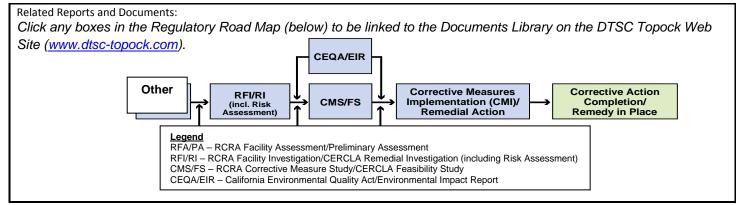
Topock Project I	Executive Abstract
Document Title:	Date of Document: April 15, 2010
Topock IM No. 3 WDR Combined First Quarter 2010 Monitoring Report	Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other)
Submitting Agency/Authored by: RWQCB	PG&E Document ID: PGE20100415A
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Priority Status: HIGH MED LOW Is this time critical? Yes No Type of Document: Draft Report Letter Memo	Action Required: Information Only Review & Comment Return to: By Date: Other / Explain:
What does this information pertain to? Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA) RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment) Corrective Measures Study (CMS)/Feasibility Study (FS) Corrective Measures Implementation (CMI)/Remedial Action California Environmental Quality Act (CEQA)/Environmental Impact Report (EIR) Interim Measures Other / Explain:	Is this a Regulatory Requirement? ☑ Yes ☐ No If no, why is the document needed?
What is the consequence of NOT doing this item? What is the consequence of DOING this item?	Other Justification/s: Permit Other / Explain:
Submittal of this report is a compliance requirement of RWQCB Waste Discharge Requirements/Order No. R7-2006-0060	
CW-3M/D, and CW-4M/D will be submitted under separate cov	rells OW-1S/M/D, OW-2S/M/D, OW-5S/M/D, CW-1M/D, CW-2M/D,
Written by: PG&E Recommendations:	
This report is for your information only. How is this information related to the Final Remedy or Regulatory Requ	uirements:
The IM No. 3 WDR First Quarter 2010 Monitoring Report is related RWQCB Waste Discharge Requirements/Order No. R7-2006-0060. Other requirements of this information?	
None.	



Version 9



Curt Russell

Topock Site Manager GT&D Remediation

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760.326.5582 Fax: 760.326.5542 Email: gcr4@pge.com

April 15, 2010

Robert Perdue
Executive Officer
California Regional Water Quality Control Board
Colorado River Basin Region
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260

Subject: First Quarter 2010 Monitoring Report - Board Order No. R7-2006-0060

PG&E Topock Compressor Station, Needles, California Interim Measure No. 3 Groundwater Treatment System

(Document ID: PGE20100415A)

Dear Mr. Perdue:

Enclosed is the First Quarter 2010 Monitoring Report for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station, Interim Measure (IM) No. 3 Groundwater Treatment System.

This report is being submitted in compliance with the Waste Discharge Requirements (WDRs) issued September 20, 2006 by the California Regional Water Quality Control Board, Colorado River Basin Region (Water Board) under Order No. R7-2006-0060 and in compliance with the revised Monitoring and Reporting Program for Order No. R7-2006-0060, issued August 28, 2008. The WDRs apply to IM No. 3 Treatment System discharge by subsurface injection.

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 Site Manager

Enclosures:

First Quarter 2010 Monitoring Report for the IM No. 3 Groundwater Treatment System

cc: Cliff Raley, Water Board

Tom Vandenberg, State Water Resources Control Board

Aaron Yue, DTSC

First Quarter 2010 Monitoring Report

Interim Measure No. 3 Groundwater Treatment System

Document ID: PGE20100415A

Waste Discharge Requirements Board Order No. R7-2006-0060 PG&E Topock Compressor Station Needles, California

Prepared for

California Regional Water Quality Control Board Colorado River Basin Region

on behalf of

Pacific Gas and Electric Company

April 15, 2010

CH2MHILL 155 Grand Avenue, Suite 1000 Oakland, CA 94612

First Quarter 2010 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System Waste Discharge Requirements Order No. R7-2006-0060 PG&E Topock Compressor Station Needles, California

Prepared for Pacific Gas and Electric Company

April 15, 2010

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

John Porcella, P.E. Project Engineer

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Appendix

A First Quarter 2010 Laboratory Analytical Reports

Acronyms and Abbreviations

IM Interim Measure

IW injection well

MRP Monitoring and Reporting Program

PG&E Pacific Gas and Electric Company

RO reverse osmosis

Truesdail Laboratories, Inc.

Water Board California Regional Water Quality Control Board, Colorado River Basin

Region

WDR Waste Discharge Requirements

BAO\101050001 VI

1.0 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 and management of extracted groundwater. The groundwater extraction, treatment, and injection systems collectively are referred to as IM No. 3. Figure 1 provides a map of the project area. All figures are located at the end of this report.

California Regional Water Quality Control Board, Colorado River Basin Region (Water Board) Order No. R7-2006-0060 authorizes PG&E to inject treated groundwater into injection wells located on San Bernardino County Assessor's Parcel No. 650-151-06. Order No. R7-2006-0060 was issued September 20, 2006 and is the successor to Order No. R7-2004-0103. The revised Monitoring and Reporting Program (MRP) under the Order, issued August 28, 2008, requires quarterly monitoring reports 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 No. 3 groundwater treatment system during the First Quarter 2010. 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.

2.0 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, TP-PR-10-10-08, and TP-PR-10-10-06, provided at the end of this report.

3.0 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, permitted by Order No. R7-2006-0060 (successor to Order No. R7-2004-0103), 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 First Quarter 2010, extraction wells TW-3D and PE-1 operated at a target pump rate of 135 gallons per minute, excluding periods of planned and unplanned downtime. Extraction wells TW-2D and TW-2S were not operated during First Quarter 2010. The operational run time for the IM groundwater extraction system (combined or individual pumping), by month, was approximately:

- 96.9 percent during January 2010
- 95.9 percent during February 2010
- 95.3 percent during March 2010

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 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 First Quarter 2010 included no extended shutdowns. IM No. 3 experienced a storm event on January 21, 2010 that produced surface runoff at one of the three storm water sampling locations identified in the IM No. 3 Storm Water Pollution Prevention Plan. Operators at IM No. 3 collected storm water runoff at storm water sampling location SW-2 during the first hour of the storm event runoff. The laboratory analytical results are presented in Appendix A.

4.0 Groundwater Treatment System Flow Rates

The First Quarter 2010 treatment system monthly average flow rates (influent, effluent, and reverse osmosis 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-RP-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-RP-10-10-11). The reverse osmosis concentrate flow rate was measured by a flow meter at the piping carrying water from reverse osmosis concentrate tank T-701 to the truck load-out station (Figure TP-RP-10-10-08).

The IM No. 3 facility treated approximately 16,671,253 gallons of extracted groundwater during the First Quarter 2010. The IM No. 3 facility also treated approximately 5,640 gallons of water generated from the groundwater monitoring program, 66,500 gallons of injection well backwashing/re-development water, and 1,300 gallons of storm water that collected in the plant containment.

Two containers of solids (sludge) were transported offsite from the IM No. 3 facility during First Quarter 2010 (January 15, 2010 and February 18, 2010).

Periods of planned and unplanned extraction system downtime (that together resulted in approximately 4.0 percent of downtime during First Quarter 2010) are summarized below. The times shown are in Pacific Standard Time to be consistent with other data collected (e.g., water level data) at the site.

4.1 January 2010

The operational run time for the IM No. 3 groundwater extraction system (combined or individual pumping) was 96.9 percent during the January 2010 reporting period.

The IM No. 3 facility treated approximately 5,775,157 gallons of extracted groundwater during January 2010. The IM No. 3 facility also treated approximately 600 gallons of water generated from the groundwater monitoring program and 11,700 gallons of injection well backwashing/re-development water. No containers of solids from the IM No. 3 facility were transported offsite during January 2010.

Injection wells IW-02 and IW-03 were operated during January 2010. The IM No. 3 facility injected approximately 5,637,472 gallons of treatment system effluent during January 2010.

The periods of planned and unplanned extraction system downtime (that together resulted in approximately 3.1 percent of downtime during January 2010) are summarized below.

• **January 1, 2010 (planned):** The extraction well system was offline from 12:50 p.m. to 1:02 p.m. for microfilter maintenance. Extraction system downtime was 12 minutes.

- **January 5, 2010 (planned):** The extraction well system was offline from 7:24 p.m. to 10:48 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 24 minutes.
- **January 10, 2010 (planned):** The extraction well system was offline from 6:32 a.m. to 7:40 a.m. for reverse osmosis system maintenance. Extraction system downtime was 1 hour and 8 minutes.
- **January 12, 2010 (planned):** The extraction well system was offline from 12:48 p.m. to 12:52 p.m. while the plant was run in recirculation mode. Extraction system downtime was 4 minutes.
- **January 13, 2010 (planned):** The extraction well system was offline from 12:30 p.m. to 12:32 p.m. and 1:18 p.m. to 1:20 p.m. for critical alarm testing. Extraction system downtime was 4 minutes.
- **January 13, 2010 (planned):** The extraction well system was offline from 5:50 p.m. to 6:48 p.m. for microfilter maintenance. Extraction system downtime was 58 minutes.
- **January 14, 2010 (planned):** The extraction well system was offline from 12:30 p.m. to 2:38 p.m. for microfilter maintenance. Extraction system downtime was 2 hours and 8 minutes.
- **January 15, 2010 (planned):** The extraction well system was offline from 11:46 a.m. to 12:40 p.m. for microfilter maintenance. Extraction system downtime was 54 minutes.
- **January 19, 2010 (planned):** The extraction well system was offline from 3:22 p.m. to 4:08 p.m. to reduce water level in T-100. Extraction system downtime was 46 minutes.
- **January 19, 2010 (unplanned):** The extraction well system was offline from 9:12 p.m. to 9:20 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 8 minutes.
- **January 20, 2010 (planned):** The extraction well system was offline from 3:00 p.m. to 4:06 p.m. to clean out microfilter strainer filter. Extraction system downtime was 1 hour and 6 minutes.
- **January 21, 2010 (unplanned):** The extraction well system was offline from 4:44 p.m. to 8:30 p.m. due to failure of chemical feed pumps. Extraction system downtime was 3 hours and 46 minutes.
- January 23, 2010 (planned): The extraction well system was offline from 10:48 a.m. to 2:38 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 50 minutes.
- **January 25, 2010 (planned):** The extraction well system was offline from 1:38 p.m. to 2:38 p.m. for microfilter maintenance. Extraction system downtime was 1 hour.
- **January 28, 2010 (planned):** The extraction well system was offline from 2:06 p.m. to 3:56 p.m. for microfilter maintenance. Extraction system downtime was 1 hour and 50 minutes.

• **January 29, 2010 (planned):** The extraction well system was offline from 7:06 p.m. to 8:31 p.m. for microfilter maintenance. Extraction system downtime was 1 hour and 25 minutes.

4.2 February 2010

The operational run time for the IM No. 3 groundwater extraction system (combined or individual pumping) was 95.9 percent during the February 2010 reporting period.

The IM No. 3 facility treated approximately 5,136,230 gallons of extracted groundwater during February 2010. The IM No. 3 facility also treated approximately 340 gallons of water generated from the groundwater monitoring program and 47,000 gallons of injection well backwashing/re-development water. One container of solids from the IM No. 3 facility was transported offsite during February 2010.

Injection wells IW-02 and IW-03 were operated during February 2010. The IM No. 3 facility injected approximately 5,031,840 gallons of treatment system effluent during February 2010.

The periods of planned and unplanned extraction system downtime (that together resulted in approximately 4.1 percent of downtime during February 2010) are summarized below.

- **February 1, 2010 (planned):** The extraction well system was offline from 5:14 p.m. to 6:10 p.m. for microfilter maintenance. Extraction system downtime was 56 minutes.
- **February 4, 2010 (planned):** The extraction well system was offline from 12:26 p.m. to 1:10 p.m. for microfilter maintenance. Extraction system downtime was 44 minutes.
- **February 5, 2010 (planned):** The extraction well system was offline from 2:22 p.m. to 3:02 p.m. for microfilter maintenance. Extraction system downtime was 40 minutes.
- **February 9, 2010 (planned):** The extraction well system was offline from 8:08 a.m. to 3:30 p.m. while the plant was shut down for injection line repair and cleaning of chemical loop. Extraction system downtime was 7 hours and 22 minutes.
- **February 10, 2010 (planned):** The extraction well system was offline from 8:18 a.m. to 8:20 a.m., 8:44 a.m. to 8:46 a.m., 8:52 a.m. to 9:10 a.m., 9:12 a.m. to 9:16 a.m., and 10:32 a.m. to 10:34 a.m. for testing of the pipeline leak detection alarm system. Extraction system downtime 28 minutes.
- **February 11, 2010 (planned):** The extraction well system was offline from 12:16 p.m. to 3:50 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 34 minutes.
- **February 15, 2010 (planned):** The extraction well system was offline from 1:38 a.m. to 2:18 a.m., and 10:22 a.m. to 3:44 p.m. for microfilter maintenance. Extraction system downtime was 6 hours and 2 minutes.
- **February 17, 2010 (planned):** The extraction well system was offline from 12:26 p.m. to 1:58 p.m. for microfilter maintenance. Extraction system downtime was 1 hour and 32 minutes.

- **February 18, 2010 (unplanned):** The extraction well system was offline from 12:14 p.m. to 12:42 p.m., 12:50 p.m. to 12:56 p.m., and 8:34 p.m. to 8:42 p.m., due to failure of level sensor in T-100. Extraction system downtime was 42 minutes.
- **February 18, 2010 (planned):** The extraction well system was offline from 2:10 p.m. to 2:26 p.m. for microfilter maintenance. Extraction system downtime was 16 minutes.
- **February 22, 2010 (unplanned):** The extraction well system was offline from 8:34 a.m. to 10:20 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 1 hour and 46 minutes.
- **February 22, 2010 (planned):** The extraction well system was offline from 2:44 p.m. to 6:14 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 30 minutes.

4.3 March 2010

The operational run time for the IM No. 3 groundwater extraction system (combined or individual pumping) was 95.3 percent during the March 2010 reporting period.

The IM No. 3 facility treated approximately 5,759,866 gallons of extracted groundwater during March 2010. The IM No. 3 facility also treated approximately 4,700 gallons of water generated from the groundwater monitoring program, 7,800 gallons of injection well backwashing/re-development water, and 1,300 gallons of storm water that collected in the plant containment. No containers of solids from the IM No. 3 facility were transported offsite during March 2010.

Injection wells IW-02 and IW-03 were operated during Mach 2010. The IM No. 3 facility injected approximately 5,625,524 gallons of treatment system effluent during March 2010.

The periods of planned and unplanned extraction system downtime (that together resulted in approximately 4.7 percent of downtime during March 2010) are summarized below.

- March 1, 2010 (unplanned): The extraction well system was offline from 10:04 a.m. to 12:26 p.m. due to air compressor failure. Extraction system downtime was 2 hours and 22 minutes.
- March 2, 2010 (unplanned): The extraction well system was offline from 12:40 a.m. to 1:42 a.m., and 2:10 a.m. to 6:32 a.m. due to microfilter failure. Extraction system downtime was 5 hours and 24 minutes.
- March 5, 2010 (planned): The extraction well system was offline from 11:16 a.m. to 1:32 p.m., and 5:18 p.m. to 6:38 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 36 minutes.
- March 10, 2010 (planned): The extraction well system was offline from 10:42 a.m. to 10:44 a.m., 1:08 p.m. to 1:12 p.m., and 1:30 p.m. to 1:34 p.m. for testing of the pipeline leak detection alarm system. Extraction system downtime was 10 minutes.

- March 12, 2010 (unplanned): The extraction well system was offline from 9:40 p.m. to 9:42 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 2 minutes.
- March 13, 2010 (planned): The extraction well system was offline from 6:26 p.m. to 9:24 p.m. for microfilter maintenance. Extraction system downtime was 2 hours and 58 minutes.
- March 17, 2010 (planned): The extraction well system was offline from 9:30 p.m. to 10:48 p.m. for a shutdown to generator power as a training exercise for new employees. Extraction system downtime was 1 hour and 18 minutes.
- March 18, 2010 (unplanned): The extraction well system was offline from 1:12 a.m. to 1:22 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 10 minutes.
- March 24, 2010 (planned): The extraction well system was offline from 9:58 a.m. to 12:28 p.m. for loop reactor maintenance. Extraction system downtime was 2 hours and 30 minutes.
- March 30, 2010 (planned): The extraction well system was offline from 7:36 a.m. to 5:50 p.m., and 6:20 p.m. to 7:16 p.m. for planned monthly maintenance. Extraction system downtime was 11 hours and 10 minutes.
- March 31, 2010 (planned): The extraction well system was offline from 5:30 p.m. to 10:46 p.m. for microfilter maintenance. Extraction system downtime was 5 hours and 16 minutes.

5.0 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 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 Truesdail via courier under chain-of-custody documentation. The laboratories confirmed the samples were received in chilled condition upon arrival.

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 First Quarter 2010, analysis of pH was conducted by field method pursuant to the 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, reverse osmosis concentrate, and sludge sampling frequency was conducted in accordance with the revised MRP, issued August 28, 2008.

Groundwater quality is being monitored in observation and compliance wells according to Order No. R7-2006-0060, the procedures and schedules approved in the *Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area* submitted to the Water Board on June 17, 2005, and the revised MRP under Order No. R7-2006-0060 issued August 28, 2008. 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, CW-3M/D, and CW-4M/D) are reported in a separate document, in conjunction with groundwater level maps of the same monitoring wells.

6.0 Analytical Results

Laboratory reports for samples collected in First Quarter 2010 were prepared by certified analytical laboratories, and are presented in Appendix A.

Samples were collected in accordance with the WDR 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 reverse osmosis 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

7.0 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.

8.0 Certification

On August 12, 2005, PG&E submitted a signature delegation letter to the Water Board, delegating PG&E signature authority to Mr. Curt Russell and Ms. Yvonne Meeks for correspondence regarding Board Order No. R7-2004-0103. Order No. R7-2006-0060 is the successor to Order No. R7-2004-0103; an additional signature authority delegation is not required, as confirmed in an email from Jose Cortez dated December 12, 2006.

<u>Certification Statement:</u>

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:	belunn
Name:	Curt Russell
Company: _	Pacific Gas and Electric Company
Title:	Topock Site Manager
Date:	April 15, 2010



TABLE 1
Sampling Station Descriptions
First Quarter 2010 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Sample Station	Sample ID ^a	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 TP-RP-10-10-08).
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.

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

TABLE 2
Flow Monitoring Results
First Quarter 2010 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Parameter	System Influent ^{a,b} (gpm)	System Effluent ^{b,c} (gpm)	Reverse Osmosis Concentrate ^b (gpm)
January 2010 Average Monthly Flowrate	129.4	126.3	2.4
February 2010 Average Monthly Flowrate	127.4	124.8	2.7
March 2010 Average Monthly Flowrate	129.0	126.0	2.5

Notes:

gpm: gallons per minute

- ^a Extraction wells TW-3D and PE-1 were operated during the First Quarter 2010. Extraction wells TW-2D and TW-2S were not operated during the First Quarter 2010.
- The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during the First Quarter 2010 is approximately 0.32 percent.
- ^c Effluent was discharged into injection wells IW-2 and IW-3 during the First Quarter 2010. Flow to injection well IW-03 was not recorded by flow meter FT1203 on March 26, 2010 through March 31, 2010 so, the flow to the injection wells during this period was captured by the combined plant effluent flow meter, FT700.

BAO\101050001 TABLES-2

TABLE 3
Sample Collection Dates
First Quarter 2010 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Parameter	Sample Collection Dates	Results
Influent ^a	January 6, 2010	See Table 4
	February 3, 2010	
	March 3, 2010	
Effluent ^b	January 6, 2010	See Table 5
	January 13, 2010	
	January 19, 2010	
	January 27, 2010	
	February 3, 2010	
	February 10, 2010	
	February 18, 2010	
	February 24, 2010	
	March 3, 2010	
	March 10, 2010	
	March 16, 2010	
	March 24, 2010	
	March 31, 2010	
Reverse Osmosis Concentrate ^c	March 3, 2010	See Table 6
Sludge ^d	January 15, 2010	See Table 7
	February 18, 2010	

Notes:

BAO\101050001 TABLES-3

^a Influent sampling is required monthly.

^b Effluent sampling is required weekly.

^c Reverse Osmosis Concentrate sampling is required quarterly.

^d Sludge samples analysis is required quarterly by composite.

TABLE 4 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs) Influent Monitoring Results ^a First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Required Sampling I	Frequency										Мо	nthly												
	Analytes Units ^b	TDS mg/L	Turbidity NTU	Specific Conductance µmhos/cm	Field ^c pH pH units	Chromium µg/L	Hexavalent Chromium µg/L	Aluminium μg/L	Ammonia (as N) mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Boron mg/L	Copper µg/L	Fluorid mg/L	le Lead µg/L	Manganese μg/L	Molybdenum µg/L	Nickel µg/L	Nitrate (as N) mg/L	Nitrite (as N) mg/L	Sulfate mg/L	lron μg/L	Zinc µg/L
Sample ID D	MDL Date	7.00	0.0070	0.0220		0.0750	0.998	2.36	0.0050	0.495	0.140	0.210	0.0020	0.520	0.0600	0.0750	0.0600	0.725	0.205	0.0950	0.00020	1.00	3.00	1.50
SC-100B-WDR-238	1/6/2010	5690	ND (0.100)	7720	7.2	1050	1090	ND (50.0)	ND (0.500)	ND (10.0)	3.81	25.7	1.07	ND (5.00)	2.83	ND (10.0)	ND (10.0)	24.6	ND (10.0)	3.59 I	ND (0.0050) 573 N	1D (20.0)	ND (10.0)
RL		250	0.100	2.00		1.00	10.5	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.0050	12.5	20.0	10.0
SC-100B-WDR-242	2/3/2010	5430	ND (0.100)	7690	7.2	1020	1200	ND (50.0)	ND (0.500)	ND (10.0)	3.58	24.2	1.03	ND (5.00)	2.48	ND (10.0)	ND (10.0)	24.4	ND (10.0)	3.38	ND (0.500)	571 N	ND (20.0)	13.1
RL		250	0.100	2.00		1.00	10.5	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.500	12.5	20.0	10.0
SC-100B-WDR-246	3/3/2010	4840	ND (0.100)	7950	7.4	1070	1180	ND (50.0)	ND (0.500)	ND (10.0)	3.70	25.0	1.06	ND (5.00)	2.33	ND (10.0)	ND (10.0)	25.1	ND (10.0)	3.44 I	ND (0.0050) 581 N	۱D (20.0)	ND (10.0)
RL		250	0.100	2.00		1.00	21.0	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.0050	12.5	20.0	10.0

NOTES:

(---) = not required by the WDR 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

μg/L = micrograms per liter

µmhos/cm = micromhos per centimeter

^a 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).

b Units reported in this table are those units required in the WDRs.

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
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Effluent Monitoring Results ^a
First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

WDRs Effluent	Ave. Monthly	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 ^b	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
Required Sampli	ng Frequency			Weekly	/											Monthly								
	Analytes Units ^c	TDS	Turbidity	Specific Conductance	Field ^e pH	Chromium	Hexavalent Chromium	Aluminium	Ammonia (as N)	Antimony	Arsenic	Barium	Boron	Copper	Fluoride	Lead N	•	Molybdenum	Nickel	Nitrate (as N)		Sulfate	Iron	Zinc
		mg/L	NTU	µmhos/cm	pH units	μg/L	μg/L	μg/L	mg/L	μg/L	μg/L	μg/L	mg/L	μg/L	mg/L	μg/L	μg/L	μg/L	μg/L	mg/L	mg/L	mg/L	μg/L	μg/L
Communication	MDLd	0.700	0.0070	0.0220		0.0750	0.0200	2.36	0.0050	0.495	0.140	0.210	0.0020	0.520	0.0600	0.0750	0.0600	0.725	0.205	0.0950	0.00020	1.00	3.00	1.50
Sample ID	Date																							
SC-700B-WDR-23	8 1/6/2010	4790	0.178	7200	6.90	1.31	ND (0.200)	ND (50.0)	ND (0.500)	ND (10.0)	ND (1.00)	16.7	1.03	ND (5.00)	2.38	ND (10.0)	42.3	18.6	ND (10.0)	3.09	ND (0.0050)	509	20.0	ND (10.0)
RL		250	0.100	2.00		1.00	0.200	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.0050	12.5	20.0	10.0
SC-700B-WDR-23	9 1/13/2010	4310	0.170	7290	6.80	1.37	ND (0.200)																	
RL		250	0.100	2.00		1.00	0.200																	
SC-700B-WDR-24	0 1/19/2010	4140	0.100 R	7070	7.00	ND (1.00)	ND (0.200)																	
RL		250	0.100	2.00		1.00	0.200																	
SC-700B-WDR-24	1 1/27/2010	4310	0.102	7250	7.00	ND (1.00)	ND (0.200)																	
RL		250	0.100	2.00		1.00	0.200																	
SC-700B-WDR-24	2 2/3/2010	4510	ND (0.100)	7210	6.90	ND (1.00)	ND (0.200)	ND (50.0)	ND (0.500)	ND (10.0)	ND (1.00)	14.3	0.987	ND (5.00)	2.23	ND (10.0)	35.9	17.4	ND (10.0)	3.14	ND (0.500)	524	ND (20.0) ND (10.0)
RL		250	0.100	2.00		1.00	0.200	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.500	12.5	20.0	10.0
SC-700B-WDR-24	3 2/10/2010	4300	ND (0.100)	7340	6.90	ND (1.00)	ND (0.200)																	
RL		250	0.100	2.00		1.00	0.200																	
SC-700B-WDR-24	4 2/18/2010	4260	ND (0.100)	7210	6.90	ND (1.00)	ND (1.05)																	
RL		250	0.100	2.00		1.00	1.05																	
SC-700B-WDR-24	5 2/24/2010	4470	ND (0.100)	7030	6.90	ND (1.00)	ND (0.200)																	
RL		250	0.100	2.00		1.00	0.200																	
SC-700B-WDR-24	6 3/3/2010	4230	ND (0.100)	7170	7.10	ND (1.00)	ND (1.05)	ND (50.0)	ND (0.500)	ND (10.0)	ND (1.00)	16.6	1.02	ND (5.00)	2.06	ND (10.0)	55.9	17.2	ND (10.0)	3.08	ND (0.0050)	510	ND (20.0) ND (10.0)
RL		250	0.100	2.00		1.00	1.05	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.0050	12.5	20.0	10.0
SC-700B-WDR-24	7 3/10/2010	4130	ND (0.100)	7140	6.90	ND (1.00)	0.210																	
RL		250	0.100	2.00		1.00	0.200																	
SC-700B-WDR-24	8 3/16/2010	4170	0.134	7210	6.90	ND (1.00)	0.440																	
RL		250	0.100	2.00		1.00	0.200																	
SC-700B-WDR-24	9 3/24/2010	4060	ND (0.100)	7160	6.90	ND (1.00)	0.470																	
RL		250	0.100	2.00		1.00	0.200																	
SC-700B-WDR-25	0 3/31/2010	4130	ND (0.100)	7290	7.00	ND (1.00)	ND (0.200)																	
RL		25.0	0.100	2.00		1.00	0.200																	

TABLE 5

Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)

Effluent Monitoring Results a

First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

NOTES:

(---) = not required by the WDR 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

NTU = nephelometric turbidity units RL = project reporting limit

µg/L = micrograms per liter

µmhos/cm = micromhos per centimeter

ND = parameter not detected at the listed value

- ^a 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).
- b In addition to the listed effluent limits, the WDRs state that the effluent shall not contain heavy metals, chemicals, pesticides or other constituents in concentrations toxic to human health.
- ^c Units reported in this table are those units required in the WDRs.
- d 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.
- e 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 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs) Reverse Osmosis Concentrate Monitoring Results ^a

First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Required Sampling Frequency	,									(Quarterly											
Analytes Units b	TDS mg/L	Specific Conductance µmhos/cm	Field ^c pH pH units	Chromium mg/L	Hexavalent Chromium mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Cobalt mg/L	Copper mg/L	Fluoride mg/L	Lead mg/L	Molybdenum mg/L	Mercury mg/L	Nickel mg/L	Selenium mg/L	Silver mg/L	Thallium mg/L	Vanadium mg/L	Zinc mg/L
Sample ID Date	35.0	0.0220		0.000075	0.00020	0.00050	0.00014	0.00021	0.00030	0.000060	•	0.00052	0.0600	0.00050	-	0.00013	0.00021	0.00025	0.00038	0.000085	0.000060	0.0090
SC-701-WDR-246 3/3/2010	32800	45100	7.4	0.00263	ND (0.0021)	ND (0.0100)	ND (0.0010)	0.147	ND (0.0020)	ND (0.0030)	0.00552	0.00571	17.6	ND (0.010	00) 0.170	ND (0.0010)	0.0312	0.0255	ND (0.0050)) ND (0.0010)) ND (0.0050)	ND (0.0100
RL	1250	2.00		0.0010	0.0021	0.0100	0.0010	0.0100	0.0020	0.0030	0.0050	0.0050	0.500	0.0100	0.0100	0.0010	0.0100	0.0100	0.0050	0.0010	0.0050	0.0100

NOTES:

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

J = concentration or reporting limits estimated by laboratory or validation

MDL = method detection limit

mg/L = milligrams per liter

ND = parameter not detected at the listed value

RL = project reporting limit

μg/L = micrograms per liter

µmhos/cm = micromhos per centimeter

^a Sampling location for all reverse osmosis samples is tap on pipe T-701 (see attached P&ID TP-PR-10-10-08).

b Units reported in this table are those units required in the WDRs.

