/ SC-700E	3-WDR	-607, 09/01	/2020	09:25	
Ammonia as N (Distilled)	DUP	2025905-01	0.078564	ND		mg/L			20		A02
	MS	2025905-01	0.078564	2.4574	2.2770	mg/L		104		80 - 120	
	MSD	2025905-01	0.078564	2.3186	2.2770	mg/L	5.8	98.4	20	80 - 120	

# **Analytical Bench Log Book**

# WDR pH Results

If the on site laboratory pH result for T-700 tank is less than pH 6.6 or greater than pH 8.3 the Injection well should be shut down until the problem is fixed.

Sample Name	Date of sampling	Time of sampling	Date of analysis	Time of analysis	pH Meter #1, #2, or #3 etc. See cover Sheet for Serial Number	Date pH meter Calibrated	Time pH meter Calibrated	Slope of the Curve	Analyst Name (for the pH result)	pH Result
1 SC-100B -604	7-7-20	1305	7-7-20	1308	HQ440d	7-7-20	0000	- 54.84	Ryan Phelps	7.64
lotes:										
2 SC-700B - 604	7-7-20	1248	7-7-20	1300	HQ440d	7-7-20	0000	-56.84	Ryan Phelps	7.38
Notes:										
3 50-701-604	7-7-20	1240	7.7.20	12.44	મહત્તન૦૧	7-7-20	0000	-56.84	Ryan Phelps	8.15
Notes:										
4 5C-100B-605	8-4-20	0820	8-4-20	0827	HQ 440d	8-4-20	0000	-54.94	Ryan Phelps	7.45
Notes:										
5 SC-700B-605	8-4-20	0830	8-4-20	0834	HQ440d	8-4-20	0000	- 54.94	Man Philys	7.14
Notes:										
6										
Notes:										
7										
Notes:										

# **Analytical Bench Log Book**

# WDR pH Results

If the on site laboratory pH result for T-700 tank is less than pH 6.6 or greater than pH 8.3 the Injection well should be shut down until the problem is fixed.

Sample Name	Date of sampling	Time of sampling	Date of analysis	Time of analysis	pH Meter #1, #2, or #3 etc. See cover Sheet for Serial Number	Date pH meter Calibrated	Time pH meter Calibrated	Slope of the Curve	Analyst Name (for the pH result)	pH Result
1 700 B - 407	9-1-20	9:25	9-1-20	9:31	HQ440d	9-1-20	0000	-56.44	Ryan Phelps	6.94
Notes:										
2 SC-100B - 407	9-1-20	9:35	9-1-20	9:39	HQ440d	9-1-20	0000	- 56.44	hyan Phelps	7.03
Notes:										
3										
Notes:										
4										
Notes:										
5										
Notes:									Ĩ	•
6										
Notes:										
7										
Notes:										

Reminder: WDR Required pH Range for the Effluent (SC-700B) is: 6.5 - 8.4

1.2