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 7 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs) Sludge Monitoring Results^a

First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Required Sampling I	Frequency										Qu	arterly								
	Analytes	Chromium	Hexavalent Chromium	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Copper	Fluoride	Lead	Molybdenum	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
	Units ^D	mg/kg 0.237	mg/kg 0.300	mg/kg 0.500	mg/kg 0.0100	mg/kg 0.0100	mg/kg 0.0030	mg/kg 0.0100	mg/kg 0.0030	mg/kg 0.0200	mg/kg 0.0120	mg/kg 0.0500	mg/kg 0.0200	mg/kg 0.00025	mg/kg 0.0200	mg/kg 0.0100	mg/kg 0.0100	mg/kg 0.0150	mg/kg 0.0050	mg/kg 0.0200
Sample ID	Date	0.207	0.000	0.000	0.0100	0.0100	0.0000	0.0100	0.0000	0.0200	0.0120	0.0000	0.0200	0.00020	0.0200	0.0100	0.0100	0.0100	0.0000	0.0200
SC-Sludge-WDR-246	3/3/2010	13200	153	ND (2.00)	38.8	101	2.17	44.5	24.8	149	26.2	18.3	35.1	0.592	32.0	ND (1.60)	ND (1.60)	ND (2.00)	161	107
RL		32.0	7.91	2.00	1.60	1.60	1.60	1.60	1.60	1.60	15.8	1.60	1.60	0.320	1.60	1.60	1.60	2.00	1.60	2.00

NOTES:

(---) = not required by the WDR Monitoring and Reporting Program
J = concentration or reporting limits estimated by laboratory or validation
mg/kg = milligrams per killogram
mg/L = milligrams per liter
MDL = method detection limit

ND = parameter not detected at the listed reporting limit

RL = project reporting limit

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

b Units reported in this table are those units required in the WDRs.

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

ocation	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-100B	SC-100B-WDR-238	J.Aide	1/6/2010	8:40:00 AM	TLI	EPA 120.1	SC	1/8/2010	Tina Acquiat
					TLI	EPA 200.7	В	1/12/2010	Kris Collins
					TLI	EPA 200.7	FE	1/12/2010	Kris Collins
					TLI	EPA 200.7	ZN	1/12/2010	Kris Collins
					TLI	EPA 200.8	AL	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	AS	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	BA	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	CR	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	CU	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	MN	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	MO	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	NI	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	PB	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	SB	1/12/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	1/7/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	1/7/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	1/7/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	1/7/2010	Giawad Ghenniwa
					FIELD	HACH	PH	1/6/2010	J.Aide
					TLI	SM2130B	TRB	1/7/2010	Gautam Savani
					TLI	SM2540C	TDS	1/8/2010	Tina Acquiat
					TLI	SM4500NH3D	NH3N	1/12/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	1/7/2010	Tina Acquiat
SC-100B	SC-100B-WDR-242	J. Aide	2/3/2010	8:10:00 AM	TLI	EPA 120.1	SC	2/4/2010	Tina Acquiat
					TLI	EPA 200.7	В	2/8/2010	Kris Collins
					TLI	EPA 200.7	FE	2/8/2010	Kris Collins
					TLI	EPA 200.7	MN	2/8/2010	Kris Collins
					TLI	EPA 200.8	AL	2/9/2010	Romuel Chavez/Daniel K
					TLI	EPA 200.8	AS	2/5/2010	Romuel Chavez/Daniel K
					TLI	EPA 200.8	BA	2/5/2010	Romuel Chavez/Daniel K
					TLI	EPA 200.8	CR	2/5/2010	Romuel Chavez/Daniel K
					TLI	EPA 200.8	CU	2/5/2010	Romuel Chavez/Daniel K
					TLI	EPA 200.8	MO	2/5/2010	Romuel Chavez/Daniel K
					TLI	EPA 200.8	NI	2/5/2010	Romuel Chavez/Daniel K
					TLI	EPA 200.8	PB	2/5/2010	Romuel Chavez/Daniel K
					TLI	EPA 200.8	SB	2/5/2010	Romuel Chavez/Daniel K

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
First Quarter 2010 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
SC-100B	SC-100B-WDR-242	J. Aide	2/3/2010	8:10:00 AM	TLI	EPA 200.8	ZN	2/9/2010	Romuel Chavez/Daniel Kar
					TLI	EPA 218.6	CR6	2/4/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	2/4/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	2/4/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	2/4/2010	Giawad Ghenniwa
					FIELD	HACH	PH	2/3/2010	J. Aide
					TLI	SM2130B	TRB	2/4/2010	Gautam Savani
					TLI	SM2540C	TDS	2/4/2010	Tina Acquiat
					TLI	SM4500NH3D	NH3N	2/9/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	2/4/2010	Tina Acquiat
SC-100B	SC-100B-WDR-246	J.Aide	3/3/2010	8:00:00 AM	TLI	EPA 120.1	SC	3/4/2010	Tina Acquiat
					TLI	EPA 200.7	AL	3/9/2010	Kris Collins
					TLI	EPA 200.7	В	3/9/2010	Kris Collins
					TLI	EPA 200.7	FE	3/9/2010	Kris Collins
					TLI	EPA 200.7	ZN	3/9/2010	Kris Collins
					TLI	EPA 200.8	AS	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 200.8	BA	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 200.8	CR	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 200.8	CU	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 200.8	MN	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 200.8	MO	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 200.8	NI	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 200.8	РВ	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 200.8	SB	3/5/2010	Daniel Kang/Romuel Chav
					TLI	EPA 218.6	CR6	3/10/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	3/4/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	3/4/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	3/4/2010	Giawad Ghenniwa
					FIELD	HACH	PH	3/3/2010	J.Aide
					TLI	SM2130B	TRB	3/4/2010	Gautam Savani
					TLI	SM2540C	TDS	3/4/2010	Tina Acquiat
					TLI	SM4500NH3D	NH3N	3/8/2010	lordan Stavrev
					TLI	SM4500NO2B	NO2N	3/4/2010	Tina Acquiat
SC-700B	SC-700B-WDR-238	J.Aide	1/6/2010	8:40:00 AM	TLI	EPA 120.1	SC	1/8/2010	Tina Acquiat
					TLI	EPA 200.7	В	1/12/2010	Kris Collins
					TLI	EPA 200.7	FE	1/12/2010	Kris Collins

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
First Quarter 2010 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
SC-700B	SC-700B-WDR-238	J.Aide	1/6/2010	8:40:00 AM	TLI	EPA 200.7	ZN	1/12/2010	Kris Collins
					TLI	EPA 200.8	AL	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	AS	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	BA	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	CR	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	CU	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	MN	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	MO	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	NI	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	РВ	1/12/2010	Romuel Chavez
					TLI	EPA 200.8	SB	1/12/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	1/7/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	1/7/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	1/7/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	1/7/2010	Giawad Ghenniwa
					FIELD	HACH	PH	1/6/2010	J.Aide
					TLI	SM2130B	TRB	1/7/2010	Gautam Savani
					TLI	SM2540C	TDS	1/8/2010	Tina Acquiat
					TLI	SM4500NH3D	NH3N	1/12/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	1/7/2010	Tina Acquiat
SC-700B	SC-700B-WDR-239	J.Aide	1/13/2010	8:15:00 AM	TLI	EPA 120.1	SC	1/14/2010	Tina Acquiat
					TLI	EPA 200.8	CR	1/15/2010	Daniel Kang
					TLI	EPA 218.6	CR6	1/15/2010	Sonya Bersudsky
					FIELD	HACH	PH	1/13/2010	J.Aide
					TLI	SM2130B	TRB	1/14/2010	Gautam Savani
					TLI	SM2540C	TDS	1/15/2010	Tina Acquiat
SC-700B	SC-700B-WDR-240	Ron Phelps	1/19/2010	8:00:00 AM	TLI	EPA 120.1	SC	1/25/2010	Tina Acquiat
					TLI	EPA 200.8	CR	1/21/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	1/26/2010	Sonya Bersudsky
					FIELD	HACH	PH	1/19/2010	Ron Phelps
					TLI	SM2130B	TRB	1/25/2010	Gautam Savani
					TLI	SM2540C	TDS	1/25/2010	Tina Acquiat
SC-700B	SC-700B-WDR-241	J.Aide	1/27/2010	8:25:00 AM	TLI	EPA 120.1	SC	1/28/2010	Tina Acquiat
					TLI	EPA 200.8	CR	1/31/2010	Daniel Kang
					TLI	EPA 218.6	CR6	1/29/2010	Sonya Bersudsky
					FIELD	HACH	PH	1/27/2010	J.Aide

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

ocation	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-241	J.Aide	1/27/2010	8:25:00 AM	TLI	SM2130B	TRB	1/28/2010	Gautam Savani
					TLI	SM2540C	TDS	1/28/2010	Tina Acquiat
SC-700B	SC-700B-WDR-242	J. Aide	2/3/2010	8:10:00 AM	TLI	EPA 120.1	SC	2/4/2010	Tina Acquiat
					TLI	EPA 200.7	В	2/8/2010	Kris Collins
					TLI	EPA 200.7	FE	2/8/2010	Kris Collins
					TLI	EPA 200.7	MN	2/8/2010	Kris Collins
					TLI	EPA 200.8	AL	2/9/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 200.8	AS	2/5/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 200.8	BA	2/5/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 200.8	CR	2/5/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 200.8	CU	2/5/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 200.8	MO	2/5/2010	Romuel Chavez/Daniel Kar
					TLI	EPA 200.8	NI	2/5/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 200.8	РВ	2/5/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 200.8	SB	2/5/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 200.8	ZN	2/9/2010	Romuel Chavez/Daniel Ka
					TLI	EPA 218.6	CR6	2/4/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	2/4/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	2/4/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	2/4/2010	Giawad Ghenniwa
					FIELD	HACH	PH	2/3/2010	J. Aide
					TLI	SM2130B	TRB	2/4/2010	Gautam Savani
					TLI	SM2540C	TDS	2/4/2010	Tina Acquiat
					TLI	SM4500NH3D	NH3N	2/9/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	2/4/2010	Tina Acquiat
SC-700B	SC-700B-WDR-243	J.Aide	2/10/2010	12:00:00 PM	TLI	EPA 120.1	SC	2/11/2010	Tina Acquiat
					TLI	EPA 200.8	CR	2/18/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	2/12/2010	Sonya Bersudsky
					FIELD	HACH	PH	2/10/2010	J.Aide
					TLI	SM2130B	TRB	2/11/2010	Gautam Savani
					TLI	SM2540C	TDS	2/11/2010	Tina Acquiat
SC-700B	SC-700B-WDR-244	C.Knight	2/18/2010	8:00:00 AM	TLI	EPA 120.1	SC	2/19/2010	Tina Acquiat
					TLI	EPA 200.8	CR	2/23/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	2/19/2010	Sonya Bersudsky
					FIELD	HACH	PH	2/18/2010	C.Knight
					TLI	SM2130B	TRB	2/19/2010	Gautam Savani

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
First Quarter 2010 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
SC-700B	SC-700B-WDR-244	C.Knight	2/18/2010	8:00:00 AM	TLI	SM2540C	TDS	2/23/2010	Tina Acquiat
SC-700B	SC-700B-WDR-245	J.Aide	2/24/2010	8:00:00 AM	TLI	EPA 120.1	SC	2/25/2010	Tina Acquiat/Gautam Sava
					TLI	EPA 200.8	CR	3/1/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	2/26/2010	Sonya Bersudsky
					FIELD	HACH	PH	2/24/2010	J.Aide
					TLI	SM2130B	TRB	2/25/2010	Gautam Savani
					TLI	SM2540C	TDS	2/25/2010	Tina Acquiat
SC-700B	SC-700B-WDR-246	J.Aide	3/3/2010	8:00:00 AM	TLI	EPA 120.1	SC	3/4/2010	Tina Acquiat
					TLI	EPA 200.7	AL	3/9/2010	Kris Collins
					TLI	EPA 200.7	В	3/9/2010	Kris Collins
					TLI	EPA 200.7	FE	3/9/2010	Kris Collins
					TLI	EPA 200.7	ZN	3/9/2010	Kris Collins
					TLI	EPA 200.8	AS	3/5/2010	Daniel Kang/Romuel Char
					TLI	EPA 200.8	BA	3/5/2010	Daniel Kang/Romuel Char
					TLI	EPA 200.8	CR	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	CU	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	MN	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	MO	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	NI	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	PB	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	SB	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 218.6	CR6	3/10/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	3/4/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	3/4/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	3/4/2010	Giawad Ghenniwa
					FIELD	HACH	PH	3/3/2010	J.Aide
					TLI	SM2130B	TRB	3/4/2010	Gautam Savani
					TLI	SM2540C	TDS	3/4/2010	Tina Acquiat
					TLI	SM4500NH3D	NH3N	3/8/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	3/4/2010	Tina Acquiat
SC-700B	SC-700B-WDR-247	J.Aide	3/10/2010	8:00:00 AM	TLI	EPA 120.1	SC	3/11/2010	Tina Acquiat
					TLI	EPA 200.8	CR	3/15/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	3/11/2010	Sonya Bersudsky
					FIELD	HACH	PH	3/10/2010	J.Aide
					TLI	SM2130B	TRB	3/11/2010	Gautam Savani
					TLI	SM2540C	TDS	3/11/2010	Tina Acquiat

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

_ocation	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-248	Ron Phelps	3/16/2010	8:00:00 AM	TLI	EPA 120.1	SC	3/17/2010	Tina Acquiat
					TLI	EPA 200.8	CR	3/18/2010	Daniel Kang
					TLI	EPA 218.6	CR6	3/17/2010	Sonya Bersudsky
					FIELD	HACH	PH	3/16/2010	Ron Phelps
					TLI	SM2130B	TRB	3/17/2010	Gautam Savani
					TLI	SM2540C	TDS	3/17/2010	Tina Acquiat
SC-700B	SC-700B-WDR-249	J.Aide	3/24/2010	8:00:00 AM	TLI	EPA 120.1	SC	3/25/2010	Tina Acquiat
					TLI	EPA 200.8	CR	3/29/2010	Daniel Kang
					TLI	EPA 218.6	CR6	3/25/2010	Sonya Bersudsky
					FIELD	HACH	PH	3/24/2010	J.Aide
					TLI	SM2130B	TRB	3/25/2010	Gautam Savani
					TLI	SM2540C	TDS	3/25/2010	Tina Acquiat
SC-700B	SC-700B-WDR-250	J.Aide	3/31/2010	8:00:00 AM	TLI	EPA 120.1	SC	4/1/2010	Tina Acquiat
					TLI	EPA 200.8	CR	4/1/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	4/2/2010	Sonya Bersudsky
					FIELD	HACH	PH	3/31/2010	J.Aide
					TLI	SM2130B	TRB	4/1/2010	Gautam Savani
					TLI	SM2540C	TDS	4/1/2010	Tina Acquiat
SC-701	SC-701-WDR-246	J.Aide	3/3/2010	8:00:00 AM	TLI	EPA 120.1	SC	3/8/2010	Tina Acquiat
					TLI	EPA 200.7	ZN	3/9/2010	Kris Collins
					TLI	EPA 200.8	AG	3/15/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	AS	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	BA	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	BE	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	CD	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	CO	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	CR	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	CU	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	HG	3/8/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	MO	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	NI	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	PB	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	SB	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	SE	3/5/2010	Daniel Kang/Romuel Cha
					TLI	EPA 200.8	TL	3/5/2010	Daniel Kang/Romuel Cha

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
First Quarter 2010 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
SC-701	SC-701-WDR-246	J.Aide	3/3/2010	8:00:00 AM	TLI	EPA 200.8	V	3/5/2010	Daniel Kang/Romuel Chavez
					TLI	EPA 218.6	CR6	3/10/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	3/4/2010	Giawad Ghenniwa
					FIELD	HACH	PH	3/3/2010	J.Aide
					TLI	SM2540C	TDS	3/8/2010	Tina Acquiat
Phase Seperator	SC-Sludge-WDR-246	J.Aide	3/3/2010	8:00:00 AM	TLI	EPA 300.0	FL	3/4/2010	Giawad Ghenniwa
					TLI	EPA 6010B	AG	3/18/2010	Kris Collins
					TLI	EPA 6010B	BA	3/12/2010	Kris Collins
					TLI	EPA 6010B	BE	3/12/2010	Kris Collins
					TLI	EPA 6010B	CD	3/12/2010	Kris Collins
					TLI	EPA 6010B	CO	3/12/2010	Kris Collins
					TLI	EPA 6010B	CR	3/12/2010	Kris Collins
					TLI	EPA 6010B	CU	3/12/2010	Kris Collins
					TLI	EPA 6010B	NI	3/12/2010	Kris Collins
					TLI	EPA 6010B	PB	3/12/2010	Kris Collins
					TLI	EPA 6010B	V	3/12/2010	Kris Collins
					TLI	EPA 6010B	ZN	3/12/2010	Kris Collins
					TLI	SW 6020A	AS	3/17/2010	Romuel Chavez/Daniel Kang
					TLI	SW 6020A	HG	3/11/2010	Romuel Chavez/Daniel Kang
					TLI	SW 6020A	MO	3/17/2010	Romuel Chavez/Daniel Kang
					TLI	SW 6020A	SB	3/17/2010	Romuel Chavez/Daniel Kang
					TLI	SW 6020A	SE	3/17/2010	Romuel Chavez/Daniel Kang
					TLI	SW 6020A	TL	3/17/2010	Romuel Chavez/Daniel Kang
					TLI	SW 7199	CR6	3/16/2010	Sonya Bersudsky

TABLE 8

Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)

Monitoring Information

First Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

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).

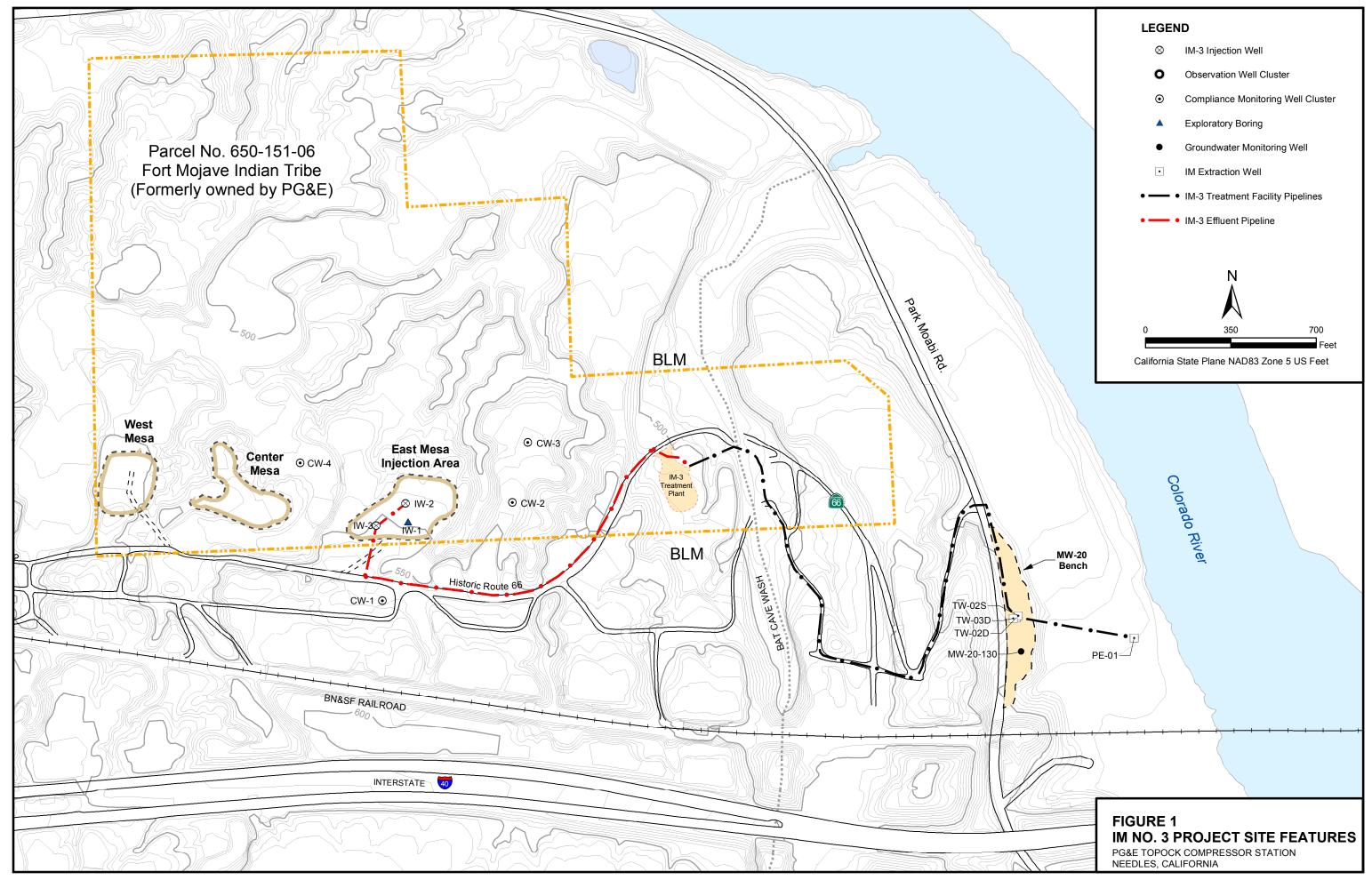
SC-100B = Sampling location for all influent samples is tap on pipe from extraction wells into tank T-100 (see attached P&ID TP-PR-10-10-04).

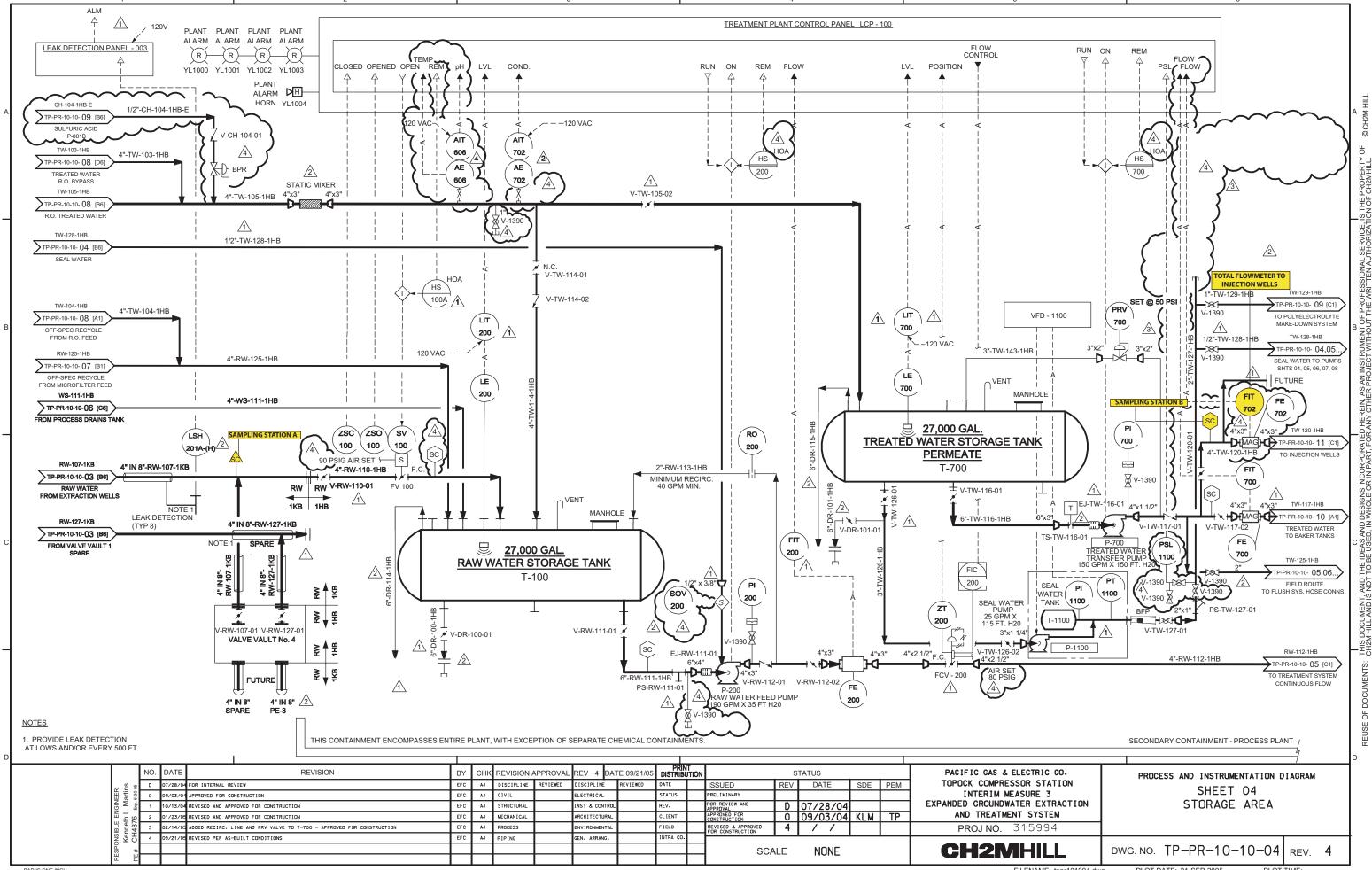
SC-701 = Sampling location for all reverse osmosis samples is tap on pipe T-701 (see attached P&ID TP-PR-10-10-08).

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.

AL =	aluminum	NH3N =	ammonia (as N)
Ag =	silver	NI =	nickel
AS =	arsenic	NO2N =	nitrite (as N)
B =	boron	NO3N =	nitrate (as N)
BA =	barium	PB =	lead
BE =	beryllium	PH =	рН
CD =	cadmium	SB =	antimony
CO =	cobalt	SC =	specific conductance
CR =	chromium	SE =	selenium
CR6 =	hexavalent chromium	SO4 =	sulfate
CU =	copper	TDS =	total dissolved solids
FE =	iron	TL =	thallium
FL =	fluoride	TLI =	Truesdail Laboratories, Inc.
HG =	mercury	TRB =	turbidity
MN =	manganese	V =	vanadium
MO =	molybdenum	ZN =	zinc







FILENAME: PR-10-03.dgn

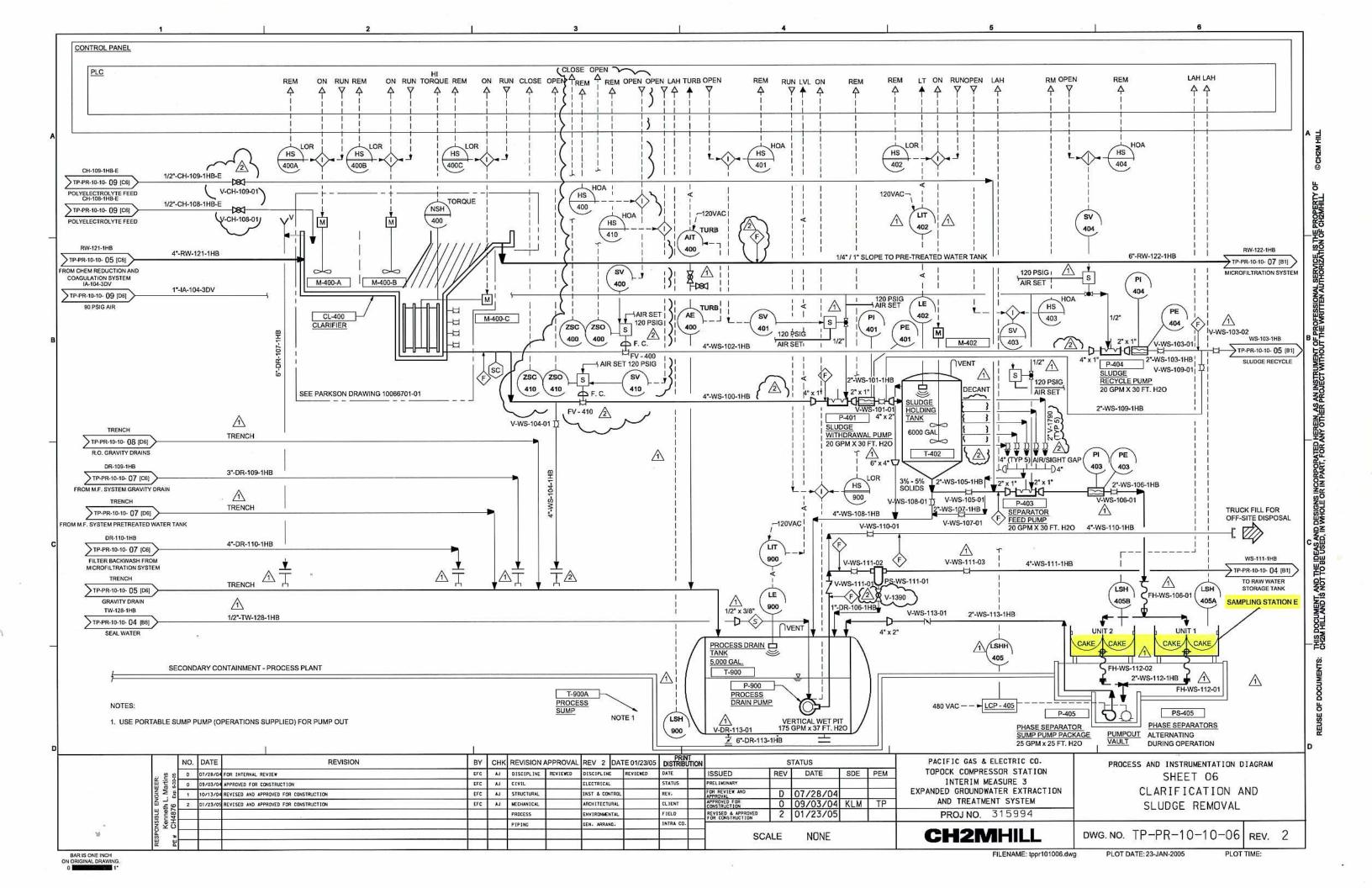
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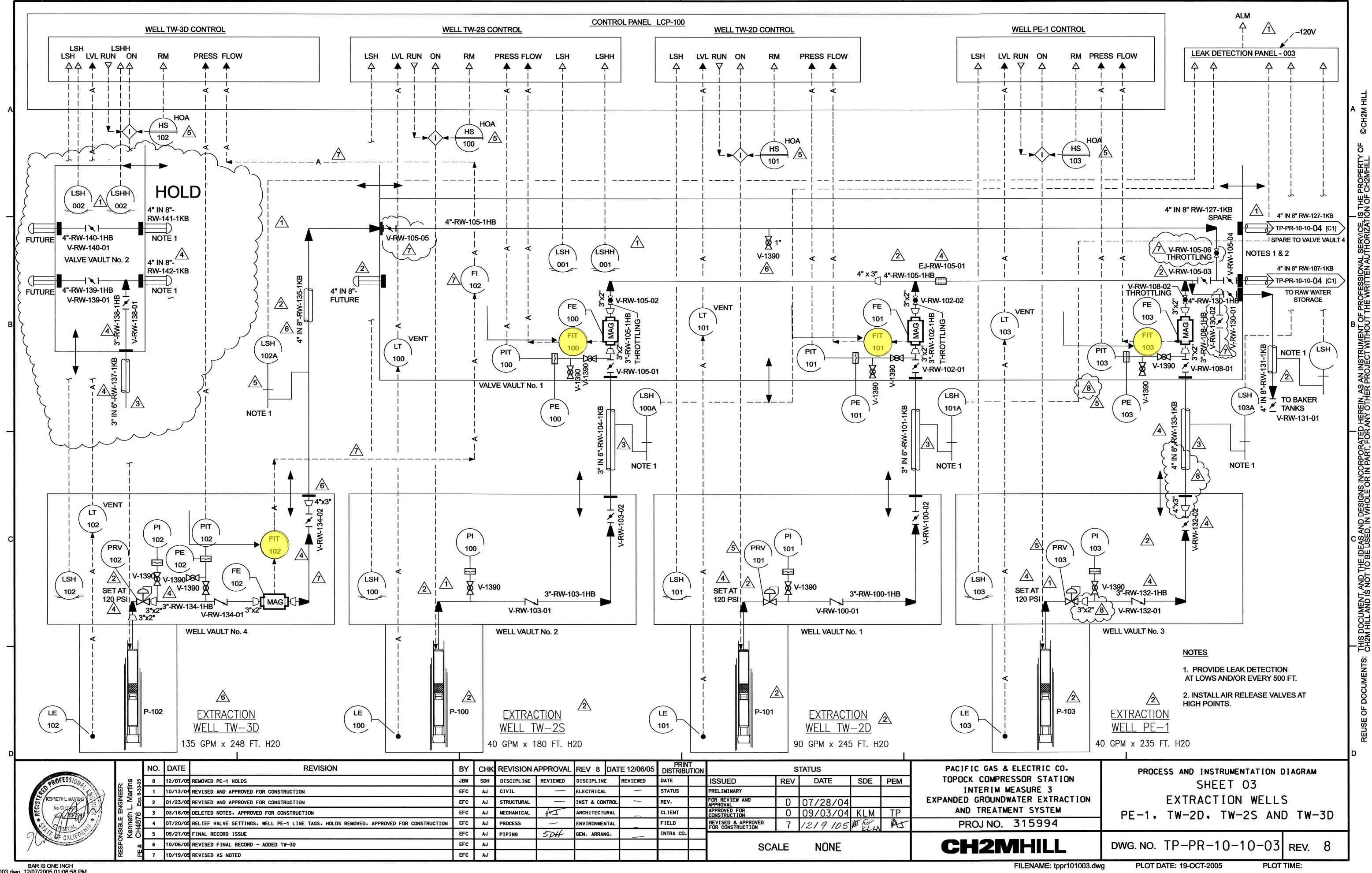
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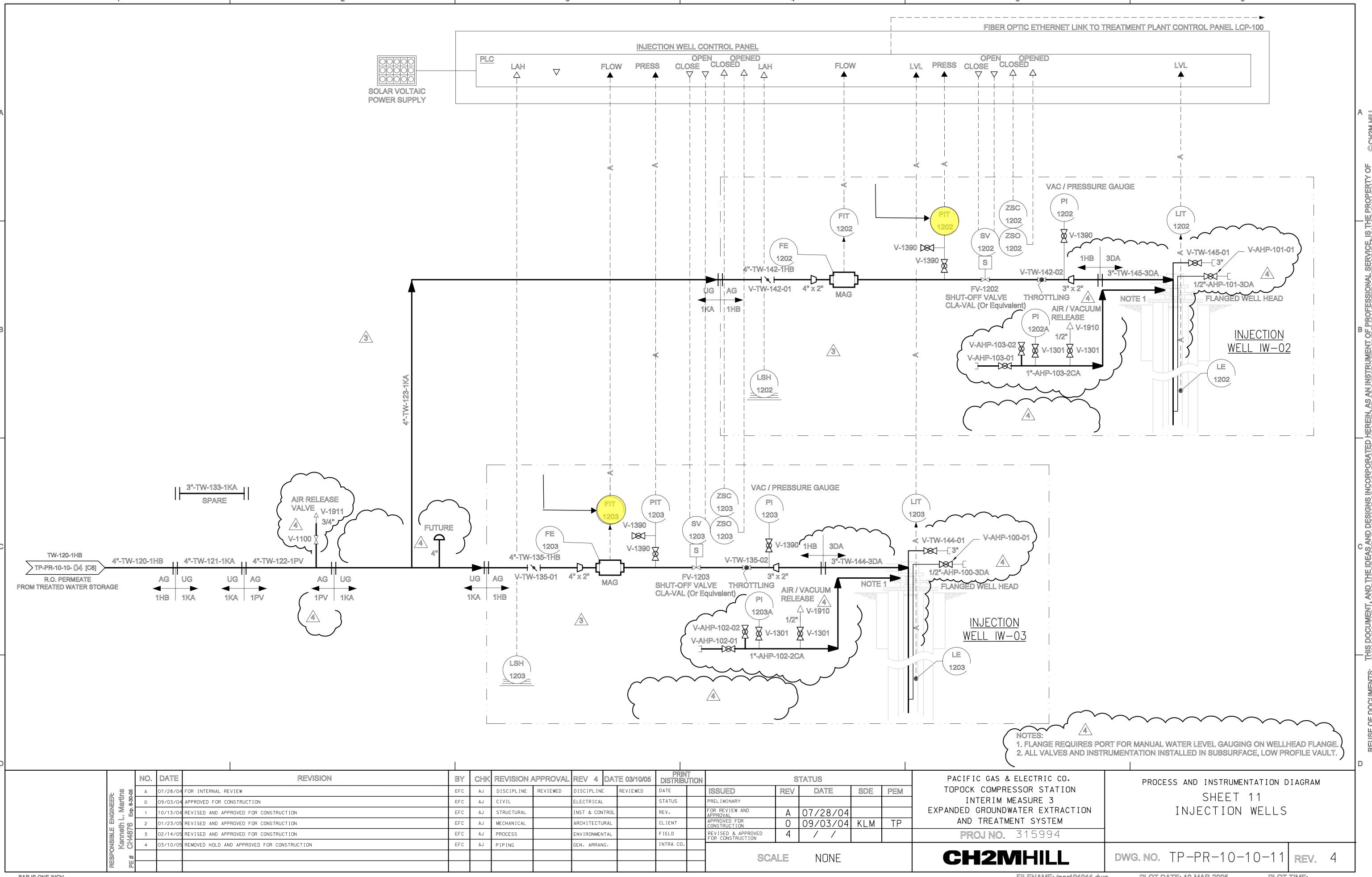
BAR IS ONE INCH ON ORIGINAL DRAWING. COND

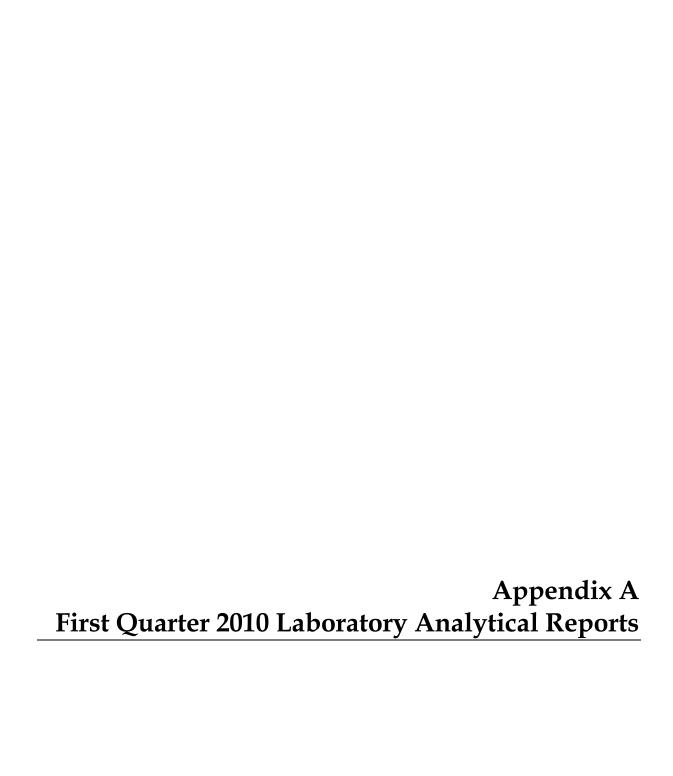
RUN ON FLOW

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

January 19, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-238 PROJECT, GROUNDWATER

MONITORING,

TLI No.: 987112

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-238 project groundwater monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on January 6, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for the matrix spike for sample SC-700B-WDR-238 for Hexavalent Chromium analysis by EPA 218.6 was just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

f. / Mona Nassimi

Manager, Analytical Services

K. R. P. gyen

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING

Established 1931



14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 987112

Date: February 9, 2010 Collected: January 6, 2010 Received: January 6, 2010

Revision 1

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 300.0	Anions	Giawad Ghenniwa
SM 4500-NH3 D	Ammonia	lordan Stavrev
SM 4500-NO2 B	Nitrite as N	Tina Acquiat
EPA 200.7	Metals by ICP	Kris Collins
EPA 200.8	Metals by ICP/MS	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

Established 1931

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 - FAX (714) 730-6462 · www.truesdail.com

Date Received: January 6, 2010 Laboratory No.: 987112

Revision 1

Attention: Shawn Duffy

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Analytical Results Summary

SM 4500-NH3 D Ammonia mg/L	S	QN				
EPA 218.6 Hexavalent Chromium ug/L	Q	1090				
SM 2130B Turbidity NTU	0.178	9	SM 4500-NO2 B Nitrite as N	mg/L	QN	£
SM 2540C 7DS mg/L	4790	5690	EPA 300.0 Nitrate as N	mgvL	3.09	3.59
EPA 120.1 EC µmhos/cm	7200	7720	EPA 300.0 Sulfate	mgA	509	573
			EPA 300.0 Fluoride	mg/L	2.38	2.83
Sample Time	08:40	08-40	Sample Time		08:40	08:40
Sample I.D.	SC-700B-WDR-238	SC-100B-WDR-238	Sample I.D.		SC-700B-WDR-238	SC-100B-WDR-238
<u>Lab (.0.</u>	987112-1	987112-2	Lab I.D.		987112-1	987112-2

ND: Not Defected (balow reporting limit)

Results below 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm will have three (3) significant figures.
Outlity Control data will always have three (3) significant figures. Note: The following "Significant Figures" rule has been applied to all results:

mgvt.: Milgrams per Ber.

Established 1931



14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 [714] 730-6239 - FAX (714) 730-6462 - www.tuesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Date Received: January 6, 2010 Laboratory No.: 987112

Revision 1

Analytical Results Summary

s Requested
nalyses as
tal Metal A
, <u>ē</u>
ANALYSIS
METALS

	Lead EPA 200.8	01/12/10	HB/L	QN	N													
	Copper EPA 200.8	01/12/10	µg√L	QN	Ş													
	Chromium EPA 200.8	12/19/08	µ9/L	1.31	1050													
	Barium EPA 200.8	01/12/10	rB/L	16.7	25.7	Zinc	€PA 200.7	01/12/10	μg/L	QN	QN							
	Arsenic EPA 200.8	01/12/10	μg/L	ND	3.81	Nickel	EPA 200.8	01/32/10	μgΛ	Q	QN							
	Antimony EPA 200.8	01/12/10	Hgvl.	QN	9	Molybdenum	EPA 200.8	01/12/10	µ9∕L	18.6	24.6	lon	EPA 200.7	01/12/10	µg/t.	20.0	Q	
normal harris	Aluminum EPA 200.8	01/12/10	μg/L	ND	æ	Manganese	EPA 200.8	01/12/10	μg/L	42.3	QN	Boron	EPA 200.7	01/12/10	µg/L	1030	1070	
		Date of Analysis:	Time Coll.	08:40	08:40			Date of Analysis:	Time Coll.	08:40	08:40			Date of Analysis:	Time Coll.	08:40	08:40	
		Date	Sample ID	SC-700B-WDR-238	SC-100B-WDR-238			Date	Sample ID	SC-700B-WDR-238	SC-100B-WDR-238			Date	Sample ID	SC-700B-WDR-238	SC-100B-WDR-238	
			Lab 1.0.	987112-1	987112-2				Lab I.D.	987112-1	987112-2				Lab I.D.	987112-1	987112-2	

NOTES:

ND: Not detected, or below limit of detection

Client: E2 Consulting Engineers, Inc.

Oakland, CA 94612

Sample: Two (2) Groundwaters

155 Grand Ave. Suite 1000

EXCELLENCE IN INDEPENDENT TESTING

Attention: Shawn Duffy

Project No.: 392895,AA.DM

Project Name: PG&E Topock Project

P.O. No.: 392895.AA.DM

Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 REPORT (714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Date: February 9, 2010 Collected: January 6, 2010 Received: January 6, 2010 Prep/ Analyzed: January 8, 2010

Revision 1

Laboratory No.: 987112

Analytical Batch: 01EC10B

Inveetigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	<u>Field I.D.</u>	Units	<u>Method</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
987112-1	SC-700B-WDR-238	μmhos/cm	EPA 120.1	1.00	2.00	7200
987112-2	SC-100B-WDR-238	μmhos/cm	EPA 120.1	1.00	2.00	7720

QA/QC Summarv

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987112-2	7720	7730	0.13%	< 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00		<2.00	Yes
ccs	705	706	99.9%	90% - 110%	Yes
CVS#1	996	998	99.8%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager عرب Analytical Services

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Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Laboratory No.: 987112

Date: February 9, 2010 Collected: January 6, 2010

Received: January 6, 2010

Prep/ Analyzed: January 8, 2010 Analytical Batch: 01TDS10C

Revision 1

Investigation:

Total Dissolved Solids by SM 2540C

REPORT

Analytical Results Total Dissolved Solids

<u> TLI I.D.</u>	<u>Field I.D.</u>	<u>Units</u>	<u>Method</u>	<u>RL</u>	<u>Results</u>
987112-1	SC-700B-WDR-238	mg/L	SM 2540C	250	4790
987112-2	SC-100B-WDR-238	mg/L	SM 2540C	250	5690

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	987111-1	3110	3200	1.43%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ΝĎ	<25.0		<25.0	Yes
LCS 1	497	500	99.4%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit,

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

 Mona Nassimi, Manager Analytical Services

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155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM REPORT

Laboratory No.: 987112

Date: February 9, 2010 **Collected:** January 6, 2010

Received: January 6, 2010

Prep/ Analyzed: January 7, 2010 Analytical Batch: 01TUC10E

Revision 1

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

<u>TLI I.D.</u>	Field I.D.	<u>Sample Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
987112-1	SC-700B-WDR-238	08:40	NTU	1.00	0.100	0.1 78
987112-2	SC-100B-WDR-238	08:40	N T U	1.00	0.100	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987112-2	ND	ND	0.00%	< 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100		<0.100	Yes
LCS	7.70	8,00	96.3%	90% - 110%	Yes
LCS	7.75	8.00	96.9%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

OF: Dilution Factor

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 01CrH10C

Laboratory No.: 987112

Date: February 9, 2010 Collected: January 6, 2010

Received: January 6, 2010

Prep/ Analyzed: January 7, 2010 Analytical Betch: 01CrH10C

Revision 1

Investigation:

Hexavalent Chromium by IC Using Method EPA 218.6

Analytical Results Hexavalent Chromium

<u>TLi I.D.</u>	<u>Field I.D.</u>	<u>Sample Time</u>	Run Time	<u>Units</u>	<u>DF</u>	RL	Results
987112-1	SC-700B-WDR-238	08:40	08:21	μ g/L	1.05	0.20	ND
987112-2	SC-100B-WDR-238	08:40	08:42	μg/L	52.5	10.5	1090

QA/QC Summary

				<i></i>		
QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987111-1	20.0	20.2	1.00%	<u><</u> 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	M\$% Recovery	Acceptance limits	QC Within Control
MS	987112-1	0.00	1.06	1.00	1.06	0.993	1.06	93.7%	90-110%	Yes
MS	987112-2	1090	52.5	25.0	1313	2320	2403	93.7%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200		<0.200	Yes
MRCCS	5.01	5.00	100%	90% - 110%	Yes
MRCVS#1	10.0	10.0	100%	_95% - 105%	Yes
MRCVS#2	10.2	10.0	102%	95% - 105%	Yes
LCS	5.16	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

 Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987112

Date: February 9, 2010

Collected: January 6, 2010

Received: January 6, 2010 Prep/ Analyzed: January 12, 2010

Analytical Batch: 01NH3-E10B

Revision 1

Investigation:

Ammonia as N by Method SM 4500-NH3 D

Analytical Results Ammonia as N

TLI I.D.	Field I.D.	Sample Time	<u>Method</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
987112-1	SC-700B-WDR-238	08:40	SM 4500-NH3 D	mg/L	1.00	0.500	ND
987112-2	SC-100B-WDR-238	08:40	SM 4500-NH3 D	mg/L	1.00	0.500	ND

QA/QC Summary

	QC STE) I.D.	-aboratory Number	Concentra	ation		plicate entration	Percent Difference	Acceptance limits	QC Within Control	
	Duplic	ate	987112-2	ND			ND	0.00%	<u><</u> 20%	Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.		MS nount	Measured Conc. of spiked sample	Theoretica Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987112-2	0.00	1.00	6.00	6	.00	5.93	6.00	98.8%	75-125%	Yes
								7	77.0/0	7.0-12070	100

QC Std I.D.	Missaured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	< 0.500		<0.500	Yes
MRCCS	5.88	6.00	98.0%	90% - 110%	Yes
MRCVS#1	5.75	6.00	95.8%	90% - 110%	Yes
LCS	10.4	10.0	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

 Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987112

Date: February 9, 2010 **Collected:** January 6, 2010

Received: January 6, 2010 Prep/ Analyzed: January 7, 2010

Analytical Batch: 01AN10E

Revision 1

Investigation:

Fluoride by Ion Chromatography using EPA 300.0

Analytical Results Fluoride

TLI I.D.	Field I.D.	Sample Time	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
987112-1	SC-700B-WDR-238	08:40	12:39	mg/L	5.00	0.500	2.38
987112-2	SC-100B-WDR-238	08:40	12:51	mg/L	5.00	0.500	2.83

QA/QC Summary

ked Dilution Factor	Added Spike Conc.	MS Amou	unt spik	of Conc ed spik	ked Recover	Acceptance limits	QC Within Control
8 5.00	4.00	20.0	0 23.:	2 22	.4 104%	85-115%	Yes
•	ole	Conc.	ole Conc.	Conc. sam	ole Conc. sample sam	conc. sample sample	ole Conc. sample sample

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.500		<0.500	Yes
MRCCS	4.15	4.00	104%	90% - 110%	Yes
MRCVS#1	3.14	3.00	105%	90% - 110%	Yes
MRCVS#2	3.15	3.00	105%	90% - 110%	Yes
LCS	4.15	4.00	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987112

Date: February 9, 2010

Collected: January 6, 2010 Received: January 6, 2010

Prep/ Analyzed: January 7, 2010

Analytical Batch: 01AN10E

Revision 1

investigation:

Sulfate by Method EPA 300.0

Analytical Results Sulfate

<u>TLI I.D.</u>	<u>Field I.D.</u>	Sample Time	Run Time	Units	<u>DF</u>	<u>RL</u>	<u>Results</u>
987112-1	SC-700B-WDR-238	08:40	15:08	mg/L	25.0	12.5	509
987112-2	SC-100B-WDR-238	08:40	15:19	mg/L	25.0	12.5	573

QA/QC Summary

	QC STE	O.D.	Laborato Number	•	Concentra	ition		plicate entration	Percent Difference	Acceptance limits	QC Within Control	
	Duplic	ate	987104		283			282	0.35%	≤ 20%	Yes	
QC Std	Lab Number	Conc	···· I Dilut		Added Spike	_ `	MS nount	Measured Conc. of spiked	Theoretical Conc. of spiked	MS% Recovery	Acceptance limits	QC V

QC S	td Lab Number	Conc.of unspiked sample	Dilution Factor	Spike Conc.	MS Amount	Conc. of spiked sample	Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MŜ	987104	283	50.0	10.0	500	797	783	103%	85-115%	Yes
		-						00.44	4.1.	

QC 8td I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.500		<0.500	Yes
MRCCS	20.1	20.0	101%	90% - 110%	Yes
MRCVS#1	15.1	15.0	101%	90% - 110%	Yes
MRCVS#2	15.0	15.0	100%	90% - 110%	Yes
LCS	20.1	20.0	101%	90% - 110%	Yes

NO: Below the reporting limit (Not Detected).

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987112

Date: February 9, 2010

Collected: January 6, 2010

Received: January 6, 2010

Prep/ Analyzed: January 7, 2010 Analytical Batch: 01AN10E

Revision 1

Investigation:

Nitrate as N by Ion Chromatography using EPA 300.0

Analytical Results Nitrate as N

<u> TLI I.D.</u>	Field I.D.	<u>Sample Time</u>	Run Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
987112-1	SC-700B-WDR-238	08:40	12:39	mg/L	5.00	1.00	3.09
987112-2	SC-100B-WDR-238	08:40	12:51	mg/L	5.00	1.00	3.59

QA/QC Summary

	QC STD	I.O.		boratory Number	 Concentra	ition	Du Conc	plic entr		P	lelative Percent fference		eptance imits		C Within Control	
	Duplica	te	9	87112-1	 3.09	'	;	3.05			1.30%	- · · · ·	20%	<u> </u>	Yes	
QC Std	Lab Number	Con- unsp sam	iked	Dilutio Factor	Added Spike Conc.		MS nount	٥	easured onc. of spiked sample	1	heoretical Conc. of spiked sample		MS% covery	Ac	ceptance limits	QC Within Control
MS	987112-1	3.0	9	5.00	4.00		20.0	Ī	24.0		23.1	Ĺ	105%	8	35-115%	Yes
		Q	C Std	I.D. C	 entration		neoretica ncentrati		Percei Recove		Acceptan Limits		QC With			
			Blani	k	ND		<0.500				<0.500	1	Yes			
			MRCC	S	4.00		4.00		100%	6	90% - 110	0%	Yes			
		М	RCV	3#1	2.98		3.00		99.39	6	90% - 110	0%	Yes			
		М	RCV	5#2	2.99		3.00		99.7%	6	90% - 110	0%	Yeş			

ND: Below the reporting limit (Not Detected).

LCS

4.01

DF: Dilution Factor.

Respectfully submitted.

90% - 110%

TRUESDAIL LABORATORIES, INC.

Yes

Mona Nassimi, Manager
Analytical Services

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987112

Date: February 9, 2010 Collected: January 6, 2010

Received: January 6, 2010

Prep/ Analyzed: January 7, 2010 Analytical Batch: 01NO210C

Revision 1

Investigation:

Nitrite as N by Method SM 4500-NO2-B

Analytical Results for Nitrite as N

<u>TLI I.D.</u>	<u>Fleid I.D.</u>	<u>Sample Time</u>	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	. <u>RL</u>	Regults
987112-1	SC-700B-WDR-238	08:40	15:58	mg/L	1.00	0.0050	ND
987112-2	SC-100B-WDR-238	08:40	15:59	mg/L	1.00	0.0050	ND

QA/QC Summary

	QC STE) I.D.	Laboratory Number	Concentra	ation		plicate entration	Percent Difference	Acceptance limits	QC WithIn Control	
	Duplic	ate	987112-2	ND			ND	0,00%	<u><</u> 20%	Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	_ `	MS nount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MŞ	987112-2	0.00	1.00	0.0200	Û.	0200	0.0195	0.0200	97.5%	75-125%	Yes
					_						

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limite	QC Within Control
Blank	ND	<0.0050		<0.0050	Yes
MRCCS	0.0279	0.0270	103%	90% - 110%	Yes
MRCVS#1	0.0193	0.0200	96.5%	90% - 110%	Yes
LCS	0.0462	0.0450	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Samples: Two (2) Groundwaters
Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Investigation: Total Metal Analyses as Requested

Laboratory No.: 987112
Reported: February 9, 2010
Collected: January 6, 2010
Received: January 6, 2010
Analyzed: See Below

Revision 1

Analytical Results

SAMPLE ID: SC-70	00B-WDR-238	Time Coll	ected:	_08;40		LAB ID	987112-1	
		Reported					Date	Time
Parameter	Method	Value	DF	Units	ŖL_	Batch	Analyzed	Analyzed
Aluminum	EPA 200.8	ND	5.00	μg/L	50.0	011210A	01/12/10	15:27
Antimony	EPA 200.8	N D	5.00	μ g /L	10.0	011210A	01/12/10	15:27
Arsenic	EPA 200.8	ND	5.00	μ g/ L	1.00	011210A	01/12/10	15:27
Barium	EPA 200.8	16.7	5.00	µg/ L	10.0	011210A	01/12/10	15:27
Chromium	EPA 200.B	1.31	5.00	μ g /L	1.00	011210	01/12/10	15:27
Соррег	EPA 200.8	ND	5.00	μ g /L	5.00	011210A	01/12/10	15:27
Lead	EPA 200.8	ND	5.00	μg/ L	10.0	011210A	01/12/10	15:27
Manganese	EPA 200.8	42.3	5.00	μ g /L	10.0	011210A	01/12/10	15:27
Molybdenum	EPA 200.8	18.6	5.00	μg/L	10.0	011210A	01/12/10	15:27
Nickel	EPA 200.8	ND	5.00	μg/L	10.0	011210A	01/12/10	15:27
Zinc	EPA 200.7	ND	1.00	μg/L	10.0	011210A-Th	01/12/10	09:54
Boron	EPA 200.7	1030	1.00	μg/L	200	011210A-Th	01/12/10	09:54
Iron	EPA 200.7	20.0	1,00	μg/L	20.0	011210A-Th	01/12/10	09:54

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Report Continued

SAMPLE ID: SC-	100B-WDR-238	Time Col	lected:	08:40		LAB ID	987112-2	
Parameter	Method	Reported Value	DF	Units	RL_	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	μ g/ L	50.0	011210A	01/12/10	15:54
Antimony	EPA 200.8	<u>ND</u>	5.00	μg/L	10.0	011210A	01/12/10	15:54
Arsenic	EPA 200.8	3.81	5.00	μg/L	1.00	011210A	01/12/10	15:54
Barium	`EPA 200.8	25.7	5.00	µg/⊾	10.0	011210A	01/12/10	15:54
Chromium	EPA 200.8	1050	5.00	μ g /L	1.00	011210A	01/12/10	15:54
Copper	EPA 200.8	ND	5.00	μg/L	5.00	011210A	01/12/10	15:54
Lead	EPA_200.8	ND	5.00	<u>μ</u> g/L	10.0	011210A	01/12/10	15:54
Manganese	EPA 200.8	<u>N</u> D	5.00	<u>µg/∟</u>	10.0	011210A	01/12/10	15:54
Molybdenum	EPA 200.8	24 .6	5.00	μ9/∟	10.0	011210A	01/12/10	15:54
Nickel	EPA 200.8	NĎ	5.00	μg/L	10.0	011210A	01/12/10	
Zinc	EPA 200,7	ND_	1.00	μg/L	10.0	011210A-Th	01/12/10	15:54
Baron	EPA 200.7	1070	1.00	μ g/ L	200	011210A-Th	01/12/10	10:17
lron	EPA 200.7	ND	1.00	нф/г	20.0	011210A-Th	01/12/10	10:17 10:17

ND: Not detected, or below limit of detection.

DF: Dilution factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

EXCELLENCE IN INDEPENDENT TESTING

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Samples: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA, DM

P.O. No.: 392895.AA.DM

Established 1931

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

Laboratory No.: 987112

Reported: February 9, 2010

Collected: January 6, 2010 Received: January 6, 2010

Revision 1

Quality Control/Quality Assurance Report

				BLANK		MRCCS			:	MRCVS			
						Observed	TRUE	36	Control	Observed	TRUE	*	Control
Parameter	Method	Batch	Units	Blank	귎	Value	Value	86	Limits	Value	Value	. B	Limits %
Aluminum	EPA 200.8	011210A	µg/L	9	50.0	52.6	50.0	105%	90-110%	52.5	0.05	105%	90-110%
Antimony	EPA 200.8	011210A	ĐĐ.	Q	10.0	50.6	50.0	101%	90-110%	49.3	50.0	98.6%	90-1-10%
Arsenic	EPA 200.8	011210A	J-Bri	Ð	0.200	50.7	20.0	101%	90-110%	49.9	50.0	88 66	90-140%
Barium	EPA 200.8	011210A	μg/L	Q	10.0	50.1	50.0	100%	90-110%	50.5	50.0	101%	90-110%
Стотит	EPA 200.8	011210A	1,0H	ON	1.00	49.0	20.0	98.0%	90-110%	48.6	20.0	97.2%	90-110%
Copper	EPA 200.8	011210A	J.Gr.	QN	5.00	52.7	50.0	105%	90-110%	52.1	50.0	104%	90.110%
Lead	EPA 200.8	011210A	J.Gr	운	10.0	50.4	50.0	101%	90-110%	50.0	50.0	100%	90-110%
Manganese	EPA 200.8	011210A	rg/L	S	10.0	52.5	50.0	105%	90-110%	52.9	50.0	106%	90.110%
Molybdenum	EPA 200.8	011210A	唇	2	10.0	49.5	50.0	39.0%	90-110%	47.9	005	95.8%	90.110%
Nickel	EPA 200.8	011210A	1.01 1.01	Ð	10.0	51.9	50.0	104%	90-110%	514	50.0	103%	OP-110%
Zinc	EPA 200.7	011210A-Th		2	10.0	9200	2000	194%	95-105%	5100	5000	102%	90-116%
Вогон	EPA 200.7	011210A-Th	F. P.	Q	82	9090	2000	101%	95-105%	4970	2000	90.4%	90-110%
lon	EPA 200.7	EPA 200.7 011210A-Th	μg/L	9	20.0	4970	2000	99.4%	95-105%	2090	5000	102%	90-110%



Report Continued

	į	,	INTERFERE	INTERFERENCE CHECK STANDARD	STANDARD		
Parameter	Lethod	- Sign	<u> </u>	٥	à	Control of the contro	
		3	<u> </u>	3 2	e B	Limits	
Aluminum	EPA 200.8	ьбл	51.7	50.0	103%	80-120%	
Arsenic	EPA 200.8	P ₀ t	50.4	50.0	101%	80-120%	
Chromium	EPA 200.8	Hgh.	49.0	50.0	98.0%	80-120%	
Copper	EPA 200.8	µg/L	50.6	20.0	101%	80-120%	
Manganese	EPA 200.8	fgt.	52.7	50.0	105%	80-120%	
Nickel	EPA 200.8	John The Company of t	51.0	50.0	102%	80-120%	
Zinc	EPA 200.7	ngvL	2080	2000	104%	80-120%	
lron	EPA 200.7	J.	2020	2000	101%	80-120%	

; ;

			LABORATO	LABORATORY CONTROL SAMPLI	SAMPLES		SAMPLE OUPLICATES	LICATES			
Parameter	Method	Units	SOI	S	%	Control	SAMPLE	SAMPLE	ana	36	Precision Control
			obs.	Theo.	Rec.	Limits	O	RESULT	RESULT	RPD	Limits %
Aluminum	EPA 200.8	hg/L	52.8	50.0	106%	90-110%	987112-1	9	QN	0.00%	90
Antimony	EPA 200.8	HO/L	50.2	50.0	100%	90-110%	987112-1	Q.	2	0.00%	J C
Arsenic	EPA 200.8	mg/L	50.1	50.0	100%	90-110%	987112-1	2	N.	0.00%	i 5
Barium	EPA 200.8	цgД	50.2	20.0	100%	90-110%	987112.1	16.7	16.2	3.04%	୍ ଚ
Chromium	EPA 200.8	rg4	48.7	50.0	97.4%	90-110%	987112-1	1.31	1.30	%22.0	i: 8
Copper	EPA 200.8	John I	52.6	50.0	105%	90-110%	987112-1	8	Q	%00.0	i 5
Lead	EPA 200.8	1.01	\$0°#	50.0	101%	90-110%	987112-1	S	Q	%000	ି ଚି
Manganese	EPA 200.8	Hg4	52.9	50.0	106%	90-110%	987112-1	42.3	41.2	2.63%	ନି ଚ
Molybdenum	EPA 200.8	μgď	48.8	50.0	97.6%	90-110%	987112-1	18.6	17.6	5.52%	
Nickel	EPA 200.8	John T	51.6	50.0	103%	90-110%	987112-1	S	2	9000	[8 -
Zinc	EPA 200.7	щ	5150	5000	103%	90-110%	987112-1	QV	ON	8000	8 8
Вогоп	EPA 200.7	μg/L	2000	2000	100%	90-110%	987112-1	1030	1010	1.96%	8 8
Iron	EPA 200.7	μĝψ	4940	2000	98.8%	90-110%	987112-1	20.0	19.3	3.56%	₹ -
											: : : : : : ! !

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				Sample		Spike	Total Amt.	Theo	٧. 1	3	Control
Sample ID	Parameter	Method	Units	Result	걸	Level	of Spike	Value	8	28	Limits %
387112-1	Aluminum	EPA 200.8	ng/L	00:0	5.00	50.0	250	250	245	96.0%	75 1350
387112-1	Anlimony	EPA 200.8	right.	0.00	5.00	50.0	250	250	233	92.59	75.1259
987112-1	Arsenic	EPA 200.8	μgη.	0.00	5.00	50.0	250	250	248	40 of 100	75, 125%
987112-1	Banum	EPA 200.8	Jugar.	16.7	5.00	50.0	250	267	252	20.1%	75,1250
387112-1	Chromium	EPA 200.8	J.	1.31	5.00	50.0	250	251	25	2 5 5	76.1959
987112-1	Copper	EPA 200.8	μg/L	0.00	5.00	50.0	250	250	22	20.10	75 4259
987112-1	Lead	EPA 200.8	1,6M	00:0	909	50.0	250	250	3 3	00 100	0 CZI -01
987112-1	Manganese	EPA 200.8	l di	42.3	200	50.05	250	200	700	90.4%	0,071-C/
987112-1	Molybdenum	EPA 200.8	P Con	18.6	5.00	5	250	767	807	E 1.00	%cz1-c)
987112-1	Nickel	EPA 200.8	Ton	341	S 45	50.0	250	607 607	230	460 S	75-125%
987112-1	Zinc	EPA 200.7	ug/L	0.00	1.00	2000	0000	300	2040	80.09	77 4070
987112-1	Boron	EPA 200.7	Lg/L	1030	1.00	2000	2000	3030	2070	97.09	75 1250
987112-1	For	EPA 200.7	ng/L	20.0	8	2000	2000	2020	1970	20. V.C.	76 426%

ND: Not detected, or below limit of detection.

DF: Dilution Factor

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

N 11188 Rec'd 01/06/10 COC Number

COMMENTS þ 10 Days PAGE NUMBER OF CONTAINERS TURNAROUND TIME DATE 01/06/10 $\overline{\omega}$ 2 Total Metals (200.7) Cr (300.0) F. NO3. NO2. SO4 75M1 95,5 A (0.00E) anoinA × × Total Metals (200.7) See List Below CHAIN OF CUSTODY RECORD × [IM3Plant-WDR-238] × Tille 22 Metals List (200.7, 200.8, 245.1) 10S (2540 c) × × Cr(VI) (218.6) Lab Fillerad × × × DESCRIPTION 530-339-3303 08% 0 8% 14201 Franklin Avenue, Tustin, CA 92780-7008 (714)730-8239 FAX: (714) 730-6462 ž HWHYSTS 01/06/10 01/06/10 55 Grand Ave Ste 1000 CATE **IRUESDAIL LABORATORIES, INC.** Oakland, CA 94612 PG&E Topock IM3 530-229-3303 CH2M HILL Æ2 392895.AAADM 7611 SC-700B-WDR-238 SC-100B-WDR-238 SAMPLERS (SIGNATURE PROJECT NAME P.O. NUMBER SAMPLE 1D. COMPANY ADDRESS SAMPL PHOME त्र

۴ The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, ò WARM | SAMPLE CONDITIONS YES C000 SPECIAL REQUIREMENTS: CUSTODY SEALED Mo, Ni, Fe, Zn RECEIVED Dale' 1-6-70 \$\langle \(\frac{\partial}{p} \) Date! / – 6 – 70
Time 20:00
Date!
Time
Date!
Time Date! / - 66-7 D Time Date/ CHAIN OF CUSTODY SIGNATURE RECORD 1.12 127 8.45 Company/ Agency C Company/ Agency Company/ Agency Company/ Agency Agency Company/ Company/ Agency 200 BIORYAG 101 B. DAY46 0845 Printed Name Bonifacio Dave Name Printed Printed Printed Printed Printed Name 0840 (Relinquished) / 9 6/12 (Relinquished) (Relinquished) (Received) t (Received) Se-100B Signature (Received) Signature Signature Signature Signature Signature

TOTAL NUMBER OF CONTAINERS

80

00

7.67

0849

0.840

SC-200B





Sample Integrity & Analysis Discrepancy Form

Clie	ent:CH2MHMA	Lab # 9	07110
Date	e Delivered: 01 / 06 /10 Time: 20:00 By: Mail Delivered	d Service: [Client
1.	Was a Chain of Custody received and signed?	·/	
2.	Does Customer require an acknowledgement of the COC?	☐Yes ☐No	
3.	Are there any special requirements or notes on the COC?	□Yes □No	
4.	tf a letter was sent with the COC, does it match the COC?	□Yes □No	
5 .	Were all requested analyses understood and acceptable?	☐Yes ☐No	
c		☐Yes □No	$\square N/A$
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>4°</u> C	☐Yes □No	□N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	_ □Yes □ No	□ N /A
8.	Were sample custody seals intact?	□Yes □No	□N/A
9.	Does the number of samples received agree with COC?	ØYes □No	
10.	Did sample labels correspond with the client ID's?	taYes □No	□N/A
11.	Did sample labels indica j€ proper preservation? Preserved (if yes) by: ☑Truesdail □Client	taYes □No	□N/A
12.	Were samples pH checked? pH = <u>See</u> C • O · C-	daYes □No	□N/A
13.	Were all analyses within better	tives DNo	□N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): RUSH Turn Around Time (TAT): RUSH	tres DNo	□N/A
1 <i>5</i> .	Sample Matrix: □Liquid □Drinking Water □Ground Wate	D1444	
	DSludge Death Divis	er 🗅 Waste er <u>IV A 7</u>	e vvater ER
16.	Comments:		•
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	afact	Davi/~



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

January 25, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-239 PROJECT, GROUNDWATER

MONITORING, TLI No.: 987246

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-239 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on January 13, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for the matrix spike for Hexavalent Chromium analysis by EPA 218.6 was just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services

K. R. P. Gya

K.R.P. Iyer

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 987246

Date: January 25, 2010 Collected: January 13, 2010

Received: January 13, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120,1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Daniel Kang
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM



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14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 [714] 730-6239 - FAX [7]4] 730-6462 - www.fuesdail.com

Laboratory No.: 987246

Date Received: January 13, 2010

Analytical Results Summary

			:
	SM 2540C <i>TDS</i>	mg/L	4310
ſ	EPA 120.1 EC	mp/soyum	7290
	SM 2130B Turbidity	NTU	0.170
	EPA 218.6 Chromium Hexavalent	μg/L	S
	EPA 200.8 Chromium Total	Hg/L	1.37
	Sample Time		1-239 08:15
	Sample I.D.	i :	SC-700B-WOR-239
	<u>Lab I.O.</u>	:	987246

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.001 will have two (2) significant figures. Result above or equal to 0.001 will have three (3) significant figures. O ality Control data will always have three (3) significant figures.

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 011510A

Laboratory No.: 987246

Date: January 25, 2010

Collected: January 13, 2010

Received: January 13, 2010 Prep/ Analyzed: January 15, 2010

Analyticai Batch: 011510A

·

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer

using EPA 200.8

Analytical Results Total Chromium

TLI I.D. Field I.D. <u>Units</u> Run Time <u>Method</u> DF RL Results SC-700B-WDR-239 987246 ug/L **EPA 200.8** 13:39 5.00 1.00 1.37

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987246	1.37	1.37	0.00%	<u>≤</u> 20%	Yes

QC Std I,D,	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
мѕ	987246	1.37	5.00	50.0	250	238	251	94.7%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00		<1.00	Yes
MRÇCS	50.3	50.0	101%	90% - 110%	Yes
MRCVS#1	49.8	50.0	99.6%	90% - 110%	Yes
MRCVS#2	48.6	50.0	97.2%	90% - 110%	Yes
ICS	50.3	50.0	101%	_80% - 120%	Yes
LCS	51.9	50.0	104%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

EXCELLENCE IN INDEPENDENT TESTING



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987246

Date: January 25, 2010

Collected: January 13, 2010 Received: January 13, 2010

Prep/ Analyzed: January 15, 2010

Analytical Batch: 01CrH10E

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

<u> TLI I.D.</u> <u>Field</u> I.D. Sample Time Run Time <u>Units</u> DF Results RL 987246 SC-700B-WDR-239 08:15 05:58 μg/L 1.05 0.20 NĎ

QA/QC Summary

							<u> </u>	mmar	<u>y</u> .				
	QC ST) I.D.		oratory umber	Concentr	ation		licate ntration	Relative Percent Difference	ľ	ceptance limits	QC Within Control	
	<u>Duplic</u>	ate	98	7247-1	797		8	03	0.75%		≤ 20%	Yes	
QC Std I.D.	Lab Number	uns	nc.of piked nple	Dilutio Factor	Added Spike Conc.	_	MS ount	Measured Conc. of spiked sample	Theoretic Conc. of spiked sam	R	MS% ecovery	Acceptance limits	QC Within Control
//S	987246	0.	176	1.06	1.00	1	.06	1.23	1,24		99.4%	90 - 110%	Yes
		6	C Std	I.D.	Measured Concentration		eoretical centration	Perce Recove	- -		QC With Contro	I	
	*		Blani	k .	ND		<0.200		<0.2	00	Yes		
			MRCC	s	4.91		5.00	98.29	6 90%	110%	Yes		
			MRCVS	3#1	10.3		10.0	103%	95% -	105%	Yes		
			MRCVS	5#2	10.4		10.0	104%	95% -	105%	Yes		
		١,	MRCV5	S#3	10.4		10.0	104%	05%	105%	Voc		

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted.

90% - 110%

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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5.00

99.0%

4.95

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Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987246

Date: January 25, 2010

Collected: January 13, 2010

Received: January 13, 2010 Prep/ Analyzed: January 14, 2010

Analytical Batch: 01TUC10J

Investigation;

Turbidity by Method SM 2130B

Analytical Results Turbidity

<u>TLI I.D.</u>

Field I.D.

Sample Time

<u>Units</u>

. <u>DF</u>

<u>RL</u>

Results

987246

SC-700B-WDR-239

08:15

NTU

1.00

0.100

0.170

009

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987245-27	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100		<0.100	Yes
LCS	7.93	8.00	99.1%	90% - 110%	Yes
LCS	7.70	8.00	96.3%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager

Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987246

Date: January 25, 2010

Collected: January 13, 2010 Received: January 13, 2010

Prep/ Analyzed: January 14, 2010

Analytical Batch: 01EC10D

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.

Field I.D.

Units

Method

DF

<u>RL</u>

Recults

987246

SC-700B-WDR-239

μmhos/cm

EPA 120.1

1.00

2.00

7290

010

QA/QC Summary

Duplicate 987246 7290 7300 0.14% < 10% Vo	QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
1000 0.1470	Duplicate	987246	7290	7300	0.14%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00		<2.00	Yes
ccs	704	706	99.7%	90% - 110%	Yes
CVS#1	998	998	100%	90% - 110%	Yes
LCS	706	706	100%	90% - 110%	Yes
LCSD	706	706	100%	90% - 110%	Yes

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7006 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987246

Date: January 25, 2010 Collected: January 13, 2010

Received: January 13, 2010 Prep/ Analyzed: January 15, 2010

Analytical Batch: 01TDS10F

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.

Field I.D.

<u>Units</u>

<u>Method</u>

<u>RL</u>

Resulte

987246

SC-700B-WDR-239

mg/L

SM 2540C

250

4310

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	987246	4310	4220	1.06%	<u>⊀</u> 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LCS	498	500	99.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

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01/13/10

₩987246

CHAIN OF CUSTODY RECORD

TRUESDAIL LABORATORIES, INC. 14201 Franklin Avenue, Tuetin, CA 92780-7008 (714)730-5239 FAX: (714) 730-6462 www.truesdail.com

[IM3Plant-WDR-239]

٩ 10 Days PAGE TURNAROUND TIME DATE 01/13/10 COC Number

COMMENTS

NUMBER OF CONTAINERS

FAX (530) 339-3303

155 Grand Ave Ste 1000

ADORESS

(530) 229-3303

₩SE

PG&E Topock

PROJECT WANE

ដ

COMPANY

Oakland, CA 94612

Turbidity (SAV2130) 108 (SM2540C) Specific Conductance (1201)

TEAM

392895 AA.DM

P.O. NUMBER

SAMPLERS (SIGNATURE

DESCRIPTION Water PT#1

ž

DATE

01/13/10

SC-700B-WDR-239

SAMPLE 10

7

d

8.9

×

TOTAL NUMBER OF CONTAINERS

9

AMANAS

7100

TEMP

0850

タベック

1001

400,

For Sample Conditions See Form Attached

evel III QC

	1/ / CHAINC	CHAIN OF CUSTODY SIGNATUR	SNATURE RECORD	1-13-40	SAMPLE CONDITIONS
Signature (Relinquished)	Printed Name	Jan J	Company! DMT	Dates 1520.	RECEIVED COOL WARM
Signature (Received)	Loka (Au Alame	Jakel 1	Company! T. X. T. Agency	Dete/ / - /3-40 Time / C + 20	CUSTODY SEALED YES ONO
Signature (Relinquished	Sale Dinted	Rated	Company/ T : / I	Date /-/3-/0 Time	SPECIAL REGUIREMENTS:
Signature (Received) A	Shakeun Mane	Sugle uning	Company/ 72.2	Dated AN TS CONT.	
Signature (Relinquished)	Printed Name		Company/ Agency	Date/ Time	
Signature (Received)	Printed Name		Company/ Agency	Dete/ Time	



Sample Integrity & Analysis Discrepancy Form

	ent: <u>E2/</u>	Lab # 9 (3724
Dat	te Delivered: <u>❷ / _/3</u> /10		Client
1.	Was a Chain of Custody received and signed?	XYes □No	
2.	Does Customer require an acknowledgement of the COC?	□Yes □No	
3.	Are there any special requirements or notes on the COC?	□Yes □No	^
4.	tf a letter was sent with the COC, does it match the COC?	□Yes □No	• •
5 .	Were all requested analyses understood and acceptable?	Mayes □No	Je,N/A □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? ½.3° C	Yes □No	
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	√DiYes ⊡No	□N/A
₿.	Were sample custody seals intact?	□Yes □No	≱ N/A
9.	Does the number of samples received agree with COC?	√ΩYes □No	
10.	Did sample labels correspond with the client ID's?	ΔYes □No	
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: Marruesdail □Client	¥Yes □No	
12.	Were samples pH checked? pH = Sec C. O. C.	⊡ Yes □No	□N/A
13.	Were all analyses within holding times to	Ø1Yes □No	
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH ☑ Std	Ø(Yes □No	□N/A
5.	Sample Matrix: □Liquid □Drinking Water □Ground Wate		
6.	Comments:		······································
<i>7</i> .	Sample Check-In completed by Truesdail Log-In/Receiving:	Hicking	<u></u> صرورو لد مد



14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

February 2, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-240 PROJECT, GROUNDWATER

MONITORING, TLI No.: 987349

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-240 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on January 19, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for the matrix spike for Hexavalent Chromium analysis by EPA 218.6 was just outside the tetention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

Due to an error during sample log-in, turbidity by SM 2130 B was analyzed past the method specified holding time.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services

K.R.P. Syc

K.R.P. Iver

Quality Assurance/Quality Control Officer

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 987349

Date: February 2, 2010 Collected: January 19, 2010

Received: January 19, 2010

ANALYST LIST

METAOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

CORRECTIVE ACTION NOTE

Wet Chemistry Group

Date Analyst Batch# TLI# Client Ills 10 G. Savani 017uclo 0 987349 E0 Consulting Engine C.Condition Requiring Corrective Action: af Turbidaty was not analyzed within the required holding time date received: 1/19/10 dat	Description:		,	•	
Condition Requiring Corrective Action: a) Turbidity was not analyzed within the required holding time date received: 1/19/10 Anti embyzed: 1/25/10 missed giving a custidy, here are was not given the samples chain of austroly, here are was did not know that there was sample requiring turbide. Action Requested/Recommended: Proj. Manager requested the analysis of the Sample although passed the holding time. Requested by S. Condon Date 1/25, Action taken: - Analyzed the sample - Informed the log-in personnel to always give chain custody to Wet Chemistry or double check if all Chemistry or double check if all Chemistry were given to Wet Chemistry			Batch #	TLI#	Client
Condition Requiring Corrective Action: a) Turbidity was not analyzed within the required holding time date received: 1/19/10 date received: 1/25/10 missed giving a custody here are well them has not given/the samples chain of austroly here are was sample requiring turbide. Action Requested/Recommended: Proj. Manager required the analysis of the Sample although passed the holding time. Requested by S. Condon Date 1/25, Action taken: - Analyzed the sample - Informed the log-in personnel to always give chain analysis of the control of all Chains were given to well chemistry.	1/25/10	G. Savani	DITUCIO O	987349	
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- Analyzed the sample - Informed the log-in personnel to always give chain custody to wet Chemistry or double check if all Che were given to welchemistry					
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- Informed the log-in personnel to always give chain custody to wet Chemistry or double check if all Chewistry were given to wet Chemistry	Anal	7 . 8 1/2	Chinal		
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	Cus	tody to We	+ Chemista	or double	check if all Clo
	We	re airen t	2 Wet Chan	i chi	
Action taken by G. Savani / P. Trinidad Date 1/25/		970077	109 4037	577 Y	
Date 1/75/	ction taken by	G Sugari 1	Ptanded		- 1/201
		3. Swani j	· / / maga		Date
		Sune	rvisor/Reviewer	m Li	
Supervisor/Pavious Pa 1		Supe	a visoi/Keviewet; _		
Supervisor/Reviewer: profile dad			QA/QC Officer:	VO	0 0.10
		Supe			dad 1. gdl

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14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 - FAX (714) 730-6462 - www.troesdail.com

Established 1931

Date Received: January 19, 2010

Laboratory No.: 987349

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612 Attention: Shawn Duffy Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Analytical Results Summary

			:
SM 2540C TDS		mg/L	4140
EPA 120.1 EC		mp/soum	7070
SM 2130B Turbidity		₩TU	N O
EPA 218.6 Chromium	Hexavalent	μg/L	Ð
EPA 200.8 Chromium	Total	μg/L	ND
ample Time		,	08:00
Sample I.D. S	,		987349 SC-700B-WDR-240
<u>Lab f.D.</u>		:	987349

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results:
Results below 0.001 will have two (2) significant figures.
Result above or equal to 0.001 will have three (3) significant figures.
Quality Control data will always have three (3) significant figures.

Laboratory

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

OC STD LD

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 012110A

Laboratory No.: 987349

Date: February 2, 2010

Collected: January 19, 2010 Received: January 19, 2010

Prep/ Analyzed: January 21, 2010

QC Within I

Analytical Batch: 012110A

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8

Analytical Results Total Chromium

TLI I.D. Field I.D. Units <u>Method</u> Run Time DF RL Resulte 987349 SC-700B-WDR-240 μg/L EPA 200.8 10:31 5.00 1.00 ND

QA/QC Summary

Duplicate

		N	lumber	Conc	entration	 		Difference	limits	Control	
	Duplic	ate 9	87349	<u> </u>	ND	<u> </u>	VD	0.00%	<u><</u> 20%	Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilutie Facto	Soil	(e A	MS mount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sampl	MS% Recovery	Acceptance limits	QC WithIn Control
MS	987349	0.00	5.00	50.	0	250	249	250	99.6%	75-125%	Yes
		QC Std	I.D.	Measure Concentra		heoretical ncentratio					

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00		<1.00	Yes
MRCCS	48.2	50.0	96.4%	90% - 110%	Yes
MRCVS#1	48.3	50.0	96.6%	90% - 110%	Yes
ics	48.8	50.0	97.6%	80% - 120%	Yes
LCS	49.3	50.0	98.6%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Acceptance

Mona Nassimi, Manager Analytical Services

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Laboratory No.: 987349

Date: February 2, 2010

Collected: January 19, 2010 Received: January 19, 2010

Prep/ Analyzed: January 26, 2010

Analytical Batch: 01CrH10H

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

TLI 1.D. Field I.D. Sample Time Run Time <u>Units</u> DF RL Results 987349 SC-700B-WDR-240 08:00 09:11 μg/L 1.05 0.20 ND

QA/QC Summary

	QC ST	D I.D.		orato umber	•	Concentra		, -	olicate entration	Relative Percent Differenc	'		ptance mits	T	QC Within Control				
	Duplic	ate	98	7348-	4	2.80			3.21	13.6%	<u> </u>	≤	20%	十	Yes				
QC Std I.D.	Lab Number	uns	nc.of piked nple	Dilut Faci	-	Added Spike Conc.		//S ount	Measured Conc. of spiked sample	Theore Conc. spiked sa	of	l ast	MS% covery	Ac	ceptance limit	ts Wi	2C Ithin ntrol		
MŞ	987349	987349 0.00 1.06 1		1.00	1.06 1		1.13	1.06		107%			90 - 110%		Yes				
			IC Std	I.D.		Measured encentration	_	eoretical centration	Perce Recove		ptanc imits	е	QC Witt						
			Blank		Blank			ND <0		<0.200		<0.200		0 Yes		_			
			MRCC	S		5.21		5.00	104%	90%	- 1109	%	Yes						
			MRCVS	5#1		10.2		10.0	102%	95%	- 1059	%	Yes						

10.0

10.0

5.00

98.3%

97.9%

104%

ND: Below the reporting limit (Not Detected).

MRCVS#2

MRCVS#3

LÇŞ

9.83

9.79

5.21

DF: Dilution Factor.

Respectfully submitted,

95% - 105%

95% - 105%

90% - 110%

TRUESDAIL LABORATORIES, INC.

Yes

Yes

" Mona Nassimi, Manager **Analytical Services**

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM **P.O. No.:** 392895.AA.DM

Laboratory No.: 987349

Date: February 2, 2010

Collected: January 19, 2010

Received: January 19, 2010 Prep/ Analyzed: January 25, 2010

Analytical Batch: 01TUC100

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

 TLI I.D.
 Field I.D.
 Sample Time
 Units
 DF
 RL
 Results

 987349
 SC-700B-WDR-240
 08:00
 NTU
 1.00
 0.100
 ND J

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	'Acceptance limits	QC Within Control
Duplicate	987415-16	ND	20.02	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ΝD	<0.100		<0.100	Yes
LCS	7.73	8.00	96.6%	90% - 110%	Yes
LCS	7.81	8.00	97.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931



REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987349

Date: February 2, 2010

www.truesdail.com

Collected: January 19, 2010 Received: January 19, 2010

Prep/ Analyzed: January 25, 2010

Analytical Batch: 01EC10H

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D. Field I.D. Units Method <u>DF</u> <u>RL</u> Results 987349 SC-700B-WDR-240 µmhos/cm EPA 120.1 1.00 2.00 7070

QA/QC Summary

QC ST	D Laborato Numbe	* Cancantrat	ION I	uplicate centration		tive Percent ifference		eptance limits	QC Within Control
Duplica	nte 987349	7070		7070		0.00%		10%	Yes
	QC Std I.D.	Measured Concentration	Theoretic Concentrat		cent overy	Acceptant Limits	Ce	QC Withi	n
	Blank	ND	<2.00			<2.00		Yes	\neg
L	ccs	704	706	99.	7%	90% - 110	~	Yes	7
	CV\$#1	996	998	99.	8%	90% - 110		Yes	-
-	LCS	706	706	10	0%	90% - 110	%	Yes	7
Ļ	LCSD	706	706	10	0%	90% - 110	%	Yes	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager **Analytical Services**

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TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 FAX (714) 730-6462 www.truesdail.com

14201 FRANKLIN AVENUE



Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987349

Date: February 2, 2010

Collected: January 19, 2010

Received: January 19, 2010 Prep/ Analyzed: January 25, 2010

Analytical Batch: 01TDS10K

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D. 987349 Field I.D.

SC-700B-WDR-240

Unite mg/L Method SM 2540C

<u>RL</u> 250 Resulte 4140

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	987246	4140	4140	0.00%	≤ 5%	Yes
		Manager T.				- 1

QC Std I,D,	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	NĎ	<25.0		<25.0	Yes
LCS	496	500	99.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit,

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

... Mona Nassimi, Manager

Analytical Services

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TRUESDAR LABORATORIES, INC.
14201 Franklin Avenue, Tustin, CA \$2780-7008
(714)730-6239 FAX: {714} 730-6482 987349

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-240]

ç	2	

Number

Rec'd 01/19/10

TURNAROUND TIME

10 Days

PAGE 1 DATE 01/19/10

								ŀ	ŀ	ŀ	-	ŀ				_	_				
COMPANY	E2						****	****	***		•	•	*****	•	•	•	•	_	_	COMMENTS	
PROJECT NAME	PG&E Topock					•	****					*****	*****	-	*******		******	_	_		
PHONE	(530) 229-3303		K (530)	FAX (530) 339-3303				11:00		-	*****	****	*****	-		******		s	_		
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612	Ste 1000 612	1			Po	olal Chrom	(1501)								****************	PARINTA	AENIATV			
P.O. NUMBER	392895.AA.DM		TEAN			Se Filler	(100	93(10)-	-	(0012	****	****	***********		**********	*********	ODYC	·····			
SAMPLERS (SKKATURE	ATURE				(9.8)	7 / SIE 10/	~~~	PISZNE	MS) A	West -	•			****	****	•	<i>83</i> €				
SAMPLE 1.D.		DATE	TIME	DESCREPTION	CVB (2)	VIEIOJ	Woods)sa	_			1					WON				
SC-700B-WDR-240	R-240	01/19/10	as	Water	×	×	×	×	×								_	T G	4-7		٠
										,		:				<u></u>	2	FOTAL	UMBER O	FOTAL NUMBER OF CONTAINERS	

- BOH	806	900	815	R
16.2	7.0.7	7.53.	001.8	18.89
1EMP.	- Hd	2 7	, 'X	7AL-1

For Semple Condition Form Attached Level III QC

	CHAIN	CHAIN OF CUSTODY SIGNATUR	GNATURE RECORD		SAMPLE CONDITIONS
delinquished A.	Printed Name	pel Legion	Company!	Delet 1-19-10 Time 48 15 45	RECEIVED COOL WARM F
gnature (eceived)	Printed Name	of HIPNITA	Company! H	Date 7-19-10	CUSTODY SEALED YES NO 13
ignature Relinquished	Printed Name	4//2011/ par	Companyi \mathcal{H}		SPECIAL REQUIREMENTS:
ignature (Printed Printed	to Rel	Company! T. A. T. A.	Date 1-/9-10	
gnature (elinquished)	Printed Name	ted f	Company/ Agency	Dater Time	
gnature (eceived)	Printed Name	ted 1e	Company! Agency	Dele/ Time	Total Control





Sample Integrity & Analysis Discrepancy Form

	ent: CH2M HILL	Lab # 987349
Dat	te Delivered: <u>01 / 19 /</u> 10 Time: <u>2 / ∶0</u> 0 By: □Mail 址Fi	eld Service
1.	Was a Chain of Custody received and signed?	tayes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No tan/A
3.	Are there any special requirements or notes on the COC?	Yes ONO WAYA
4 .	If a letter was sent with the COC, does it match the COC?	Yes No DANA
5.	Were all requested analyses understood and acceptable?	Eves DNO DNA
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>♣/° C</u>	ZeYes \(\text{No} \) \(\text{DN/A} \)
7 .	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	Yes □No □N/A
8.	Were sample custody seals intact?	□Yes □No □N/A
9.	Does the number of samples received agree with COC?	Oryes □No □N/A
10.	Did sample tabets correspond with the client ID's?	DYes DNo DNA
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: Truesdail Client	□Yes □No DANA
12.	Were samples pH checked? pH =	□Yes □No tan/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	Zerves ONO ON/A
14,	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH □ Std	ZYes DNo DN/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Wipe □Paint □Solid 🗹 Ot	ajer □Waste Water her_/L/ATER
16.	Comments:	
7.	Sample Check-In completed by Truesdail Log-In/Receiving:	Rafael Davila



14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

February 3, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-241 PROJECT, GROUNDWATER

MONITORING, TLI NO.: 987492

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-241 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on January 27, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for the matrix spike for Hexavalent Chromium analysis by EPA 218.6 was just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

/c∕Mona Nassimi

Manager, Analytical Services

K. R. P. gyer

K.R.P. lyer

Quality Assurance/Quality Control Officer

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895 AA DM

Laboratory No.: 987492

Date: February 3, 2010

Collected: January 27, 2010 Received: January 27, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Daniel Kang
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky



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> Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Laboratory No.: 987492 Date Received: January 27, 2010

Analytical Results Summary

SM 2540C 7DS	mg/L	4310
EPA 120.1 EC	umhos/cm	7250
SM 2130B Turbidity	NTU	0.102
EPA 218.6 Chromium Hexavalent	µg/L	9
EPA 200.8 Chromium Total	μg/L	Q
Sample Time		08:25
Sample I.D.		SC-700B-WDR-241
<u>Lab I.D.</u>		987492

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.001 will have two (2) significant figures. Result above or equal to 0.001 will have three (3) significant figures. Quality Control data will always have three (3) significant figures.

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895,AA,DM

Prep. Batch: 013110A

Laboratory No.: 987492

Date: February 3, 2010

Collected: January 27, 2010 Received: January 27, 2010

Prep/ Analyzed: January 31, 2010

Analytical Batch: 013110A

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8

Analytical Results Total Chromium

TLI I.D. Field I.D. Units <u>Me</u>thod Run Time DF RL Results 987492 SC-700B-WDR-241 μg/L EPA 200.8 21:57 5.00 1.00 ND

QA/QC Summary

	QC STD I,D,	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control	
	Duplicate	987492	ND	ND	0.00%	<u><</u> 20%	Yes	١
Т		6		Measured	1			<u>-</u>

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987492	0.00	5.00	50.0	250	233	250	93.2%	75-125%	Yes
								00.270	-	1 .00

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC WithIn Control
Blank	ND	<1.00		<1.00	Yes
MRCCS	48.4	50.0	96.8%	90% - 110%	Yes
MRCVS#1	47.2	50.0	94.4%	90% - 110%	Yes
MRCVS#2	47.2	50.0	94.4%	90% - 110%	Yes
MRCV\$#3	48.6	50.0	97.2%	90% - 110%	Yes
ICS	47.5	50.0	95.0%	80% - 120%	Yes
LCS	48.3	50.0	96.6%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

√₋₋ Mona Nassimi, Manager

Analytical Services

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REPORT

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Laboratory No.: 987492

Date: February 3, 2010

Collected: January 27, 2010

Received: January 27, 2010

Prep/ Analyzed: January 29, 2010

Analytical Batch: 01CrH101

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D.	<u>Field I.D.</u>	Sample Time	Run Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
987492	SC-700B-WDR-241	08:25	09:38	μ g/L	1.05	0.20	. ND

QA/QC Summary

	QC STI		N	orator	_	Concentra	ation		licate ntration	P	elative ercent fference		eptance limits		QC Within Control	
	Duplic	ate	98	7348-4	<u> </u>	1.50		1 1	.60		6.5%		20%		Yes	
QC 8td I.D.	Lab Number	uns	nc.of piked nple	Dilut Fact		Added Spike Conc.	-	MS ount	Measured Conc. of spiked sample	'	Theoretical Conc. of liked sample	l a.	MS% ecovery	Ac	cceptance limits	QC Within Control
MS	987492	Q.	00	1.0	6	1.00	1	.06	0.984	T	1.06		92.8%		90 - 110%	Yes
		٥	C Std	I.D.		Measured Incentration		eoretical centration	Perce Recove		Acceptan Limits	CO	QC Wit		1	
			Blani	,		ND		0.200			<0.200		Yes	_	1	
			MRCC	s		5.12		5.00	102%	,	90% - 110		Yes	_		
		^	/RCVS	i#1		9.77		10.0	97.79	6	95% - 105	_	Yes		1	

10.0

5.00

97.7%

100%

103%

ND: Below the reporting limit (Not Detected).

MRCVS#2

10.0

5.15

DF: Dilution Factor.

Respectfully submitted,

95% - 105%

95% - 105%

90% - 110%

TRUESDAIL LABORATORIES, INC.

Yes

Yes

Yes

Mona Nassimi, Manager **Analytical Services**

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EXCELLENCE IN INDEPENDENT TESTING

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REPORT

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895,AA.DM Laboratory No.: 987492

Date: February 3, 2010

www.truesdail.com

Collected: January 27, 2010 Received: January 27, 2010

Prep/ Analyzed: January 28, 2010

Analytical Batch: 01TUC10Q

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

TLI I.D.

Field I.D.

Sample Time

Units

DF

RL

Results

987492

SC-700B-WDR-241

08:25

NTU

1.00

0.100

0.102

QA/QC Summarv

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptence limits	QC Within Control
Duplicate	987492	0.102	0.103	0.98%	≤ 20%	Yes

QC Std 1.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	< <u>0</u> .100		<0.100	Yeş
LCS	7.70	8.00	96.3%	90% - 110%	Yes
LCS	7.83	8.00	97.9%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Oilution Factor.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

QC STD | Laboratory

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

P.O. No.: 392895,AA,DM

Laboratory No.; 987492

Date: February 3, 2010

Collected: January 27, 2010

Received: January 27, 2010 Prep/ Analyzed: January 28, 2010

Analytical Batch: 01EC10M

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D. Field I.D. Units Method DF RL Results 987492 SC-700B-WDR-241 umhos/cm EPA 120.1 1.00 2.00 7250

I.D.	Number	" Concontest	ion Concer		1	tive Percent lifference		eptance imits	QC Within Control
Duplic	ate 987492	7250	72	70		0.28%		10%	Yes
	QC Std I.D.	Measured Concentration	Theoretical Concentration	Perce		Acceptan Limits	Ce	QC Withi Control	n
ļ	Blank	ND	<2.00			<2.00		Yes	
1	ccs	705	706	99.9	%	90% - 110	%	Yes	7
ļ	CVS#1	995	998	99.7	%	90% - 110	%	Yes	1
į.	CVS#2	994	998	99.6	%	90% - 110	%	Yes	
	LCS	705	706	99.9	%	90% - 110	%	Yes	
Ļ	LCSD	705	706	99.9	%	90% - 110	%	Yes	-

Respectfully submitted. TRUESDAIL LABORATORIES, INC.

 $t_{i,j}$, Mona Nassimi, Manager Analytical Services

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987492

Date: February 3, 2010

Collected: January 27, 2010

Received: January 27, 2010 Prep/ Analyzed: January 28, 2010

Analytical Batch: 01TDS10M

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D. 987492 <u>Field I.D.</u>

SC-700B-WDR-241

Units mg/L Method SM 2540C

<u>RL</u> 250 Results 4310

QA/QC Summarv

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance fimits	QC Within Control
Duplicate	987492	4310	4400	1.03%	<u>≺</u> 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LCS	497	500	99.4%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

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Rec'd 01/27/10

987492

TRUESDAL LABORATORES, INC. 14201 Franklin Avenue, Tustin, CA 92780-7009 (714)730-6239 FAX: (714) 730-6462 www.truesdail.com

PG&E Topock

PROJECT NAME

COMPANY

CHAIN OF CUSTODY RECORD

[M3Plant-WDR-241]

COC Number

뇽

PAGE

10 Days

COMMENTS

987 492 DATE OFFICTION

FAX (530) 339-3303

NUMBER OF CONTAINERS Turbidity (SM2130) × TDS (SM2S4OC) (1021) Someranor Conduction × (7.005) PIEMAN (200.7) DESCRIPTION Water TEAN Ħ 01127HO (282) 55 Grand Ave Ste 1000 DATE Oakland, CA 94612 (530) 229-3303 392895.AA.DM SAMPLERS (SIGNATURE SC-700B-WDR-241

P.O. NUMBER

ADDRESS

PHONE

Level III QC

For Sample Condition See Form Attach

TOTAL NUMBER OF CONTAINERS

M

Thens 70.00

1410 ğ

100, らい

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10 X

Marks S

3HWHS

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0825

04/12/1

SC-700B

	10		CHAIN OF CUSTODY SIGNAT	F CUST	ODY SIC	SNATUR	URE RECORD		1-22-16	2010		Ϋ́S	SAMPLE CONDITIONS	DITIONS		
	Signature (Relinquished)	7%	Printed Name		DE	Company/ Agency	ZIM	O. Tir	Oate/ $/53$	30	RECEIVED	D 1000		WARM		<u>r</u>
	Signature (Received)	lad	Printed Name	N.	13	Company/ Agency	ガソ・ /	Ι, Ι	2 - / pu	Date /-27-10	CUSTODY SEALED	EALED	YES	2	_	
	Signature (Relinquished)	12/	Printed Name	100	100	Company/ Agency	T. XIT	3 ;≛	166' / - 27	Time 2/200	SPECIAL REQUIREMENTS:	CEMENTS:				
	Signature (H. B.	unin	Printed	Just 1	2.	Company/ Agency	I71.	Da Ti	Dated TimeJAN 27 2010	7 2010						
31	Signature (Relinquished)		Printed Name			Company/ Agency		₽.E.	Deta/ Time	31:00						
	Signature (Received)		Printed Name			Company/ Agency		Date. Time	Date/ Time							

1872

SAMPLE 10.

Sample Integrity & Analysis Discrepancy Form

	ent:E2	Lab # 9874 92
Dat	te Delivered: <u>0/</u> / <u>2.7</u> /10 Time: <u>2/:0</u> 0 By: □Mail ⊠Fie	ld Service
1.	Was a Chain of Custody received and signed?	⊠Yes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No ⊠N/A
З.	Are there any special requirements or notes on the COC?	□Yes □No ⊠N/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No ☑N/A
5.	Were all requested analyses understood and acceptable?	⊠Yes □No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>서 ° C</u> A ERT !!	⊈Yes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles Leevel III QC	Yes □No □N/A
8.	Were sample custody seals intact?	. □Yes □No ØjN/A
9.	Does the number of samples received agree with COC?	⊈Yes □No □N/A
10.	Did sample labels correspond with the client ID's?	ØYes □No □N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □Truesdall □Client	□Yes □No ÆN/A
12,	Were samples pH checked? pH = SLL C. O. C.	d√Yes □No □N/A
13,	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	✓Yes □No □N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH ☑ Std	PYes □No □N/A
15,	Sample Matrix: □Liquid □Drinking Water □Ground Wa	nter □Waste Water
	□Sludge □Soil □Wipe □Paint □Solid ☒Oth	1.1
6.	Comments:	
7.	Sample Check-In completed by Truesdail Log-In/Receiving:	? Shehuin



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

February 17, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-242 PROJECT, GROUNDWATER

MONITORING,

TLI No.: 987628

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-242 project groundwater monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on February 3, 2010, intact and in chilled condition. The samples will be kept in a locked reftigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Mr. Shawn Duffy of CH2M Hill cancelled the analysis for TOC on sample SC-100B-WDR-242.

The straight run for the matrix spike for sample SC-700B-WDR-242 for Hexavalent Chromium analysis by EPA 218.6 was just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

A Mona Nassimi

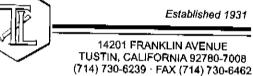
Manager, Analytical Services

K. R. P. Syca K.R.P. Iyer

Quality Assurance/Quality Control Officer



www.truesdall.com



February 17, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

PG&E TOPOCK 1M3PLANT-WDR-242 PROJECT, GROUNDWATER MONITORING, SAMPLE

SC-501-WDR-242,

TLI No.: 987628

Mr. Shawn Duffy of CH2M Hill requested that sodium hydroxide be added to an aliquot of sample SC-501-WDR-242. Granular sodium hydroxide was added to 50 mL of sample, while stirring, until a pH of 10 was achieved. A dark red precipitate formed and was allowed to settle overnight. Before sodium hydroxide addition, the sample was yellow in color. After sodium hydroxide addition and settling, the supernatant was clear and colorless. A portion of the supernatant was then pipetted off and analyzed for Total Iron (349 ug/L) and Total Manganese (14.6 ug/L) by EPA 200.7. Before sodium hydroxide was added, the results for Total Iron and Total Manganese were 515,000 ug/L and 21,000 ug/L, respectively.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted, TRUESDAIL LABORATORIES, INC.

/

✓ Mona Nassimi

Manager, Analytical Services

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 987628

Date: February 17, 2010

Collected: February 3, 2010 Received: February 3, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST.
EPA 120.1	Specific Conductivity	_ Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 300.0 Anions		Giawad Ghenniwa
SM 4500-NH3 D	Ammonia	Iordan Stavrev
SM 4500-NO2 B	Nitrite as N	Tina Acquiat
EPA 200.7	Metals by ICP	Kris Collins
EPA 200.8 Metals by ICP/MS		Romuel Chavez / Daniel Kang
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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Date Received: February 3, 2010

Laboratory No.: 987628

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Analytical Results Summary

				!	
SM 4500-NH3 D Ammonia ma/L	2	QN			
EPA 218.6 Hexavalent Chronium uafL	2	1200			
SM 2130B Turbidity NTU	S	9	SM 4500-NO2 B Nitrite as N mg/L	Q	QN
SM 2540C TDS mg/L	4510	823	EPA 300.0 Nifrate as M mg/L	3.14	3.38
<u>EPA 120.1</u> ΕC μπhos/cm	7210	7690	EPA 300.0 Sutfate mg/L	524	57.1
			EPA 300.0 Fluoride mg/L	2.23	2.48
Sample Time	08:10	08:10	<u>Sample Тіте</u>	08:10	08:10
Sample I.D.	SC-700B-WDR-242	SC-100B-WDR-242		SC-700B-WDR-242	SC-100B-WDR-242
<u>Lab I.D.</u>	987628-1	987628-2	<u> </u>	987628-1	987628-2

ND: Non Defected (below reporting Imal)

mg/L: Miligrams per liter.

Note: The following "Signahcan Figures" rute has been applied to all results:
Results below 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm will have three (3) significant figures.
Quelty Control data will always have three (3) significant figures.

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Date Received: February 3, 2010 Laboratory No.: 987628

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Analytical Results Summary

Total Metal Analyses as Requested METALS ANALYSIS:

Portophan so socially incl	Aluminum Antimony Arsenic Barium Chromium Copper Lead EPA 200.8 EPA 200.8 EPA 200.8 EPA 200.8 EPA 200.8 EPA 200.8 EPA 200.8 Date of Analysis: 02/09/10 02/05/10 02/05/10 02/05/10 12/19/08 02/05/10	איפין	08:10 ND ND 14.3 ND ND ND	08:10 ND ND 3.58 24.2 1020 ND ND	Manganese Molybdenum Nickel Zinc	EPA 200.7 EPA 200.8 EPA 200.8 EPA 200.8	Date of Analysis: 02/08/10 02/05/10 02/05/10 02/08/10	Time Coll. #g/L #g/L µg/L	08:10 35.9 17.4 ND ND	08:10 ND 24.4 NO 13.1	13:30 21000	Boron Iron	EPA 200.7 EPA 200.7	Date of Analysis: 02/08/10 02/08/10	Time Coll. புதிட புதிட	47.44	08:10
					Nangan	EPA 20						Boror	EPA 20			8-10 087	
	Date of A	Lab I.O. Sample ID Tim	987628-1 SC-700B-WDR-242 0	987628-2 SC-100B-WDR-242 0			Date of A	Lab i.D. Sample ID Tim	987628-1 SC-700B-WDR-242 0	987528-2 SC-100B-WDR-242 0	987628-3 SC-501-WDR-242 1			Date of A	Labi.D. SampleiD Tim	CAC GON GOOT 22	

007

ND: Not detected, or below limit of detection

515000

i

SC-501-WDR-242

987628-3

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895,AA,DM

Laboratory No.: 987628

Date: February 17, 2010 Collected: February 3, 2010

Received: February 3, 2010
Prep/ Analyzed: February 4, 2010

Analytical Batch: 02EC10D

Investigation:

Specific Conductivity by EPA 120.1

REPORT

Analytical Results Specific Conductivity

TLI I.D.	<u>Field I.D.</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
987628-1	SC-700B-WDR-242	μmhos/cm	EPA 120.1	1.00	2.00	7210
987628-2	SC-100B-WDR-242	μmhos/cm	EPA 120.1	1.00	2.00	7690

QA/QC Summary

Relative

QC ST	D Laborato Numbe	' L Conc	entration	Concentra		Percent Difference		eptance mits	Control
Duplica	te 987628-	2 7	7690	7700		0.13%	<u> </u>	10%	Yes
	QC Std I.D.	Measure	ed	Theoretical	Percen	t Accepta	псе	QC Withi	

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	DN	<2.00		<2.00	Yes
ccs	704	706	99.7%	90% - 110%	Yes
CVS#1	995	998	99.7%	90% - 110%	Yes
LÇS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

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Mona Nassimi, Manager Analytical Services

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 392895.AA.DM P.O. No.: 392895.AA,DM

REPORT

Laboratory No.: 987628 Date: February 17, 2010 Collected: February 3, 2010 Received: February 3, 2010

Prep/ Analyzed: February 4, 2010 Analytical Batch: 02TDS10B

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

<u>TLI I.D.</u>	<u>Field I.D.</u>	<u>Units</u>	<u>Method</u>	<u>RL</u>	Results
987628-1	SC-700B-WDR-242	mg/L	SM 2540C	250	4510
987628-2	SC-100B-WDR-242	mg/L	SM 2540C	250	5430

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	987628-1	4510	4430	0.89%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LCS 1	501	500	100%	90% - 110%	Yes
LCS 2	497	500	99.4%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit,

Respectfully submitted. TRUESDAIL LABORATORIES, INC.

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😓 Mona Nassimi, Manager Analytical Services

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

REPORT

Laboratory No.: 987628

Date: February 17, 2010

Collected: February 3, 2010 Received: February 3, 2010

Prep/ Analyzed: February 4, 2010

Analytical Batch: 02TUC10E

investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

<u>TLI I.D.</u>	<u>Field I.D.</u>	Sample Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
98 7 628-1	SC-700B-WDR-242	08:10	NTU	1.00	0.100	ND
98 7 628-2	SC-100B-WDR-242	08:10	NTU	1.00	0.100	ND

QA/QC Summary

QC STO I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987628-2	ND	ND	0.00%	≤ 20%	Yes
			·· ·			

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100		<0.100	Yes
LCS	7.90	8.00	98.8%	90% - 110%	Yes
LCS	7.73	8.00	96.6%	90% - 110%	Yes

ND: Gelow the reporting limit (Not Detected).

DE: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 02CrH10D

Laboratory No.: 987628

Date: Februery 17, 2010

Collected: February 3, 2010

Received: February 3, 2010 Prep/ Analyzed: February 4, 2010

Analytical Batch: 02CrH10D

Investigation:

Hexavalent Chromium by IC Using Method EPA 218.6

Analytical Results Hexavalent Chromium

<u>TLI I.D.</u>	<u>Field I.D.</u>	<u>Sample Time</u>	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
987628-1	\$C-700B-WDR-242	08:10	10:28	μg/L	1.05	0.20	ND
987628-2	SC-100B-WDR-242	08:10	10:38	μg/L	52.5	10.5	1200

QA/QC Summary

	QC STE	I.D.	Laboratory Number		Laboratory Number					Duplicate Concentration			eptance limits	QC Within Control	
	Duplic	ate		98760	00-5	861		8	67	0.69%	•	20%	Yes		
QC Std I.D.	Lab Number	Conc. unspik samp	ked (Diluti	on Factor	Added Spike Conc.	_	MS nount	Measured Conc. of spiked sample	Theoretica Conc. of spiked sample		MS% covery	Acceptance limits	QC Within Control	
MS	987628-1	0.00)		1.06	1.00		1.06	1.04	1.06	(98.1%	90-110%	Yes	
MS	987628-2	1200	0		52.5	25.0	•	1313	2550	2513		103%	90-110%	Yes	
		ac	Std (.D.		Bured ntration		neoretical ncentratio				QC Witi Contro			
		1 .	Pal 1-			LP4	I	-0.000	1	1 .0.00		1	1		

QC Std I.D.			Recovery	Acceptance Limits	Control
Blank	ND	<0.200		<0.200	Yes
MRCCS	5.17	5.00	103%	90% - 110%	Yes
MRCVS#1	10.5	10.0	105%	95% - 105%	Yes
MRCVS#2	10.2	10.0	102%	95% - 105%	Yes
MRCVS#3	9.83	10.0	98.3%	95% - 105%	Yes
LCS	5.19	5.00	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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Laboratory No.: 987628

Collected: February 3, 2010

Received: February 3, 2010

Prep/ Analyzad: February 9, 2010

Date: February 17, 2010

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Analytical Batch: 02NH3-E10B

Investigation:

Ammonia as N by Method SM 4500-NH3 D

Analytical Results Ammonia as N

<u>TLI I.D.</u>	Field I.D.	Sample Time	<u>Method</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
987628-1	SC-700B-WDR-242	08:10	SM 4500-NH3 D	mg/L	1.00	0.500	ND
987628-2	SC-100B-WDR-242	08:10	SM 4500-NH3 D	mg/L	1.00	0.500	ND

QA/QC Summary

	QC ST			aborato Numbe	r <u></u>	Concentra	tion	Du _l Conce	entr	ation	Pe Dif	elative ercent ference	Acceptance limits		limits		Co	Within ntrol	
QC Sta	Lab Number	Co	nc.of piked mple		tion ctor	Added Spike Conc.		M8 nount	C	easured conc. of spiked sample	TI	heoretical Conc. of spiked sample		AS% covery	Acce	es ptance nits	QC Within		
MS	987628-1	0	.00	1.	00	6.00	Ű	3.00		5.77	İ	6.00	9	6.2%	75-	125%	Yes		
			QC Sto	1 I.D.		easured centration		eoretica Icentrati		Percer Recove		Acceptar Limits		QC With Contro					
			- Bian	ık		ND		<0.500				<0.500	Ĭ	Yes					
			MRC	cs		5.77		6.00		96.2%	5 T	90% - 11	0%	Yes					

6.00

10.0

95.7%

105%

90% - 110%

90% - 110%

ND: Below the reporting limit (Not Detected).

MRCVS#1

LCS

5.74

10.5

DF: Dilution Factor.

Respectfully submitted. TRUESDAIL LABORATORIES, INC.

Yes

Yes

🖅 Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987628

Date: February 17, 2010

Collected: February 3, 2010 Received: February 3, 2010

Prep/ Analyzed: February 4, 2010

Analytical Batch: 02AN10C

Investigation:

Fluoride by Ion Chromatography using EPA 300.0

Analytical Results Fluoride

<u>TĻI 1.D.</u>	<u>Field I.D.</u>	Sample Time	Run Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
987628-1	SC-700B-WDR-242	08:10	12:43	mg/L	5.00	0.500	2.23
987628-2	SC-100B-WDR-242	08:10	12:55	mg/L	5.00	0.500	2.48

QA/QC Summary

Relative

	QCST		Nun	nber		Concentration		Concentration		tration	Percent Difference	ilmits		Control	
	Duplic	ate	9876	21-1	0.881		0.8	72	1.03%	1	≤ 20%	Yes			
QC Std I.D.	Lab Number	Conc.o unspike sample	a a	illution Factor	Added Spike Conc.	MS Amount		Measured Conc. of spiked sample	Theoretical Conc. of spiked sample		MS% covery	Acceptance limits	QC Within Control		
MS	987621-1	0.881		1,00	2.00		2.00	2.88	2.88	·	100%	85-115%	Yes		
		QC 8	td 1.D.		easured centration	ı	neoretical	Percen			QC With				

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	NÓ	<0.500		<0.500	Yes
MRCCS	4.16	4.00	104%	90% - 110%	Yes
MRCVS#1	3.14	3.00	105%	90% - 110%	Yes
MRCVS#2	3.13	3.00	104%	90% - 110%	Yes
MRCVS#3	3.14	3.00	105%	90% - 110%	Yes
LCS	4.07	4.00	102%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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Laboratory

EXCELLENCE IN INDEPENDENT TESTING

Established 1931



REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project

Project No.: 392895,AA,DM P.O. No.: 392895,AA,DM Laboratory No.: 987628

Date: February 17, 2010

QC Within

Collected: February 3, 2010

Received: February 3, 2010 Prep/ Analyzed: February 4, 2010

Analytical Batch: 02AN10C

Acceptance

Investigation:

Sulfate by Method EPA 300.0

Analytical Results Sulfate

TLI I.D.	<u>Field I.D.</u>	<u>Sample Time</u>	Run Time	<u>Unite</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
987628-1	\$C-700B-WDR-242	08:10	17:28	mg/L	25.0	12.5	524
987628-2	SC-100B-WDR-242	08:10	17:40	mg/L	25.0	12.5	571

QA/QC Summary

Duplicate

Relative

	uc 312	, i.D.	Number	CONCARCIA	iuon	Conc	entration	Difference	ilmits	Control	
	Duplic	ate	987621-3	21.1		1	21.4	1.41%	≤ 20%	Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	i Dilution	Added Spike Conc.	_	MS nount	Measured Conc. of spiked sample	Theoretica Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MŞ	987621-3	21,1	10.0	4.00		40.0	61.5	61.1	· 101%	85-115%	Yes
			" ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '								

QC \$td I,D,	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.500		<0.500	Yes
MRCCS	20.0	20.0	100%	90% - 110%	Yes
MRCVS#1	15.1	15.0	101%	90% - 110%	Yes
MRCVS#2	15.0	15.0	100%	90% - 110%	Yes
MRCVS#3	15.0	15.0	100%	90% - 110%	Yes
MRÇV\$#4	15.1	15.0	101%	90% - 110%	Yes
LCS	20.1	20.0	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987628

Date: February 17, 2010

Collected: February 3, 2010 Received: February 3, 2010

Prep/ Analyzed: February 4, 2010

Analytical Batch: 02AN10C

Investigation:

Nitrate as N by Ion Chromatography using EPA 300.0

Analytical Results Nitrate as N

TLI I.D.	Field I.D.	Sample Time	Run Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
987628-1	SC-700B-WDR-242	08:10	12:43	mg/L	5.00	1.00	3.14
987628-2	SC-100B-WDR-242	08:10	12:55	mg/L	5.00	1.00	3.38

QA/QC Summary

											,						
	QC STD			borat	_	Concentr	ation		plic ent	ate ration	F	Relative Percent Ifference		eptance imits	T	QC Within Control	
	Duplica	ate	9	87623	-6	ND.			ND			0.00%	•	20%	1	Yes	
QC Std I.D.	Lab Number	Con unsp sam	iked		ition ctor	Added Spike Conc.	ľ	MS nount	٩	leasured Conc. of spiked sample		heoretical Conc. of spiked sample		MS% covery		Acceptance limits	QC Within Control
MS	987623-6	0,2	32	1.	00	2.00	2	2.00		2.28		2.23		02%		85-115%	Yes
		Q	C Std	I.D.		entration		eoretica centrati		Percer Recove		Acceptan Limits		QC With			1_ ,
			Blank			ND		<0.500				<0.500		Yes	\exists		
			MRCC	S		4.01		4.00		100%	,	90% - 110)%	Yes			
		<u>M</u>	RCVS	#1		2.98		3.00		99.3%	,	90% - 110)%	Yes	\neg		
		<u> </u>	RCVS	#2		2.99		3.00		99.7%	,	90% - 110)%	Yeş		'	
			LCS			4.01		4.00		100%	. T	90% - 110	194	Vac	_		

ND: Selow the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 392895,AA,DM

P.O. No.: 392895,AA,DM

Laboratory No.: 987628

Date: February 17, 2010

Collected: February 3, 2010 Received: February 3, 2010

Prep/ Analyzed: February 4, 2010

Analytical Batch: 02NO210C

Investigation:

Nitrite as N by Method SM 4500-NO2-B

Analytical Results for Nitrite as N

<u>TLI I.D.</u>	<u>Field I.D.</u>	<u>Sample Time</u>	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	Recults
987628-1	SC-700B-WDR-242	08:10	10:07	mg/L	1.00	0.500	ND
987628-2	SC-100B-WDR-242	08:10	10:08	mg/L,	1.00	0.500	ND

QA/QC Summary

Relative

	QC STI) I.D.	Number	Concentra	ition i	ncentration	Percent Difference	Acceptance limits	Control	
	Duplic	ate	987628-1	ΝĎ		ND	0.00%	<u><</u> 20%	Yes	
QC Stal	Leb Number	Conc.o unspike sample	d Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987628-1	0,00	1.00	0.0200	0.0200	0.0195	0.0200	97.5%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	22	<0.500		<0.500	Yes
MRCC\$	0.0266	0.0270	98.5%	90% - 110%	Yes
_MRCVS#1	0.0195	0.0200	97.5%	90% - 110%	Yes
LCS	0.0464	0.0450	103%	90% - 110%	Voc

ND: Below the reporting limit (Not Detected).

OF: Dilution Factor.

Respectfully submitted,

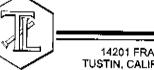
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
 Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING

Established 1931



Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Samples: Three (3) Groundwater Samples

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Investigation: Total Metal Analyses as Requested

REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Laboratory No.: 987628

Reported: February 17, 2010 Collected: February 3, 2010 Received: February 3, 2010

Analyzed: See Below

Analytical Results

SAMPLE ID:	SC-700B-WDR-242	Time Col	lected:	08:10		LAS ID	987628-1	
Parameter	Method	Reported <u>Value</u>	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	μg/L	50.0	020910B	02/09/10	15;19
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	020510A	02/05/10	14:39
<u>Arsenic</u>	EPA 200.8	ND	5.00	μg/L	1,00	020510A	02/05/10	14:39
<u>Barium</u>	EPA 200.8	14.3	5.00	μg/L	10,0	020510A	02/05/10	14:39
Chromium	EPA 200.8	ND	5.00	μ g/ L	1.00	020510A	02/05/10	14:39
Copper	EPA 200.8	ND	5.00	<u>µg/L</u>	5.00	020510A	02/05/10	14:39
Lead	EPA 200.8	ND	5.00	μ g/L	10.0	020510A	02/05/10	14:39
Manganese	EPA 200.7	35.9	1.00	μ g/L	10.0	020810A-Th	02/08/10	10:52
Molybdenum	EPA 200.8	17.4	5.00	μg/L	10.0	020510A	02/05/10	14:39
Nickel	EPA 200.8	ND	5.00	<u>µg/L</u>	10.0	020510A	02/05/10	14:39
Zinc	EPA 200.8	ND	5.00	μg/L	10.0	020910B	02/09/10	15:19
Boron	EPA 200.7	987	1.00	μg/L	200	020810A-Th	02/08/10	10:52
Iron	EPA 200.7	ND	1.00	µg/L	20.0	020810A-Th	02/08/10	10:52

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Report Continued

SAMPLE ID: SC-1	00B-WDR-242	Time Col	lected:	08:10		LAB ID	987628-2	1-1
Parameter	Method	Reported Value	DF	Units	RL.	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	μg/L	50.0	020910B	02/09/10	15:45
Antimony	EPA 200.8	ND	5.00	μ g/ L	10.0	020510A	02/05/10	15:05
Arsenic	EPA 200.8	3.58	5.00	μ g/L	1.00	020510A	02/05/10	15:05
Barlum	EPA 200.8	24.2	5.00	μ g/ L	10.0	020510A	02/05/10	15:05
Chromium	EPA 200.8	1020	5.00	 µg/L	1.00	020510A	02/05/10	15:05
Copper	EPA 200.8	ND	5.00	μ g/L	5.00	020510A	02/05/10	15:05
Lead	EPA 200.8	ND	5.00	μ g/L	10.0	020510A	02/05/10	
Manganese	EPA 200,7	ND	1.00	μg/L	10.0	020810A-Th	02/05/10	15:05 11:14
Molybdenum	EPA 200.8	24.4	5.00	μ g/L	10.0	020510A	02/05/10	
Nickel	EPA 200.8	ND	5.00	μg/L_	10.0	020510A		<u> 15:05</u>
Zinc	EPA 200.8	13.1	5.00	µg/L	10.0	020910A	02/05/10	15:05
Boron	EPA 200.7	1030	1.00		200		02/09/10	<u>15:45</u>
1ron	EPA 200.7	ND	1.00	μ g/ L μ g/L	20.0	020810A-Th 020810A-Th	02/08/10 02/08/10	11:14 11:14

SAMPLE ID: SC-501-	VDR-242	Time C	ollected: 13	1:30	 -	LAB ID:	987628-3	
D		Reported			· ·	· <u> </u>	Date	Time
Parameter	Method	Value	DF	Units	RL_	Batch	Analyzed	Analyzed
Manganese	<u>EPA 200.7</u>	21000	11.1	μg/L	111	020510B-Th	02/05/10	18:16
<u>Iron</u>	EPA 200.7	515000	111	µg/L	1110	020510B-Th	02/05/10	17:40

ND: Not detected,or below limit of detection.

DF: Dilution factor.

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Samples: Three (3) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Established 1931

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7508 (714) 730-6462 - www.truesdail.com

Laboratory No.: 987628

Reported: February 17, 2010 Collected: February 3, 2010

Received: February 3, 2010

Quality Control/Quality Assurance Report

				BLANK		MRCCS				MRCVS			
						Observed	TRUE	*	Control	Observed	TRUE	米	Control
Pazameter	Method	Batch	Units	Blank	R	Value	Value	Rec	Limits	Value	Value	Rec	Limits %
Aluminum	EPA 200.8	02091 0B	hQr/L	QV	50.0	49.1	50.0	98.2%	90-110%	53.5	50.0	107%	90-110%
Antimony	EPA 200.8	02051 0 A	µg/L	ND	10.0	48.2	50.0	96.4%	90-110%	46.6	50.0	93.2%	90-110%
Arsenic	EPA 200.8	02051 0 A	mg/L	S	0.200	48.8	20:0	89.76	90-110%	48.8	50.0	97.6%	90-110%
Barium	EPA 200.8	020510A	μg/L	ND	10.0	46.3	20:0	92.6%	90-110%	45.9	20:0	91.8%	90-110%
Chromium	EPA 200.8	020510A	μgγ	NO	1.00	47.9	20.0	95.8%	90-110%	47.5	50.0	92.0%	90-110%
Copper	EPA 200.8	020510A	цgЦ	NO	2.00	48.0	20.0	%0.96	90-110%	47.4	20.0	94.8%	90-110%
Lead	EPA 200.8	020510A	μgվ	Q	10.0	48.7	20.0	97.4%	90-110%	47.4	50.0	88.48	90-110%
Manganese	EPA 200.7	020810A-Th	ug/L	QN	10.0	5010	2000	100%	95-105%	5010	2000	100%	90-110%
Manganese	EPA 200.7	EPA 200.7 0205108-Th	hg/L	QN	10.0	2050	2000	100%	95-105%	2000	2000	100%	90-110%
Molybdenum	EPA 200.8	020510A	иgЛ	ΝD	10.0	48.6	50.0	97.2%	90-110%	46.3	50.0	92.6%	90-110%
Nickel	EPA 200.8	02051 0 A	hgy	ND	10.0	47.0	20.0	94.0%	90-110%	47.2	20.0	94.4%	90-110%
Zinc	EPA 200.8	020910B	right.	Q	10.0	52.3	20.0	105%	90-110%	90.6	20:0	101%	90-110%
Boron	€PA 200.7	020810A-Th	μgγ	QN	200	4870	5000	97.4%	95-105%	4900	2000	98.0%	90-110%
lron	EPA 200.7	020810A-Th	₩.	QN	20.0	4900	2000	98:0%	95-105%	2000	2000	100%	90-110%
Iron	EPA 200.7	EPA 200.7 020510B-Th	ugiL	ON	20.0	2000	2000	100%	95-105%	5020	2000	100%	90-110%



Report Continued

INTERFERENCE CHECK STANDARD

Parameter	Method	Units	<u>S</u>	<u>S</u>	'nξ	Control
			Obe.	Theo.	Rec.	Limits
Aleminum	EPA 200.8	μĐΨ	54.3	50.0	109%	80-120%
Arsenic	EPA 200.8	щOL	48.0	50.0	96.0%	80-120%
Chromium	EPA 200.8	Jø/	47.2	50.0	94.4%	80-120%
Copper	EPA 200.8	1/Brt	47.8	50.0	95.6%	80-120%
Manganese	EPA 200.7	rg.	2010	2000	101%	80-120%
Manganese	EPA 200.7	тфт	2020	2000	101%	80-120%
Nickel	EPA 200.8	Lg/L	46.6	50.0	93.2%	80-120%
Zinc	EPA 200.8	L/Gri	49.8	50.0	%9.66	80-120%
lron	EPA 200.7		1990	2000	99.5%	80-120%
lon	EPA 200.7	μg/L	2010	2000	101%	80-120%

Parameter Method Units LCS LIMIT SAMPLE SAMPLE SAMPLE PRESULT Aluminum EPA 2008 µg/L 51.3 50.0 103% 90-110% 987628-1 ND Antimony EPA 2008 µg/L 47.9 50.0 93.6% 90-110% 987628-1 ND Arsenic EPA 2008 µg/L 47.9 50.0 95.6% 90-110% 987628-1 ND Copper EPA 2008 µg/L 47.8 50.0 95.6% 90-110% 987628-1 ND Copper EPA 2008 µg/L 48.2 50.0 96.4% 90-110% 987628-1 ND Lead EPA 2008 µg/L 48.7 50.0 96.4% 90-110% 987628-1 ND Manganese EPA 2007 µg/L 48.4 50.0 96.8% 90-110% 987628-1 ND				LABORATO	LABORATORY CONTROL SAMPLES	SAMPLES		SAMPLE DUPLICATES	LICATES			
Authorium Metrodo Unites LLS LCS Kec. Limits Control SAMPLE Luminum EPA 200.8 μg/L 45.3 50.0 103% 90-110% 987628-1 Alimony EPA 200.8 μg/L 46.8 50.0 93.6% 90-110% 987628-1 Arsenic EPA 200.8 μg/L 47.9 50.0 95.8% 90-110% 987628-1 Arsenic EPA 200.8 μg/L 47.9 50.0 95.8% 90-110% 987628-1 Arsenic EPA 200.8 μg/L 48.7 50.0 95.8% 90-110% 987628-1 Arsenic EPA 200.8 μg/L 48.7 50.0 95.8% 90-110% 987628-1 Arsenic EPA 200.8 μg/L 48.40 50.0 96.8% 90-110% 987628-1 Arsenic EPA 200.7 μg/L 46.40 50.0 96.8% 90-110% 987628-1 Arsenic EPA 200.7 μg/L 47.1 50.0<	Darmon	11.44.4	1	Ş		i						Precision
Dec. Dec. Dec. Dec. Limits Dec. Limits Dec. Limits Dec. Limits Dec. Limits Dec. Limits Dec. Dec. Limits Dec. Dec.	raidilala	рошам		S	837	×	Control	SANPLE	SAMPLE	ā	3 ₹	Control
Luminum EPA 200.8 µg/L 51.3 50.0 93.6% 90-110% 987628-1 Renic EPA 200.8 µg/L 47.9 50.0 93.6% 90-110% 987628-1 seric EPA 200.8 µg/L 47.9 50.0 95.8% 90-110% 987628-1 arium EPA 200.8 µg/L 47.8 50.0 91.8% 90-110% 987628-1 hromium EPA 200.8 µg/L 47.8 50.0 95.6% 90-110% 987628-1 ead EPA 200.8 µg/L 48.7 50.0 95.8% 90-110% 987628-1 ead EPA 200.8 µg/L 48.7 50.0 95.8% 90-110% 987628-1 langanese EPA 200.7 µg/L 48.0 50.0 95.8% 90-110% 987628-1 lickel EPA 200.8 µg/L 47.1 50.0 94.2% 90-110% 987628-1 nc EPA 200.8 µg/L 47.1 50.0 95.8% 9				0.bs.	Тъво.	Rec	Limits	Q	RESULT	RESULT	a.	Linits %
nimeny EPA 200.8 µg/L 46.8 50.0 93.6% 90-110% 987628-1 rashic EPA 200.8 µg/L 47.9 50.0 95.8% 90-110% 987628-1 nromium EPA 200.8 µg/L 47.8 50.0 91.8% 90-110% 987628-1 poper EPA 200.8 µg/L 48.2 50.0 96.4% 90-110% 987628-1 sed EPA 200.8 µg/L 48.7 50.0 96.4% 90-110% 987628-1 sed EPA 200.7 µg/L 48.7 50.0 96.4% 90-110% 987628-1 langanese EPA 200.7 µg/L 48.40 50.0 97.4% 90-110% 987628-1 langanese EPA 200.7 µg/L 46.8 50.0 97.2% 90-110% 987628-1 colybdenum EPA 200.7 µg/L 47.1 50.0 94.2% 90-110% 987628-1 col EPA 200.8 µg/L 47.9 50.0 95.8%	Aluminum	EPA 200.8	rg/	51.3	50.0	103%	90-110%	987628-1	QN	QN	%00'0	, Z
ritemic EPA 200.8 μg/L 47.9 50.0 95.8% 90-110% 987628-1 aritum EPA 200.8 μg/L 45.9 50.0 91.8% 90-110% 987628-1 hromium EPA 200.8 μg/L 47.8 50.0 95.6% 90-110% 987628-1 opper EPA 200.8 μg/L 48.2 50.0 95.6% 90-110% 987628-1 add EPA 200.7 μg/L 48.7 50.0 97.4% 90-110% 987628-1 langanese EPA 200.7 μg/L 48.0 50.0 96.8% 90-110% 987628-1 langanese EPA 200.7 μg/L 46.8 50.0 96.8% 90-110% 987628-1 objectnum EPA 200.8 μg/L 47.1 50.0 94.2% 90-110% 987628-1 och EPA 200.8 μg/L 47.1 50.0 94.2% 90-110% 987628-1 och EPA 200.7 μg/L 4850 50.0 97.2%	Antimony	EPA 200.8	тgн	46.8	20.0	93.6%	90-110%	987628-1	Ð	S	0.00%	i 83
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hromium EPA 200.8 μg/L 47.8 50.0 95.6% 90-110% 987628-1 opper EPA 200.8 μg/L 48.7 50.0 96.4% 90-110% 987628-1 sad EPA 200.8 μg/L 48.7 50.0 97.4% 90-110% 987628-1 langanese EPA 200.7 μg/L 2010 2000 101% 90-110% 987628-1 olybdenum EPA 200.7 μg/L 46.8 50.0 93.6% 90-110% 987628-1 olybdenum EPA 200.8 μg/L 47.1 50.0 94.2% 90-110% 987628-1 och EPA 200.8 μg/L 47.9 50.0 94.2% 90-110% 987628-1 och EPA 200.7 μg/L 4850 50.0 97.2% 90-110% 987628-1 och EPA 200.7 μg/L 4850 5000 97.0% 90-110% 987628-1 och EPA 200.7 μg/L 4850 5000 97.0% <th< td=""><td>Barium</td><td>EPA 200.8</td><td>EG/</td><td>45.9</td><td>50.0</td><td>91.8%</td><td>90-110%</td><td>987628-1</td><td>14.3</td><td>13.8</td><td>3.56%</td><td>000</td></th<>	Barium	EPA 200.8	EG/	45.9	50.0	91.8%	90-110%	987628-1	14.3	13.8	3.56%	000
copper EPA 200.8 µg/L 48.2 50.0 96.4% 90-110% 987628-1 ead EPA 200.8 µg/L 48.7 50.0 97.4% 90-110% 987628-1 langanese EPA 200.7 µg/L 4840 50.0 96.8% 90-110% 987628-1 langanese EPA 200.7 µg/L 46.8 50.0 93.6% 90-110% 987628-1 olybdenum EPA 200.8 µg/L 47.1 50.0 93.6% 90-110% 987628-1 nc EPA 200.8 µg/L 47.1 50.0 95.8% 90-110% 987628-1 sion EPA 200.7 µg/L 4850 50.0 97.2% 90-110% 987628-1 sion EPA 200.7 µg/L 4850 5000 97.2% 90-110% 987628-1 sion EPA 200.7 µg/L 2030 200 97.0% 90-110% 987628-1 sion EPA 200.7 µg/L 2030 200 97.0% 9	Chromium	EPA 200.8	Đ.	47.8	50.0	95.6%	90-110%	987628-1	9	S	%000	(S)
ead EPA 200.8 µg/L 48.7 50.0 97.4% 90-110% 987528-1 langanese EPA 200.7 µg/L 4840 5000 96.8% 90-110% 987628-1 olybdenum EPA 200.7 µg/L 46.8 50.0 93.6% 90-110% 987628-1 olybdenum EPA 200.8 µg/L 47.1 50.0 94.2% 90-110% 987628-1 ickel EPA 200.8 µg/L 47.1 50.0 94.2% 90-110% 987628-1 non EPA 200.7 µg/L 4850 50.0 97.2% 90-110% 987628-1 non EPA 200.7 µg/L 4850 5000 97.2% 90-110% 987628-1 non EPA 200.7 µg/L 2030 2000 97.0% 90-110% 987628-1 non EPA 200.7 µg/L 2030 2000 97.0% 90-110% 987628-1	Copper	EPA 200.8	Hg/L	48.2	50.0	96.4%	90-110%	987628-1	2	2	%0000	ି
langanese EPA 200.7 µg/L 2010 5000 96.8% 90-110% 987628-1 singanese EPA 200.7 µg/L 2010 2000 101% 90-110% 987628-3 olybdenum EPA 200.8 µg/L 46.8 50.0 93.6% 90-110% 987628-1 ickel EPA 200.8 µg/L 47.1 50.0 94.2% 90-110% 987628-1 non EPA 200.7 µg/L 4850 50.0 97.2% 90-110% 987628-1 non EPA 200.7 µg/L 4850 5000 97.0% 90-110% 987628-1 non EPA 200.7 µg/L 2030 2000 97.0% 90-110% 987628-1 non EPA 200.7 µg/L 2030 2000 97.0% 90-110% 987628-1	Lead	EPA 200.8	ц о ў.	48.7	50.0	97.4%	90-110%	987628-1	2	S	0.00%	ि
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olybdenum EPA 200.8 µg/L 46.8 50.0 93.6% 90-110% 967628-1 cickel EPA 200.8 µg/L 47.1 50.0 94.2% 90-110% 987628-1 nc EPA 200.8 µg/L 47.9 50.0 95.8% 90-110% 987628-1 sion EPA 200.7 µg/L 4860 5000 97.2% 90-110% 987628-1 sin EPA 200.7 µg/L 4850 5000 97.0% 90-110% 987628-1 sin EPA 200.7 µg/L 2030 2000 102% 90-110% 987628-1	Manganese	EPA 200.7		2010	2000	101%	90-110%	987628-3	21000	21200	0.95%	5
ickel EPA 200.8 µg/L 47.1 50.0 94.2% 90-110% 967628-1 nc EPA 200.8 µg/L 47.9 50.0 95.8% 90-110% 987628-1 oron EPA 200.7 µg/L 4850 50.00 97.2% 90-110% 987628-1 on EPA 200.7 µg/L 4850 5000 97.0% 90-110% 987628-1 on EPA 200.7 µg/L 2030 2000 102% 90-110% 987628-1	Molybdennm	EPA 200.8	μgγ	46.8	20.0	93.6%	90-110%	987628-1	17.4	17.1	1.74%	8
nc EPA 200.8 µg/L 47.9 50.0 95.8% 90-110% 987628-1 sion EPA 200.7 µg/L 4850 5000 97.2% 90-110% 987628-1 sin EPA 200.7 µg/L 4850 5000 97.0% 90-110% 987628-1 sin EPA 200.7 µg/L 2030 2000 102% 90-110% 987628-1	Nickel	EPA 200.8	16H	47.1	50.0	94.2%	90-110%	987628-1	2	Ð	0.00%	900
oron EPA 200.7 μg/L 4860 5000 97.2% 90-110% 987628-1 on EPA 200.7 μg/L 4850 5000 97.0% 90-110% 987628-1 on EPA 200.7 μg/L 2030 2000 102% 90-110% 987628-1	Zinc	EPA 200.8	ng/L	47.9	50.0	95.8%	90-110%	987628-1	S	2	0.00%	\$
on EPA 200.7 µg/L 4850 5000 97.0% 90-110% 987628-1	Boron	EPA 200.7	μg/L	4860	2000	97.2%	90-110%	987628-1	987	1010	2.30%	5
on EPA 200.7 µg/L 2030 2000 102% 90-110% 987628-1	uol	EPA 200.7	иgЛ	4850	2000	97.0%	90-110%	987628-1	Q.	Ð	0.00%	଼ ଜିନ୍ଦ
	ion	EPA 200.7	μ 0/ Γ	2030	2000	102%	90-110%	987628-1	515000	516000	0.19%	5
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This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

MATRIX SPIKE	ų										Accuracy
0 00	; ;	;		Sample		Spike	Total Amt.	Theo.	¥8	94	Control
Sampe ID	ralameter	Method	Units	Result	OF	Level	of Spike	Value	op eq	Rec.	Limits %
987628-1	Auminum	EPA 200.8	μg/L	0.00	5.00	50.0	250	250	240	%0'96	75-125%
987628-1	Antimony	EPA 200.8	µ9∕L	0.00	5.00	50.0	250	250	232	92.8%	75-125%
987628-1	Arsenic	EPA 200.8	μg/L	0.00	5.00	50.0	250	250	244	97.6%	75-125%
987628-1	Barium	EPA 200.8	1 6π	14.3	5.00	50.0	250	75	236	88.7%	75-125%
987628-1	Chromium	EPA 200.8	μ ο /L	0.00	5.00	50.0	250	250	224	89.6%	75-125%
987628-1	Copper	EPA 200.8	ug/L	0.00	5.00	20.0	250	250	209	83.6%	75-125%
987628-1	Lead	EPA 200.8	明	0.00	5.00	50.0	250	250	210	84.0%	75-125%
987628-1	Manganese	EPA 200.7	Hg/L	35.9	1.00	2000	2000	2036	1950	95.7%	75-125%
987628-3	Manganese	EPA 200.7	Ъбц	21000	11.1	2000	22200	43200	40300	86.9%	75-125%
987628-1	Molybdenum	EPA 200.8	иgvî.	17.4	5.00	50.0	250	267	260	%0'26	75-125%
987628-1	Nickel	EPA 200.8	hg/L	2.90	5.00	50.0	250	253	211	83.2%	75-125%
987628-1	Zinc	EPA 200.8	µg/L	0.00	5.00	90.09	250	250	235	94.0%	75-125%
987628-1	Boron	EPA 200.7	µg∕L	287	1.00	2000	2000	2987	2900	95.7%	75-125%
987628-1	lron	EPA 200.7	μg/L	00.0	1.00	2000	2000	2000	1880	\$2.0%	75-125%
987628-1	lron	EPA 200.7	μg/L	515000	111	2000	222000	737000	738000	100%	75-125%

ND: Not detected, or below limit of detection.

OF: Oilution Factor

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

987628 CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-242]

TRUESDAL LABORATORIES, INC. 14201 Franklin Avenue, Tustin, CA 92780-7008 (714)730-6239 FAX: (714) 730-6462 www.truesdell.com

PAGE 1 10 Days **TURNAROUND TIME** DATE 02/03/10

OF COC Number

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TOTAL NUMBER OF CONTAINERS	6						У.	15.9	•	(۵	005	` /	5 ,	00.		013		59	ک	5180	0/80	2/3/10	5C-700B
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	¥	•		36		ON :		/o.	CAV	200	_			(50)	Θυ,						1612	Oakland, CA 94612	
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7	-	•		•	200	******		-	MOYE	-	_		542	•	-						M3	PG&E Topock IM3	PROJECT NAME
COMMENTS	_	_	•	~~	•	_		****	****	•	-	•	(1)	_	_							CH2M HILL Æ2	COMPANY

3 7

L	7	CHAIN	CHAIN OF CUSTODY SIGNATU	IGNATURE RECORD	2-3-10	SAMPLE CONDITIONS
	Signature (Relinquished)	Printed Printed	Det JAGE	Company! OMI	Date 1530	RECEIVED COOL WARM "F
	Signaturé (Received) XO	Dull Dulle Name	bed Labor	Company! T. A. T. Agency	Date/ ス・3ー/ O Time / 5 * 2 *5	CUSTODY SEALED YES NO
	Signature (Relinquished)	Printed	led Roled	Company! T. K. T.	Date 2 3 - 10	SPECIAL REQUIREMENTS:
1	Signature (Received)	Printed Printed	bed Luga	Company ' 7 2 T	Date EB 03 2010	The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, Mo, Ni, Fe, Zn
ັ _້ ວັ	Signature (Relinquished)	Printed Name	ted ie	Company/	Date: 27:06	
<u>, , , , , , , , , , , , , , , , , , , </u>	Signature (Received)	Printed Name	bed ie	Company/Confidence		
J				See FORTH A	TECTION OF	





Sample Integrity & Analysis Discrepancy Form

Clien	E: CREMPUL	_{Lab #} 987 628
Date	Delivered: 2_/3_/10 Time: <u>2/:</u> 00 By: □Mail □Field	d Service □Client
1.	Was a Chain of Custody received and signed?	taryes ONO ON/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No ŒN/A
3.	Are there any special requirements or notes on the COC?	□Yes □No DANIA
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No □N/A
5 .	Were all requested analyses understood and acceptable?	□Yes □No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>♀ ° C</u>	ØYes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, eir bubbles, etc)?	Wes ONO ON/A
8.	Were sample custody seals intact?	drYes □No □N/A
9.	Does the number of samples received agree with COC?	□Yes □No □N/A
10.	Did sample labels correspond with the client ID's?	TVes ONO ON/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: Truesdall Client	☐Yes □No □N/A
12.	Were samples pH checked? pH = $See C \cdot O \cdot C$	ŒYes □No □N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	DYes ONO ON/A
14	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH □ Std	de Yes ONO ON/A
15.	Sample Matrix:	ter □Waste Water
	□Sludge □Soil □Wipe □Paint □Solid □Oth	~ ~~ ~~
16.	Comments:	
17.	Sample Check-In completed by Truesdall Log-In/Receiving:	Rafail Davila

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

February 24, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-243 PROJECT, GROUNDWATER

MONITORING, TLI No.: 987789

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-243 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on February 10, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for the matrix spike for Hexavalent Chromium analysis by EPA 218.6 was just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

€ , Mona Nassimi

Manager, Analytical Services

K. R. P. gge

K.R.P. Iver

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 987789

Date: February 24, 2010 Collected: February 10, 2010

Received: February 10, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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Established 1931

Date Received: February 10, 2010

Laboratory No.: 987789

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Analytical Results Summary

SM 2540C 7DS	mg/L	4300
EPA 120.1 <i>E</i> C	mhos/cm	7340
SM 2130B Turbidity	UTN	ND
EPA 218.6 Chromium Hexavalent	T/Bri	ND
EPA 200.8 Chromium Total	μg/L	QN
Sample Time		12:00
Sample I.D. Sa		SC-700B-WDR-243
<u>Lab I.D.</u>		987789

ND; Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.001 will have two (2) significant figures. Result above or equal to 0.001 will have three (3) significant figures. Quality Control data will always have three (3) significant figures.

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 021810A

Laboratory No.: 987789

Date: February 24, 2010

Collected: February 10, 2010

Received: February 10, 2010 Prep/ Analyzed: February 18, 2010

Analytical Batch: 021810A

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8

Analytical Results Total Chromium

TLI I.D. Field I.D. <u>Units</u> <u>Method</u> Run Time DF RL <u>Results</u> SC-700B-WDR-243 μg/L EPA 200.8 11:01 5.00 1.00 ND 987789

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987789	ИD	ND	0.00%	<u><</u> 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987789	0.00	5.00	50.0	250	231	250	92.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00		<1.00	Yes
MRCCS	49.2	50.0	98.4%	90% - 110%	Yes
MRCVS#1	48.2	50.0	96.4%	90% - 110%	Yes
MRCVS#2	48.9	50.0	97.8%	90% - 110%	Yes
MRCVS#3	48.3	50.0	96.6%	90% - 110%	Yes
ICS	48.6	50.0	97.2%	80% - 120%	Yes
LCS	49.3	50.0	98.6%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987789

Date: February 24, 2010

Collected: February 10, 2010

Received: February 10, 2010 Prep/ Analyzed: February 12, 2010

Analytical Batch: 02CrH10K

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

Sample Time **Run Time Units** DF RL Results TLI I.D. Field I.D. μg/L 1.05 0.20 ND 987789 SC-700B-WDR-243 12:00 14:11

QA/QC Summary

	QC STI) I.D.		oratory umber	′	Concentra	ation	,	olicate entration		Relative Percent Difference		eptance imits	QC Within Control		
	Duplic	ate	98	7792-1		10.4		1	0.3		0.97%		20%	Yes	j	
QC Std I.D.	Lab Number	นทร	nc.of piked nple	Dilutio Facto		Added Spike Conc.	-	//S ount	Measure Conc. of spiked sample	,	Theoretical Conc. of spiked samp	R	MS% scovery	Acceptance lim	its	QC Within Control
MS	987789	0.	.00	1.08		1.00	1	.06	1.12		1.06		106%	90 - 110%		Yes
		c	C Std	I.D.		Measured Incentration	• • • •	eoretical centration	Perc Reco		1		QC Wit Contr	1		
			Blanl	k		ND		<0.200			<0.20	0	Yes			

MRCCS 5.18 5.00 104% 90% - 110% Yes Yes 10.0 102% 95% - 105% 10.2 MRCVS#1 10.0 95.6% 95% - 105% Yes MRCVS#2 9.56 MRCVS#3 9.68 10.0 96.8% 95% - 105% Yes 5.00 106% 90% - 110% Yes LCS 5.31

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
 Analytical Services

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REPORT

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155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Laboratory No.: 987789

Date: February 24, 2010

Collected: February 10, 2010

Received: February 10, 2010 Prep/ Analyzed: February 11, 2010

Analytical Batch: 02TUC10N

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

DF <u>RL</u> Results Field I.D. Sample Time Units TLI I.D. NTU 1.00 0.100 ND 987789 SC-700B-WDR-243 12:00

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987780-5	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	=74	<0.100	Yes
LCS	7.73	8,00	96.6%	90% - 110%	Yes
LCS	7.80	8.00	97.5%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDÁIL LABORATORIES, INC.

ار Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987789

Date: February 24, 2010

Collected: February 10, 2010

Received: February 10, 2010 Prep/ Analyzed: February 11, 2010

Analytical Batch: 02EC10l

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

<u>TLI I.D.</u>

Field I.D.

Units

Method

<u>DF</u>

<u>RL</u>

Results

987789

SC-700B-WDR-243

μmhos/cm

EPA 120.1

1.00

2.00

7340

QA/QC Summary

QC S1	- 1	Laborato Number	•	Concentrat	Oncentration Duplicate Concentratio			Relative Percent Difference		Acceptance limits		QC Within Control
Duplica	Ouplicate 987789			7340		7350 0.14%		<u> </u>	10%	Yes		
	OC 8			Measured	1	Theoretical	Perc	ent	Acceptan	ce	QC Withi	n

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00		<2.00	Yes
ccs	705	706	99.9%	90% - 110%	Yes
CVS#1	995	998	99.7%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895,AA.DM

Laboratory No.: 987789

Date: February 24, 2010 Collected: February 10, 2010

Received: February 10, 2010

Prep/ Analyzed: February 11, 2010

Analytical Batch: 02TDS10F

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D. 987789 Field I.D. SC-700B-WDR-243 Units mg/L

Method SM 2540C

RL 250 Results 4300

QA/QC Summarv

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	987789	4300	4370	0.81%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	•••	<25.0	Yes
LCS	500	500	100%	90% - 110%	Yes
LCSD	496	500	99.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

🎶 Mona Nassimi, Manager

Analytical Services

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TRUESDAIL LABORATORIES, INC. 14201 Franklin Avenue, Tustin, CA 92780-7008 (714)730-6239 FAX: (714) 730-6462 www.truesdail.com

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-243]

COC Number

TURNAROUND TIME

10 Days PAGE 1 DATE 02/10/10

g

TOTAL NUMBER OF CONTAINERS COMMENTS 987789 02/10/10 NUMBER OF CL 75.7 TrenD. Rec'd a ,003 þ 3 8, 16.6 Turbidity (SM2130) P.4 6.9 100/SAN2540C) Specific Conductance (120.1) Total Chromium ANA171250 1209 Cr6 (218.6) Lab Fillered DESCRIPTION Water FAX (530) 339-3303 1195 1200 TEAM TIME 02/10/10 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 392895.AA.DM (530) 229-3303 PG&E Topock SAMPLERS (SIGNATURE SC-700B-WDR-243 E2 SC- 700B-PROJECT NAME P.O. NUMBER SAMPLE 1.D. COMPANY ADDRESS PHONE

To Sandie Cardinors

Salatan (

See Form Attached

to C	CHAIN OF CUSTODY SIGNATU	GNATURE RECORD	0//0//0	SAMPLE CONDITIONS
Signature (Relinquished)	Printed HOU	Company! OM_{\pm}	Date/ /S//S	RECEIVED COOL WARM
Signature (Received)	Printed Follow R	Company! Agency	Date/ 2/10/10 Time / 5:79	CUSTODY SEALED YES \(\Boxed{\omega}\) NO \(\Boxed{\omega}\)
Signature	Printed 7	Company/	Date 25/05/0	
(Relinquished)	Name to 100 (Agency / / /	Time 2/100	SPECIAL REQUIREMENTS:
•	Printed (Company/	Datel Allollo	
(Received) In a land with lang	Name alred an	Agency / / L	Time 11 21 10-	
Signature	Printed	Company/	Date/	
(Relinquished)	Name	Agency	Time	
Signature	Printed	Company/	Date/	
(Received)	Name	Agency	Тіте	





Sample Integrity & Analysis Discrepancy Form

Clie	nt: CHEWINILL	Lab # 9877 89
Date	e Delivered: 2 / 10/10 Time: 21:00 By: 🗆 Mail 🗹 Fiel	d Service □Client
1.	Was a Chain of Custody received and signed?	tiYes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No □M/A
3.	Are there any special requirements or notes on the COC?	□Yes □No □M/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No ☑N/A
5.	Were all requested analyses understood and acceptable?	ØYes □No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u> </u>	☑Yes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	□Yes □No □N/A
8.	Were sample custody seals intact?	□Yes □No □N/A
9.	Does the number of samples received agree with COC?	tres □No □N/A
10.	Did sample labels correspond with the client ID's?	☐Yes □No □N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: ☐Truesdail ☐Client	©Yes □No □N/A
12.	Were samples pH checked? pH = <u>See</u> C . O . C	©Yes □No □N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	ØYes □No □N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH □ Std	☑Yes □No □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Wipe □Paint □Solid □Oth	er □Waste Water er_WATER
6.	Comments:	
7.	Sample Check-In completed by Truesdail Log-In/Receiving:	Rafael Davil



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March 2, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Avc., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-244 PROJECT, GROUNDWATER

MONITORING, TLI No.: 987923

Trucsdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-244 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on February 18, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

L Mona Nassimi

Manager, Analytical Services

K. R. P. Inster

K.R.P. Iyer

Quality Assurance/Quality Control Officer

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Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 987923

Date: March 2, 2010 Collected: February 18, 2010

Received: February 18, 2010

ANALYST LIST

METIHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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Date Received: February 18, 2010

Laboratory No.: 987923

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612 Attention: Shawn Duffy

Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Analytical Results Summary

SM 2540C TDS	mo/!	4260
EPA 120.1 EC	umbos/cm	7210
SM 2130B Turbidity	NTU	QN
EPA 218.6 Chromium Hexavalent	ng/L	2
EPA 200.8 Chromium Total	μ g ν/L	QN
Sample Time		08:00
Sample I.D.		SC-700B-WDR-244
Lab I.D.		987923

ND: Non Detacted (befow reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.004 with here two (2) significant figures. Result above α equal to 0.001 will have three (3) significant figures. Quality Control data will always have three (3) significant figures.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 022310A

Laboratory No.: 987923

Date: March 2, 2010

Collected: February 18, 2010 Received: February 18, 2010

Prep/ Analyzed: February 23, 2010

Analytical Batch: 022310A

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8

Analytical Results Total Chromium

TLI I.D. Field I.D. Units Method Run Time DF RL Results 987923 SC-700B-WDR-244 μg/L **EPA 200.8** 10:55 5.00 1.00 ND

QA/QC Summarv

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987923	ND	ND	0.00%	<u>≺</u> 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00		<1.00	Yes
MRCCS	47.8	50.0	95.6%	90% - 110%	Yes
MRCVS#1	48.6	50.0	97.2%	90% - 110%	Yes
MRCV\$#2	48.4	50.0	96.8%	90% - 110%	Yes
ICS	47.3	50.0	94.6%	80% - 120%	Yes
LCS	47.9	50.0	95.8%	90% - 110%	Voc

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

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Relative

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987923

Date: March 2, 2010

Collected: February 18, 2010 Received: February 18, 2010

Prep/ Analyzed: February 19, 2010

Analytical Batch: 02CrH10Q

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D. Field I.D. Sample Time Run Time Units DF RL Results 987923 SC-700B-WDR-244 08:00 13:02 μg/L 5.25 1.05 ND

QA/QC Summary

	QC STI		N	umber	Concentre	ation 	Conce	ntration	Percent Difference		eptance imits	Control	
	Duplic	ate	98	7819-2	13.6	<u> </u>	1	3.7	0.73%	<	20%	Yes	
QC Std I.D.	Lab Number	unst	ic.of piked nple	Dilution Factor	Added Spike Conc.		MS lount	Measured Conc. of spiked sample	Theoretica Conc. of spiked samp	0.	M5% covery	Acceptance limits	QC Within Control
MS	987923	0.	00	5.25	1.00	5	.25	5.76	5.25		110%	90 - 110%	Yes
		٥	C Std	I.D. c	Measured oncentration		eoretical centration	Percei Recove			QC With Contro		
			Blank		ND		<0.200		<0.20	0	Yes		

MRCCS 4.85 5.00 97.0% 90% - 110% Yes MRCVS#1 9.82 10.0 98.2% 95% - 105% Yes MRCVS#2 10.0 10.0 100% 95% - 105% Yes MRCVS#3 10.0 10.0 100% 95% - 105% Yes LĊS 5.00 5.00 100% 90% - 110%

ND: Below the reporting limit (Not Detected).

OF: Ollution Factor.

Respectfully submitted,

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Mona Nassimi, Manager Analytical Services

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REPORT

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Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987923

Date: March 2, 2010

Collected: February 18, 2010

Received: February 18, 2010 Prep/ Analyzed: February 19, 2010

Analytical Batch: 02TUC10P

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

<u> TLI I.D.</u>

Field i.D.

Sample Time

<u>Units</u>

<u>DF</u>

<u>RL</u> R

<u>Results</u>

987923

SC-700B-WDR-244

08:00

NTU

1.00

0.100

ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987923	ND	ND QN	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100		<0.100	Yes
LCS	7.80	8.00	97.5%	90% - 110%	Yes
LCS	7.75	8.00	96.9%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

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Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

QC STD

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987923

Date: March 2, 2010

Collected: February 18, 2010

Received: February 18, 2010 Prep/ Analyzed: February 19, 2010

Analytical Batch: 02EC10L

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.

Field I.D.

Units

<u>Method</u>

DF

<u>RL</u>

QC Within

Recults

987923

SC-700B-WDR-244

Laboratory

Number

μmhos/cm

Concentration

EPA 120.1

1.00

Relative Percent

2.00

Acceptance

7210

QA/QC Summary

<u> </u>). Numbe	r	 Concentra	ition	Ċ)ifference	1	limits	Control
Dupli	cate 987923	7210	 7230			0.28%		<u>≤</u> 10%	Yes
	QC Std I.D.	Measured Concentration	 neoretical ncentration	Perce Recov		Acceptani Limits	CO	QC Within	n
	Blank	ND	<2.00			<2.00		Yes	1
	CCS	705	706	99.9	%	90% - 110	%	Yes	7
	CVS#1	995	998	99.7	%	90% - 110	%	Yes	7
	LCS	705	706	99.9	%	90% - 110	%	Yes	7
	LCSD	705	 706	99.9	%	90% - 110	%	Yes	1

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

 Mona Nassimi, Manager Analytical Services

Truesdail Laboratories, Inc.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 987923

Date: March 2, 2010

Collected: February 18, 2010

Received: February 18, 2010 Prep/ Analyzed: February 23, 2010

Analytical Batch: 02TDS10O

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D. 987923 <u>Field I.D.</u>

SC-700B-WDR-244

<u>Units</u> mg/L Method SM 2540C <u>RL</u> 250

Results 4260

QA/QC Summarv

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	987938-5	384	378	0.79%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LCS	498	500	99.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

 Mona Nassimi, Manager Analytical Services

TRUE	14201	7	****
<			

SDAL LABORATORES, INC. I Franklin Avenue, Tuatin, CA 92780-7008 730-6239 FAX: (714) 730-6462 truesdail.com

10 Days

COC Number

CHAIN OF CUSTODY RECORD

1420	14201 Franklin Avenue, Lushin, CA 92789-7006 6748730-8339 FAY-6748 730-8482	Lustin, CA 927 ti 730.5462	180-100g				•		•	6	ı	-	7	IRNARO	TURNAROUND TIME	E	9	Days
	www.truesdail.com						[i#3Plant-WDR-244]	R-244	J]	ングイ	*	77.5	إ	OATE 02/18/10	21B10	1	PAGE	ъ -1
COMPANY	E2						-			-				/	_			
PROJECT NAME	PG&E Topock					-		<u></u>				_			_	_		CONTREMES
FHONE	(530) 229-3303		FAX (530)	FAX (530) 339-3303			un					_				3	_	
ADDRESS	155 Grand Ave Ste 1000	Ste 1000	ı				lway:	_	_	_		_	_		_	VER.		
	Oakland, CA 94612	16 12	ı			PO	(150) (150)	_		_		_	_	_		1/1/1		
P.O. NUMBER	392895.AA.DM		TEAN	-		e _{jji}	eoue _X	-	(OE)				-	_	/O _O .			
SAMPLERS (SIGNATURE		C. Kunght			(9)	E) sjeg	mpuo _O	*****	(SMS)						10 V3	•		
SAMPLE LD.		OATE	E E	DESCRETION	Cre (218	W/dol		_	Turbidit			//	/		BWIN			
SC-7008-WDR-244	R-244	02/18/10	0030	Water	×	×	x 1	×							3		PH=	ب
									t. •			e.			3 1	OTAL NU	WBER OF	TOTAL NUMBER OF CONTAINERS

Level III QC ALERT !!

4869

0867 - 108**0**

一元

Joc.

SIRC

Hex Chron -

5000

~ U80

Total ~

Temp" - 080 - 76.90

For Sample Conditions See Form Attached

SAMPLE CONDITIONS	COOL WARM	SEALED YES NO	REMENTS:			
	RECEIVED	CUSTODY SEALED	SPECIAL REQUIREMENTS:			
	Date/2-18-70 Time 15:17	Date 2-18-10 Time 1517	Date セー・ゼーウ Time 2000	Date FEB I 8 2010	Date 16 80	Date/ Time
IGNATURE RECORD	Company! OM! Agency	Companyl 7	Company/ Agency FC	Companyl 7 L 1	Company/ Agency	Company/ Agency
CHAIN OF CUSTODY SIGNAT	Printed C. FAN GIFT	B.0474G	Relinquished) Round acts Days as Name B. DAYAC	My Name Luda	Printed Name	Printed Name
	Signature C. Muse W-	Signature (Received) Bonsfaced	(Relinquished) Some con D	Signature L. Stubulling Printed Luda.	Signeture (Relinquished)	Signature (Received)

Sample Integrity & Analysis Discrepancy Form

Clie	ent: <u>E 2</u>	_{Lab #} 987923
Date	e Dellvered:0 <u>2./ /2</u> /10 Time: <u>20:'0</u> 0 By: □Mail 20Fl	eld Service
1.	Was a Chain of Custody received and signed?	⊠Yes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No ⊠N/A
<i>3</i> .	Are there any special requirements or notes on the COC?	□Yes □No 🏟N/A
4.	If a letter was sent with the COC, does it match the COC?	☐Yes ☐No ÆQN/A
5.	Were all requested analyses understood and acceptable?	A∕Yes □No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>ਟ੍ਰਿੰ.2° C</u>	^A Yes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	OYES INO IN/A
8.	Were sample custody seals intact?	Yes ONO MIN/A
9.	Does the number of samptes received agree with COC?	Ø(Yes □No □N/A
10.	Did sample labels correspond with the client ID's?	ØYes □No □N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □ Truesdail □Client	□Yes □No MAN/A
12.	Were samples pH checked? pH = \underline{Sel} C . O . C .	£diYes □No □N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	A(Yes □No □N/A
14.	- Have Project due dates been checked and accepted? Turn Around Time (TAT): ロ RUSH - 対 Std	⊠Yes □No □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground V □Sludge □Soil □Wipe □Paint □Solid 🛱 🕻	Vater □Waste Water Other <u>Walte</u> k
16,	Comments:	
17.	Sample Check-In completed by Truesdall Log-In/Peceiving	1 Stephenine



14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

March 2, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-245 PROJECT, GROUNDWATER MONITORING, TLI NO.: 988013

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-245 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on February 24, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for the matrix spike for Hexavalent Chromium analysis by EPA 218.6 was just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services

K. R. P. gyan

K.R.P. Iyer

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895,AA.DM

Laboratory No.: 988013

Date: March 2, 2010 Collected: February 24, 2010 Received: February 24, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat / Gautam Savani
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky



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14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 - FAX (714) 730-6462 - www.tuesdail.com

Date Received: February 24, 2010 Laboratory No.: 988013

> Project Name: PG&E Topock Project Attention: Shawn Duffy

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Analytical Results Summary

SM 2540C TDS	mg/L	4470
EPA 120.1 EC	mpyos/cm	7030
SM 2130B Turbidity	NTU	QN
EPA 218.6 Chromium Hexavalent	µg/L	ND
EPA 200.8 Chromium Total	rg/L	9
Sample Time		08:00
<u>Sample I.D.</u>		SC-700B-WDR-245 08:00
Lab I.D.		988013

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Result above or equal to 0.001 will have three (3) significant figures. Quality Control data will always have three (3) significant figures. Results below 0.001 will have two (2) significant figures.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 030110A

Laboratory No.: 988013

Date: March 2, 2010

Collected: February 24, 2010 Received: February 24, 2010

Prep/ Analyzed: March 1, 2010

Analytical Batch: 030110A

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer

using EPA 200.8

Analytical Results Total Chromium

TL1 I.D. Field I.D. Units Method Run Time DF RL Results 988013 SC-700B-WDR-245 μ**g/L** EPA 200.8 10:59 5.00 1.00 ND

QA/QC Summary

	QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control	
	Duplicate	988013	ND	ND	0.00%	<u><</u> 20%	Yes	
7	· · · · · · · · · · · · · · · · · · ·							_

QC Std I.D,	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	M8 Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988013	0.00	5.00	50.0	250	239	250	95.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00		<1.00	Yes
MRCCS	48.9	50.0	97.8%	90% - 110%	Yes
MRCVS#1	47.6	50.0	95.2%	90% - 110%	Yes
MRCVS#2	49.4	50.0	98.8%	90% - 110%	Yes
MRCVS#3	48.6	50.0	97.2%	90% - 110%	Yes
ICS	48.4	50.0	96.8%	80% - 120%	Yes
LCS	48.2	50.0	96.4%	90% - 110%	Vec

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988013

Date: March 2, 2010

Collected: February 24, 2010 Received: February 24, 2010

Prep/ Analyzed: February 26, 2010

Analytical Batch: 02CrH10W

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D. Field I.D. Sample Time Run Time Units <u>DF</u> RL <u>Results</u> 988013 SC-700B-WDR-245 08:00 15:20 μg/L 1.05 0.20 ND

QA/QC Summary

	QC STI		N	orator umber 7819-4	, —	Concentra	ition	Conce	licate ntration	P Dir	Percent fference	lic	ptance nits 20%	QC Within Control	
QC Std I.D.	Lab Number	Col	nc.of piked mple			Added Spike Conc.		MS lount	Measured Conc. of spiked sample	Ī.	Theoretical Conc. of spiked sample	,	#8% covery	Acceptance limit	QC Within Control
MŜ	988013	0.	164	1.06	;	1.00	1	.06	1.32	Ι	1.22	1	09%	90 - 110%	Yes
		G	QC Std	I.D.	_	Measured encentration		eoretical centration	Perce Recov		Acceptar Limits		QC With Contro	• -	
			Blan	k		ND		<0.200			<0.200)	Yes		
		1	MRCC	es l		5.26		5.00	1059	٧ <u>.</u>	90% - 11	00%	Voc		

QC ata i.D.	Concentration	Concentration	Recovery	Limits	Control
Blank	ND	<0.200		<0.200	Yes
MRCCS	5.26	5.00	105%	90% - 110%	Yes
MRCVS#1	10.1	10.0	101%	95% - 105%	Yes
MRCVS#2	10.4	10.0	104%_	95% - 105%	Yes
MRCVS#3	9.75	10.0	97.5%	95% - 105%	Yes
MRCV\$#4	10.2	10.0	102%	95% - 105%	Yes
MRCVS#5	10.1	10.0	101%	95% - 105%	Yes
LĊS	5.24	5.00	105%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily Indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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14201 FRANKLIN AVENUĘ TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895,AA,DM P.O. No.: 392895,AA,DM Laboratory No.: 988013

Date: March 2, 2010

Collected: February 24, 2010

Received: February 24, 2010

Prep/ Analyzed: February 25, 2010

Analytical Batch: 02TUC10S

investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

TLI I.D.

Field I.D.

Sample Time

Units

DΕ

<u>RL</u> <u>F</u>

Results

988013

SC-700B-WDR-245

08:00

NTU

1.00

0.100

ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988013	ND	ND ND	0.00%	<u>≤</u> 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100		<0.100	Yes
LCS	7.95	8.00	99.4%	90% - 110%	Yes
LCS	7.73	8.00	96.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and those laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988013

Date: March 2, 2010

Collected: February 24, 2010 Received: February 24, 2010

Prep/ Analyzed: February 25, 2010

Analytical Batch: 02EC10O

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.

Field I.D.

Units

Method

DF

<u>RL</u>

<u>Results</u>

988013

SC-700B-WDR-245

umhos/cm

EPA 120.1

1.00

2.00

7030

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Dupticate	988013	7030	7050	0.28%	<u><</u> 10%	Yes
						`

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00		<2.00	Yes
ccs	705	706	99.9%	90% - 110%	Yes
CVS#1	994	998	99.6%	90% - 110%	Yes
CVS#2	994	998	99.6%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988013

Date: March 2, 2010

Collected: February 24, 2010

Received: February 24, 2010 Prep/ Analyzed: February 25, 2010

Analytical Batch: 02TDS10R

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.

Field I.D.

<u>Unita</u>

<u>Method</u>

<u>RL</u>

Results

988013

SC-700B-WDR-245

mg/L

SM 2540C

250

4470

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988013	4470	4360	1.25%	≤ 5%	Yes

QC 8td i.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	***	<25.0	Yes
LCS	496	500	99.2%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

TRUESDAL LABORATORIES, INC. 14201 Franklin Avenue, Tustin, CA 92780-7668 (714)730-6239 FAX: (714) 730-6462 www.trueedail.com

CHAIN OF CUSTODY RECORD

TURNAROUND TIME COC Number

10 Days

PAGE

COMMENTS

NUMBER OF CONTAINERS DATE 02/24/10 988013 (DETSIME) VAIDANUT (IM3Plant-WDR-245) Space Conductante (120,1) DESCRIPTION FAK (530) 339-3303 TEAM 155 Grand Ave Ste 1000 DATE

Dakland, CA 94612

ADDRESS

392895.AA,DM

P.O. NUMBER

SAMPLERS (SIGNATURE

(530) 229-3303

HOM

PG&E Topock

PROJECT WAVE

E2

COMPANY

AWASYSIS 1080 TIME SC-400B 0800

Water

02/24/10

SC-700B-WDR-245

SAMPLE 1D.

Level III OC

t & 6

6c 0.411

76.4 .001

400 C-TO(14)

TOTAL NUMBER OF CONTAINERS

6)

4:2

For Sample Condition See Form Attached

t) Ct	CHAIN OF CUSTODY SIGNATU	SNATURE RECORD	1-24-10	SAMPLE CONDITIONS
Signeture (Relinquished)	Printed H(D)	Company/	Date/ 153	RECEIVED COOL WARM "F
Signature 7 (Received) 78	Printed # 1/0/12),	Company! ///	Date 2-24-10 Time 15.30	CUSTODY SEALED YES NO
Signature (Relinquished)	Printed // 19/1/	Company!	Date: 2-24-10	SPECIAL REQUIREMENTS:
Signature () (Received) M. M. M. M. C.	Printed W. Warne Manne Manne	Company! 71 I	Date 4/1094.	7
Signeture (Refinquished)	Printed Name	Company/ Agency	Date/ Time	1
Signature (Received)	Printed	Company/ Agency	Date, Time	

Sample Integrity & Analysis Discrepancy Form

Clier	nt:E 2/	Lab # 988013
Date	Delivered: 02/24/10 Time: 20:50 By: □Mail ØFiel	d Service □Client
1,	Was a Chain of Custody received and signed?	≰ Yes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No ⊠ N/A
3.	Are there any special requirements or notes on the COC?	□Yes □No MAN/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No ⊠ N/A
5 .	Were all requested analyses understood and acceptable?	≴ DYes □No □N/A
5.	Were samples received in a chilled condition? Temperature (if yes)? Y°C ALEDTIC	Yes □No □N/A
7,	Were samples received intact (i.e. broken bottles, leaks, air bubbles, et Level III Of	Yes □No □N/A
3.	Were sample custody seals intact?	→ ☐Yes ☐No ☑N/A
),	Does the number of samples received agree with COC?	A Yes □No □N/A
10.	Did sample labels correspond with the client ID's?	ØYes □No □N/A
1.	Did sample labels indicate proper preservation? Preserved (if yes) by: □ Truesdail □Client	□Yes □No MIN/A
2.	Were samples pH checked? pH = $SLCOC$	MQYes □No □N/A
3.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	⊠Yes ⊡No ⊡N/A
4.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH 🖈 Std	QYes □No □N/A
5.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Wipe □Paint □Solid MOto	
16.	Comments:	
7.	Sample Check-In completed by Truesdail Log-In/Receiving:	! Shaleeni.



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March 17, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-246 PROJECT, GROUNDWATER

MONITORING,

TLI No.: 988154

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-246 project groundwater monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on March 3, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The run at a 10x dilution on the matrix spike for sample SC-701-WDR-246 for Hexavalent Chromium analysis by EPA 218.6 was just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 10x dilution agree with those from the 25x dilution, the data from the run at 10x is reported.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi ـــرام

Manager, Analytical Services

K.R.P. Byen

K.R.P. Iver

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 988154

Date: March 17, 2010 Collected: March 3, 2010 Received: March 3, 2010

ANALYST LIST

METROD	PARAMETER:	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 300.0	Anions	Giawad Ghenniwa
SM 4500-NH3 D	Ammonia	lordan Stavrev
SM 4500-NO2 B	Nitrite as N	Tina Acquiat
EPA 200.7	Metals by ICP	Kris Collins
EPA 200.8	Metals by ICP/MS	Daniel Kang / Romuel Chavez
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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Established 1931

Date Received: March 3, 2010 Laboratory No.: 988154

Attention: Shawn Duffy

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Analytical Results Summary

		:			
SM 4500-NH3 D Ammonia	mg/L	S	9		
EPA 218.6 Hexavalent Chromium	1,6r	Q	1180	Q	
SM 2130B Turbidity	NTU	S	S	-	SM 4500-MO2 B
SM 2540C 7DS	mg/L	4230	4840 046	32800	EDA 1000
EPA 120.1 EC	итпос/ст	7170	7950	45100	FDA 300.0
					FDA 100.0
Sample Time		08:00	08:00	08:00	Sample Time
Sample I.D.		SC-700B-WDR-246	SC-1008-WDR-246	SC-701-WDR-246	Samoie I
<u> </u>		988154-1	988154-2	9881543	- F

SM 4500-NO2 B Nitnte as N	mg/L	QN	QN	
EPA 300.0 Nitrate as N	mg/L	3.08	3.44	•
EPA 300.0 Sulfate	mg/L	510	581	
EPA 300.0 Fluoride	mg/L	2.06	2.33	17.6
Sample Time			08:00	!
Sample I.D.		SC-700B-WDR-246	SC-100B-WDR-246	SC-701-WDR-246
<u>Lab I.D.</u>		988154-1	988154-2	9881543

ND. Not Detected (below reporting limit) mg/L: Militigrams per Ber.

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.001 ppm wit have two (2) significant figures. Result above or equal to 0.001 ppm with have times (3) significant figures. Ocally Control data will always have three (3) significant figures.

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Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Laboratory No.: 988154

Date Received: March 3, 2010

Analytical Results Summary

METALS ANALYSIS:		Total Netal Analyses as Requested	as Requested									
			Aluminum EPA 200.7	Antimony EPA 200.8	Arsenic EPA 200.8	Barium EPA 200.8	Chromium EPA 200.8	Copper EPA 200.8	Lead EPA 200.8	Beryllium EPA 200.8	Cadmium EPA 200.8	Cobalt EPA 200.8
	P0	Date of Analysis:	03/09/10	03/05/10	03/05/10	03/05/10	03/05/10	03/05/10	03/05/10	03/05/10	03/05/10	03/05/10
tab I.D.	Sample ID	Time Col!.	Hg/L	μg/L	ng/L	μg/L	μg/L	μg/L	±g/L	μg/L	±0/L	μg/L
988154-1	SC-700B-WDR-246	08:00	ON	QN	QN	16.6	QV.	QN	Ð			
988154-2	SC-100B-WDR-246	08:00	Q	Q	3.70	25.0	1070	QN	ON	1	}	!
988154-3	SC-701-WDR-246	08:00	1	ON	9	147	2.63	5.71	2	ON ON	Q	5.52
			Manganese	Molybdenum	Nickel	Zinc	Mercury	Selenium	Silver	Thallium	Vanadium	
			EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.7	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	EPA 200.8	
	අ	Dete of Analysis:	03/05/10	03/05/10	03/05/10	03/09/10	030810A-Hg	030510A	031510A	030510A	030510A	
Lab I.D.	Sample ID	Time Coll.	μg/L	ug/L	ng/L	μg/L	µg/L	µg/L	μg/L	μgη	Jug/L	
988154-1	SC-700B-WDR-246	08:00	55.9	17.2	QN	QN	;	Į			1	
988154-2	SC-100B-WDR-246	08:00	ON	25.1	S	Q.	i	i	ŧ	}		
988154-3	SC-701-WDR-246	08:00	1	170	31.2	Q	9	25.5	QN	Q	ę	
			Boron	ίσ								
			EPA 200.7	EPA 200.7								
	Day	Date of Analysis:	03/09/10	03/09/10								

^{ஜ்} 1006

988154-1 988154-2 988154-3 ND: Not detected, or below limit of detection

9 일 :

1050

08:00 08:00 08:00

> SC-700B-WDR-246 SC-100B-WDR-246 SC-701-WDR-246

Sample ID

Jab 1.0.

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Attention: Shawn Duffy

Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988154

Date: March 17, 2010

Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 4, 2010 Analytical Batch: 03EC10D

Investigation:

Specific Conductivity by EPA 120.1

REPORT

Analytical Results Specific Conductivity

<u>TLI I.D.</u>	<u>Field I.D.</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	RL	<u>Results</u>
988154-1 988154-2	SC-700B-WDR-246 SC-100B-WDR-246	μmhos/cm umbos/cm	EPA 120.1	1.00	2.00	7170 7950
988154-2	SC-100B-WDR-246	μmhos/cm	EPA 120.1	1.00	2.00	79

QA/QC Summary

QC STD I,D,	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988155-2	3560	8560	0.00%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	<u>.</u> -	<2.00	Yes
ccs	705	706	99.9%	90% - 110%	Yes
CVS#1	995	999	99.6%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwaters **Project Name:** PG&E Topock Project

Project No.: 392895.AA.DM **P.O. No.:** 392895.AA.DM

REPORT

Laboratory No.: 988154

Date: March 17, 2010

Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 8, 2010 Analytical Batch: 03EC10F

investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

 TLI I.D.
 Field I.D.
 Units
 Method
 DF
 RL
 Results

 988154-3
 SC-701-WDR-246
 μmhos/cm
 EPA 120.1
 1.00
 2.00
 45100

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988154-3	45100	45200	0.22%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00		<2.00	Yes
ccs	705	706	99.9%	90% - 110%	Yes
CVS#1	994	999	99.5%	90% - 110%	Yes
LCS	706	706	100%	90% - 110%	Yes
LCSD	706	706	100%	90% - 110%	Yes

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

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+ / Mona Nassimi, Manager Analytical Services

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Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM REPORT

Laboratory No.: 988154

Date: March 17, 2010 Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 4, 2010 Analytical Batch: 10TDS10C

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

<u>TLI I.D.</u>	Fleid I.D.	<u>Units</u>	<u>Method</u>	<u>RL</u>	Results
988154-1	SC-700B-WDR-246	mg/L	SM 2540C	250	4230
988154-2	SC-100B-WDR-246	mg/L	SM 2540C	250	4840

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988150-5	612	612	0.00%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LCS	496	500	99.2%	90% - 110%	Yes
LĊŚD	498	500	99.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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Client: E2 Consulting Engineers, Inc.

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Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Laboratory No.: 988154

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Date: March 17, 2010 Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 8, 2010

Analytical Batch: 03TDS10E

Investigation:

Total Dissolved Solids by SM 2540C

REPORT

Analytical Results Total Dissolved Solids

TLI I.D.

Field I.D.

<u>Units</u>

Method

<u>RL</u>

Results

988154-3

SC-701-WDR-246

mg/L

SM 2540C

1250

32800

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988154-3	32600	32600	0.31%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	***	<25.0	Yes
LCS 1	501	500	100%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

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≁₀ – Mona Nassimi, Manager Analytical Services

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Oakland, CA 94612

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Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

roject No.: 392895.AA,DM P.O. No.: 392895.AA,DM REPORT

Laboratory No.: 988154

Date: March 17, 2010 Collected: March 3, 2010

Received: March 3, 2010 Prep/ Analyzed: March 4, 2010 Analytical Batch: 03TUC10E

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

TLI I.D.	<u>Field I.D.</u>	<u>Sample Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
988154-1	SC-700B-WDR-246	08:00	NTŲ	1.00	0.100	NĎ
98815 4 -2	SC-100B-WDR-246	08:00	NTŲ	1.00	0.100	NĎ

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988154-2	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100		<0.100	Yes
LCS	7.93	8.00	99.1%	90% - 110%	Yes
LĊS	7.88	8.00	98.5%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor

Respectfully submitted,

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Mona Nassimi, Manager Analytical Services

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Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA,DM Prep. Batch: 03CrH10C

Laboratory No.: 988154

Date: March 17, 2010

Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 10, 2010

Analytical Batch: 03CrH10C

Investigation:

Hexavalent Chromium by IC Using Method EPA 218.6

Analytical Results Hexavalent Chromium

<u>TLI I.D.</u>	<u>Field I.D.</u>	<u>Sample Time</u>	Run Time	<u>Units</u>	<u>DF</u>	RL	<u>Results</u>
988154-1	SC-700B-WDR-246	08:00	11:30	μ g/L	5.25	1.05	ND
988154-2	SC-100B-WDR-246	08:00	08:50	μg/L	105	21.0	1180
988154-3	SC-701-WDR-246	08:00	14:17	μ g/L	10.5	2.10	ND

QA/QC Summarv

	QC STO	. d, l	Number	Sample Concentra		plicate entration	Percent Difference	Acceptance limits	QC Within Control	
	Duplic	ate	988154-2	1180		1240	4.96%	<u><</u> 20%	Yes	
Ŀ	Lab Number	Conc.o unspike	· .	Added Spike	MS nount	Measured Conc. of spiked	Theoretical Conc. of spiked	MS% Recovery	Acceptance	QC V

Relative

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Conc. of spiked	Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS.	988154-1	0.249	5.25	1.00	5.25	5.99	5,50	109%	90-110%	Yes
MS	988154-2	1180	105	15.0	1575	2880	2755	108%	90-110%	Yes
MS	988154-3	0.918	10.5	1.00	10.5	12.3	11.4	108%	90-110%	Yes
										

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200		<0.200	Yes
MRCCS	5.06	5.00	101%	90% - 110%	Yes
MRCVS#1	9.6	10.0	95.6%	95% - 105%	Yes
MRCVS#2	10.5	10.0	105%	95% - 105%	Yes
MRÇVS#3	10.20	10.0	102%	95% - 105%	Yes
MRCVS#4	10.10	10,0	101%	95% - 105%	Yes
LCS	5.19	5.00	104%	90% - 110%	Ves

ND: Below the reporting limit (Not Detected).

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Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager

Analytical Services

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Attention: Shawn Duffy

Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988154

Date: March 17, 2010 Collected: March 3, 2010

Received: March 3, 2010

Prep/ Analyzed: March 8, 2010 Analytical Batch: 03NH3-E10A

Investigation:

Ammonia as N by Method SM 4500-NH3 D

Analytical Results Ammonia as N

TLI I.D.	<u>Field I.D.</u>	Sample Time	<u>Method</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
988154-1	SC-700B-WDR-246	08:00	SM 4500-NH3 D	mg/L	1.00	0.500	ND
9881 54 -2	SC-100B-WDR-246	08:00	SM 4500-NH3 D	mg/L	1.00	0.500	ND

QA/QC Summary

	QC STC	I.D.		aborato Numbe	•	Concentra	tion		olicate entration	Percent Difference	ı	eptance imits	QC Within Control	
	Duplic	ate	9	88154-	2	ND			ND	0.00%	-	20%	Yes	
QC Std I.D.	Lab Number	unsp	ic.of piked aple		tion	Added Spike Conc.		MS nount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample		MS% covery	Acceptance limits	QC Within Control
MS	983651-2	0.0	00	1.	00	6.00		6.00	5.69	6.00		4.8%	75-125%	Yes
								ti	. D			00 Mark		

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.500		<0.500	Yes
MRCCS	5.67	6.00	94.5%	90% - 110%	Yes
MRCVS#1	5.71	6.00	95.2%	90% - 110%	Yes
LCS	10.6	10.0	106%	90% - 110%	Yeq

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Mona Nassimi, Manager, ص Analytical Services

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Attention: Shawn Duffy

Sample: Three (3) Groundwaters

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988154

Date: March 17, 2010

Collected: March 3, 2010

Received: March 3, 2010

Prep/ Analyzed: March 4, 2010 Analytical Batch: 03AN10D

Investigation:

Fluoride by Ion Chromatography using EPA 300.0

Analytical Results Fluoride

<u>TLI I.D.</u>	Field I.D.	<u>Sample Time</u>	Run Time	<u>Units</u>	<u>D</u> E	<u>RL</u>	Results
988154-1	SC-700B-WDR-246	08:00	12:41	mg/L	5.00	0.500	2.06
988154-2	SC-100B-WDR-246	08:00	13:50	mg/L	5.00	0.500	2.33
988154-3	SC-701-WDR-246	08:00	14:01	mg/L	5.00	0.500	17. 6

QA/QC Summarv

) I.D.	Number		ation		entration	Percent Difference	limits	Control	
Lab Number	Conc.of unspiked	Dilution Factor	Added Spike Conc.			Measured Conc. of spiked sample			Acceptance limite	QC Within Control
988109	0.00	1.00	2.00	2	.00	2.12	2.00	106%	85-115%	Yes
	Duptic Lab Number	Duplicate Lab Number Conc.of unspiked sample	Duplicate 988109 Lab Conc.of unspiked sample Pactor	Duplicate 988109 ND Lab Number Conc.of unspiked sample Factor Conc.	QC 8TD I.D. Number Concentration Duplicate 988109 ND Lab Number Conc.of unspiked sample Dilution Factor Added Spike Conc.	Duplicate 988109 ND Lab Number Concentration Concentratio	Duplicate 988109 ND ND	Number Concentration Concentration Percent Difference	QC STD I.D. Number Concentration Concentration Percent Difference limits Duplicate 988109 ND ND 0.00% ≤ 20% Lab Number Conc. of unspiked sample Dilution Factor Added Spike Conc. MS Measured Conc. of Conc. of Spiked Spiked Spiked Sample Conc. of Recovery Sample	Occurrence Number Concentration Concentration Percent Difference Ilmits Control Duplicate 988109 ND ND 0.00% ≤ 20% Yes Lab Number Conc. of unspiked sample Dilution Factor Added Spike Conc. MS Conc. of Spiked Spiked Sample Conc. of Spiked Spiked Sample Recovery Spiked Spiked Sample

QC 8td I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC WithIn Control
Blank	QVI	<0.500	***	<0.500	Yes
MRCCS	4.08	4.00	102%	90% - 110%	Yes
MRCVS#1	3,14	3.00	105%	90% - 110%	Yes
MRCVS#2	3,15	3.00	105%	90% - 110%	Yes
LÇS	4,10	4.00	103%	90% - 110%	Yes

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 Mona Nassimi, Manager Analytical Services

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Client: E2 Consulting Engineers, Inc.

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Oakland, CA 94612

Attention: Shewn Duffy

Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988154

Date: March 17, 2010

Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 4, 2010

Analytical Batch: 03AN10D

Investigation:

Sulfate by Method EPA 300.0

Analytical Results Sulfate

TLI I.D.	Fleid I.D.	Sample Time	Run Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
988154-1	SC-700B-WDR-246	08:00	14:58	mg/L	25.0	12.5	510
988154-2	SC-100B-WDR-246	08:00	15:10	mg/L	25.0	12.5	581

QA/QC Summary

	QC STE) i.D.	aboratory Number 986109	Concentr	ation		iplicate centration	Relative Percent Difference 0.00%	Acceptance limits	QC Within Control Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	M Amo	_	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988109	0.00	1.00	2.00	2.(00	2.01	2.00	101%	85-115%	Yes
							. '1''	1	· · · - · · · · · · · · · · · · · · · ·		

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.500		<0.500	Yes
MRCCS	20.2	20.0	101%	90% - 110%	Yes
MRCVS#1	15.1	15.0	101%	90% - 110%	Yes
MRCVS#2	15.2	15.0	101%	90% - 110%	Yes
LCS	20.3	20.0	102%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Maneger Analytical Services

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988154

Date: March 17, 2010

Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 4, 2010

Analytical Batch: 03AN10D

Investigation:

Nitrate as N by Ion Chromatography using EPA 300.0

Analytical Results Nitrate as N

<u>TLI I.D.</u>	<u>Field_I.D.</u>	Sample Time	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
9881 54 -1	SC-700B-WDR-246	08:00	12:41	mg/L	5.00	1.00	3.08
988154-2	SC-100B-WDR-246	08:00	13:50	mg/L	5.00	1.00	3. 44

QA/QC Summary

	QC STD	I.D.	Aboratory Number 988109	Concenti		Conce	licate ntration	Relative Percent Difference	Accepta limits	3	QC Within Control	
QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution	Added Spike Conc.		MS nount	Measured Conc. of spiked sample	0.00% Theoretical Conc. of spiked sample	≤ 20% MS% Recove	,	Yes Acceptance limits	QC Within Control
MS	988109	0.00	1.00	2.00	2	2.00	2.04	2.00	102%	<u></u>	85-115%	Yes
		QC Sto	11.D.	leasured centration		eoretical centration	Percen Recove	- I		Within ontrol		
		Blar	nk	ΝĎ		<0.500		<0.500	,	Yes	1	

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	NĎ	<0.500		<0.500	Yes
MRCCS	4.02	4.00	101%	90% - 110%	Yes
MRCVS#1	2.98	3.00	99.3%	90% - 110%	Yes
MRCVS#2	3.00	3.00	100%	90% - 110%	Yeş
LCS	4.02	4.00	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

OF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Three (3) Groundwaters Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988154

Date: March 17, 2010

Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 4, 2010 Analytical Batch: 03NO210C

Investigation:

Nitrite as N by Method SM 4500-NO2-B

Analytical Results for Nitrite as N

<u>TLI I.D.</u>	<u>Field I.D.</u>	<u>Sample Time</u>	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
988154-1	SC-700B-WDR-246	08:00	15:57	mg/L	1.00	0.0050	ND
988154-2	SC-100B-WDR-246	08:00	15:58	mg/L	1.00	0.0050	ND

QA/QC Summary

	QC STE	I.D.	Number	Concentra	ation		entration	Percent Difference	limits	Control	
	Duplic	ate	988154-1	ND.			ND	0.00%	≤ 20%	Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	l Dilution	Added Spike Conc.	1 .	M8 nount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988154-1	0.00	1.00	0.0200	0.	0200	0.0197	0.0200	98.5%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	NO	<0.0050		<0.0050	Yes
MRCCS	0.0261	0.0270	96.7%	90% - 110%	Yes
MRCVS#1	0.0201	0.0200	101%	90% - 110%	Yes
LCS	0.0462	0.0450	103%	90% - 110%	Vee

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

Relative

TRUESDAIL LABORATORIES, INC.

√ ∠Mona Nassimi, Manager Analytical Services

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Laboratory No.: 988154 Reported: March 17, 2010 Collected: March 3, 2010 Received: March 3, 2010

Analyzed: See Below

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Samples: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA,DM

P.O. No.: 392895.AA.DM

Investigation: Total Metal Analyses as Requested

Analytical Results

BAMPLE ID: SC-7	00B-WDR-246	Time Coll	ected: 08	3:00		LABID	988154-1	
Parameter	Method	Reported Value	DF	Units	RL.	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.7	ND	1.00	μg/L	50.0	030910B-Th	03/09/10	15:13
Antimony	EPA 200.8	ND	5.00	μ g/L	10.0	030510A	03/05/10	15:11
Arsenic	EPA 200.8	ND	5.00	μ g/L	1.00	030510A	03/05/10	15:11
Barium	EPA 200.8	16.6	5.00	μg/L	10.0	030510A	03/05/10	15:11
Chromium	EPA 200.8	ND	5.00	μg/L	1.00	030510A	03/05/10	15:11
Copper	EPA 200.8	NÓ	5.00	μ g /L	5.00	030510A	03/05/10	15:11
Lead	EPA 200.8	ND.	5.00	μ g/ L	10.0	030510A	03/05/10	15:11
Manganese	EPA 200.8	55.9	5.00	μg/L	10.0	030510A	03/05/10	15:11
Molybdenum	EPA 200.8	17.2	5.00	μg/L	10.0	030510A	03/05/10	15:11
Nickel	EPA 200.8	ND	5.00	μg/L	10.0	030510A	03/05/10	15:11
Zinc	EPA 200.7	ND	1.00	μ g/L	10.0	030910B-Th	03/09/10	15:13
Boron	EPA 200.7	1020	1.00	μg/L	200	030910B-Th	03/09/10	15:13
iron	EPA 200.7	ND .	1.00	µg/L	20.0	030910A-Th	03/09/10	10:50

SAMPLE ID: S	C-100B-WDR-248	Time Co	llected: 08	:00		LAB ID	988154-2	
Parameter	Method	Reported Value	OF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.7	ND	1.00	μg/L	50.0	030910B-Th	03/09/10	15:36
Antimony	EPA 200.8	ND	5.00	μg/L	10.0	030510A	03/05/10	15:37
Arsenic	EPA 200.8	3.70	5.00	μg/L	1.00	030510A	03/05/10	15:37
Barium	EPA 200.8	25.0	5.00	μg/L	10.0	030510A	03/05/10	15:37
Chromium	EPA 200.8	1070	5.00	μg/L	1.00	030510A	03/05/10	15:37
Соррег	EPA 200.8	ND	5.00	μ g/L	5.00	030510A	03/05/10	15:37
Lead	EPA 200.8	ND	5.00	μ g/L	10.0	030510A	03/05/10	15:37
Manganese	EPA 200.8	ND	5.00	μg/L	10.0	030510A	03/05/10	15:37
Molybdenum	EPA 200.8	25.1	5.00	μg/L	10.0	030510A	03/05/10	15:37
Nickel	EPA 200.8	ND	5.00	μg/L	10.0	030510A	03/05/10	15:37
Zinc	EPA 200.7	ND	1.00	μg/L	10.0	030910B-Th	03/09/10	15:36
Boron 7	EPA 200.7	1060	1.00	μ ց /L	200	030910B-Th	03/09/10	15:36
lron	EPA 200.7	ND	1.00	μg/L	20.0	030910A-Th	03/09/10	11:39

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Report Continued

SAMPLE ID: SC-70	01-WDR-246	Time Coll	ected:	08:00		LAB ID	988154-3	
		Reported					Date	Time
Parameter	Method	Value	ÐF	Units	RL	Batch	Analyzed	Analyzed
Antimony	EPA 200.8	ND	5.00	μg/L	10.0	030510A	03/05/10	15:44
Arsenic	EPA 200.8	N D	5.00	μg/L	1.00	030510A	03/05/10	15:44
Barium	EPA 200.8	147	5.00	μ g/L	10.0	030510A	03/05/10	15:44
Beryllium	EPA 200.8	ND	10.0	μ g/L	2.00	030510A	03/05/10	16:37
Cadmium	EPA 200.8	ND	5.00	µg/L	3.00	030510A	03/05/10	15:44
Chromium	EPA 200.8	2,63	5.00	μ g/L	1.00	030510A	03/05/10	15:44
Cobalt	EPA 200.8	5.52	5.00	μg/L	5.00	030510A	03/05/10	15:44
<u>Copper</u>	EPA 200.8	5.71	5.00	μ g/L	5.00	030510A	03/05/10	15:44
Lead .	EPA 200.8	ND	5.00	μg/L	10.0	030510A	03/05/10	15:44
Mercury	EPA 200.8	, ND	5.00	μg/L	1.00	030810А-На	03/08/10	11:53
Molybdenum	EPA 200.8	170	5.00	μg/L	10.0	030510A	03/05/10	15:44
Nickel	EPA 200.8	31.2	5.00	μ g/L	10.0	030510A	03/05/10	15:44
Selenium	EPA 200.8	25.5	5.00	μ g/ L	10.0	030510A	03/05/10	15:44
Silver	EPA 200.8	ND	10.0	μ g/ L	5.00	031510A	03/15/10	18:27
Thallium	EPA 200.8	ND.	5.00	μg/L	1.00	030510A	03/05/10	15:44
<u>Vanadium</u>	EPA 200.8	ND	5.00	μg/L	5.00	030510A	03/05/10	15:44
Zinc	EPA 200.7	ND	1.00	μg/L	10.0	030910B-Th	03/09/10	15:41

ND: Not detected, or below limit of detection.

DF: Dilution factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

EXCELLENCE IN INDEPENDENT TESTING

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Samples: Three (3) Groundwaters Attention: Shawn Duffy

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 • FAX (714) 730-6462 · www.buesdail.com

Established 1931

Reported: March 17, 2010 Collected: March 3, 2010

Laboratory No.: 988154

Received: March 3, 2010

Quality Control/Quality Assurance Report

				BLANK		MRCCS				MRCVS			
1	:		:	i	;	Observed	TRUE	715	Control	Observed	TRUE	米	Control
rarameter	Method	Batch	Units	BIANK	Æ	value	Value	Rec	LIMITS	Value	Yalue	Rec	Limits %
Aluminum	EPA 200.7	030910B-Th	Hg/L	Q	50.0	4770	2000	95.4%	95-105%	4790	2000	95.8%	90-110%
Anlimony	EPA 200.8	030510A	1/6π	QN	10.0	46.6	50.0	93.2%	90-110%	51.0	50.0	102%	90-110%
Arsenic	EPA 200.8	030510A	иgr	Q	0.20	51.0	50.0	102%	90-110%	50.4	50.0	101%	90-110%
Barium	EPA 200.8	030510A	Jog.	Ð	10.0	46.1	50.0	92.2%	90-110%	54.8	50.0	110%	90-110%
Benyllium	EPA 200.8	030510A	тgл	Q	1.00	47.1	50.0	94.2%	90-110%	49.4	50.0	98.8%	90-110%
Cadmium	EPA 200.8	030510A	иgљ	Ð	3.00	45.1	50.0	90.2%	90-110%	52.0	50.0	104%	90-110%
Chromium	EPA 200.8	030510A	μg/L	Q	1.00	48.2	50.0	96.4%	90-110%	46.4	50.0	92.8%	90-110%
Cobalt	EPA 200.8	030510A	μgվ	N	5.00	49.5	50.0	99.0%	90-110%	51.6	50.0	103%	90-110%
Copper	EPA 200.8	030510A	нgл	QN	5.00	48.0	50.0	%0'96	90-110%	47.5	50.0	95.0%	90-110%
Lead	EPA 200.8	030510A	1 <u>9</u> 7	Q	10.0	47.6	50.0	95.2%	90-110%	49.9	50.0	99.8%	90-110%
Manganese	EPA 200.8	030510A	J.Gri	QN	10.0	49.2	50.0	98.4%	90-110%	50.5	50.0	101%	90-110%
Mercury	EPA 200.8	030810A-Hg		Q	0.20	1.99	2.00	99.5%	90-110%	1.95	2.00	97.5%	90-110%
Molybdenum	EPA 200.8	030510A	пgц	Ð	10.0	50.4	50.0	101%	90-110%	52.3	50.0	105%	90-110%
Nickel	EPA 200.8	030510A	пgЛ	Ð	10.0	47.3	50.0	94.6%	90-110%	46.8	50.0	93.6%	90-110%
Selenium	EPA 200.8	030510A	пgп	QN	10.0	50.5	50.0	101%	90-110%	48.8	50.0	897.6%	90-110%
Silver	EPA 200.8	031510A	J ₀ ff	QN	5.00	47.9	50.0	95.8%	90-110%	46.8	50.0	93.6%	90-110%
Thallium	EPA 200.8	030510A	J/gr/	ND	1.00	49.5	50.0	80.66	90-110%	51.5	50.0	103%	90-110%
Vanadium	EPA 200.8	030510A	Hg.	Q	5.00	48.7	50.0	97.4%	90-110%	47.2	50.0	94.4%	90-110%
Zinc	EPA 200.7	030910B-Th	µg/L	Q	10.0	4870	2000	97.4%	95-105%	4850	9009	97.0%	90-110%
Вогоя	EPA 200.7	030910B-Th	±g₁L	Q.	200	4870	5000	97.4%	95-105%	4920	5000	98.4%	90-110%
lon	EPA 200.7	030910A-Th	ng√	9	20.0	4900	5000	98.0%	95-105%	5030	2000	101%	90-110%

Report Continued		Control	Limits	80-120%	80-120%	80-120%	86-120%	80-120%	80-120%	80-120%	80-120%	80-120%	80-120%	80-120%
	TANDARD	×	Rec.	91.5%	98.8%	99.6%	32.6%	94.2%	93.6%	95.4%	101%	91.6%	85.8%	98.0%
NC.	ICE CHECK 8	ន	Theo.	2000	50.0	20.0	50.0	50.0	50.0	50.0	2:00	50.0	50.0	2000
TORIES,	INTERFERENCE CHECK STANDARD	SOI	Obs.	1830	49.4	49.8	45.4	47.1	46.8	47.7	2.02	45.8	42.9	1960
ABORA'	·	Units		J/6r/	µg/L	μg/L	65	J/Gri	1,6r	иду	иду	ng/L	Jight	ug/L
TRUESDAIL LABORATORIES, INC.		Method		EPA 200.7	EPA 200.8	EPA 200.7								
		Parameter		Aluminum	Arsenic	Cadmium	Chromium	Cobalt	Copper	Manganese	Метсилу	Nickel	Silver	Zinc

80-120%

97.0%

2000

<u>3</u>

ng T

EPA 200.7

<u>8</u>

			LABORATO	LABORATORY CONTROL SAMPLES	SAMPLES		SAMPLE DUPLICATES	PLICATES			
Parameter	Method	Units	SOI	SOI	*	Control	SAMPLE	SAMPLE	a Pa	3 5	Precision
			Obs.	Theo	Rec	Limits	9	PESII! T	T (I PECAL)		5 :
Aluminum	EPA 200.7	rig/L	4990	2000	88.66	90-110%	988154-1	GIA	MO	אפיים	LIMITS 7
Antimony	EPA 200.8	μ 9 /Γ	49.2	50.0	98.4%	90-110%	OBB167 5	2 2	Š	6.00.0	Ġ
Arsenic	EPA 200.8	no/L	503	0.03	1010	2007	1-151000		3	0.00%	<20
Ватіл	EDA 200 g	00.	14.0	9 6	2 2	&01-06	986154-1	읽	2	0.00%	075
Bondling	TD4 200.0	Hg/L	0.10	50.0	103%	90-110%	988154-1	16.6	16.9	1.79%	Ş Ş
	EPA 200.8	HOL.	48.0	20.0	96.0%	90-110%	988154-1	2	9	A UU V	5
Cadmium	EPA 200.8	Jug/L	51.4	50.0	103%	90-110%	988154-1	QN	9	0.00%	A77.
Chromium	EPA 200.8	rg/L	48.3	50.0	89.98	90-110%	988154.1	2		2000	Ř
Cobalt	EPA 200.8	ц <u>о</u> Г.	49.0	50.0	98.0%	90-110%	988154.1	9	2 2	0.00%	ଷ
Copper	EPA 200.8	J/gr/	48.6	50.0	97.2%	90-110%	988154-1	2 2	2	0.00%	97
Lead	EPA 200.8	pgy	48.3	50.0	96.6%	90-110%	088154.1	5 5	<u>}</u>	0.00%	07
Manganese	EPA 200.8	LOT.	49.2	50.5	08.4%	00 1100	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	2	NO	0.00%	ପ୍ତ
Mercury	EPA 200 8		2.02	900	40.40	2011-00	300104-1	95.5	55.9	0.00%	520
Molybdenum	FPA 200 B		50.0	20.2	8101	SU-110%	988154-3	9	2	%00.0	ġ
Nickel	EDA 200 0		5	30.0	102%	30LL-10%	988154-1	17.2	17.5	1.73%	520
Cologist	0.000	HOLE.	40.0	0.00	96.0%	90-110%	988154-1	Q	Q	0.00%	ଖି
	Er A 200.0	mg/L	50.3	20.0	101%	90-110%	988154-1	Q	QN	0.00%	5
Silver	EPA 200.8	нgЛ	46.9	20.0	93.8%	90-110%	988250-1	S		7 000	
Thailium	EPA 200.8	т <u>о</u> п	49.8	50.0	99.6%	90-110%	988154-1	2	2 2	2000	NZS
Vanadium	EPA 200.8	Jig/L	48.7	50.0	97.4%	90.150%	000454 4	2	2 2	0.00%	ଖ
Zinc	FPA 200 7	, P	ADON	983	200.00	200	1 2 2000	2	20	0.00%	8
Roma	CDA 200 7	20 1	066	0000	22.0%	90-110%	988154-1	ND ND	QV	%00:0	ମ
5 6	ED# 200.7	Jan 1	0100	2000	100%	90-110%	988154-1	1020	1020	0.00%	023
	ErA 200.4	ng/L	4880	2000	%9.66 %9.66	90-110%	988154-1	Q	P	%000	₹
											1

TRUE	
7	

MATRIX SPIKE	KE										Accuracy
,	1			Sample		Spike	Total Amt.	Theo.	\$	3¢	Control
Sample ID	Parameter	Method	Units	Result	님	Level	of Spike	Value	ξή O	Rec.	Limits %
988154-1	Aluminum	EPA 200.7	J/Bri	0.00	1.00	2000	2000	2000	1850	92.5%	75-125%
988154-1	Antimony	EPA 200.8	ng/L	0.00	5.00	50.0	250	250	226	90.4%	75-125%
988154-1	Arsenic	EPA 200.8	µg√L	00:00	5.00	50.0	250	250	244	97.6%	75-125%
988154-1	Barium	EPA 200.8	ر وي دي	16.6	5.00	50.0	250	267	252	£.2%	75-125%
988154-1	Beryllium	EPA 200.8	µg/L	00:00	5.00	50.0	250	250	233	93.2%	75-125%
988154-1	Cadmium	EPA 200.8	ug/L	0.00	5.00	50.0	250	250	236	94.4%	75-125%
988154-1	Chromium	EPA 200.8	hg/L	00'0	5.00	50.0	250	250	227	90.8%	75-125%
988154-1	Cobalt	EPA 200.8	ндЛ	0.00	5.00	50.0	250	250	226	90.4%	75-125%
988154-1	Copper	EPA 200.8	μgብ	0.00	5.00	50.0	250	250	212	84.8%	75-125%
988154-1	Lead	EPA 200.8	100°E	0.00	5.00	50.0	250	250	197	78.8%	75-125%
988154-1	Manganese	EPA 200.8	µg/L	55.9	5.00	50.0	250	306	288	92.8%	75-125%
988154-3	Mercury	EPA 200.8	ug/L	0.00	2.00	2.00	10.0	10.0	83	83.4%	75-125%
988154-1	Mołybdenum	EPA 200.8	Hg/L	17.2	5.00	50.0	250	797	282	106%	75-125%
988154-1	Nickel	EPA 200.8	иду	4.06	5.00	50.0	250	254	214	82.0%	75-125%
988154-1	Selenium	EPA 200.8	1004	3.04	5.00	50.0	250	253	236	93.2%	75-125%
988250-1	Silver	EPA 200.8	н9%	0.00	5.00	50.0	250	250	523	91.6%	75-125%
988154-1	Thallium	EPA 200.8	μg/L	0.00	5.00	50.0	250	250	212	84.8%	75-125%
988154-1	Vanadium	EPA 200.8	ug/L	0.00	2.00	50.0	250	250	242	96.8%	75-125%
988154-1	Zinc	EPA 200.7	ngA	0.00	1.00	2000	2000	2000	1780	89.0%	75-125%
988154-1	Вогол	EPA 200.7	ндЛ	1020	1.00	2000	2000	3020	2940	%0'96	75-125%
988154-1	Iron	EPA 200.7	н97.	0.00	1.00	2000	2000	2000	1870	93.5%	75-125%

ND: Not detected, or below limit of detection.

DF: Dilution Factor

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

14201 Franklin Avenue, Tustin, CA 92780-7008 (714)730-6239 FAX: (714) 730-6462 RUESDAL LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-246]

COC Number

TURNAROUND TIME

IM3Plant-WDR-246 10 Days

Sample Conditions LIFORTH Attached TOTAL NUMBER OF CONTAINERS COMMENTS ٩ PAGE 17 = 100 74 NUMBER OF DATE 03/03/10 Ú 4 ব 4 Total Metals (200.7) Cr 488184 (300.0) F. NO3, NO2, SO4 evel 4 (0.00E) anoinA × × Total Metals (200.7) See List Below × × × 21.6 Title 22 Metals List (200.7, 200.8, 245.1) Š × × × × CRVI) (218.6) Lab Fillered × × × × × 1.265 crbģ DESCRIPTION FAX 530-339-3303 74.00 286 <u>2</u> 03/03/10 03/03/10 03/03/10 155 Grand Ave Ste 1000 DATE 0800 Dakland, CA 94612 PG&E Topock IM3 530-229-3303 CH2M HILL Æ2 392895.AA.DM evere.truesdail.com SC-700B-WDR-246 SC-100B-WDR-246 Time SC-701-WDR-246 0890 0%3 SAMPLERS (SIGNATURE PROJECT NAME P.O. NUMBER SAMPLE LD. COMPANY ADDRESS SC./00B S 700B 몺

ţĻ The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, WARM | 오 SAMPLE CONDITIONS YES ğ SPECIAL REQUIREMENTS: CUSTODY SEALED Mo, Ni, Fe, Zn RECEIVED Date NA 03 2010 3-3-10 2007 Date/ 3/3/ Darte 1 Oate/ Time Time Date/ Time Date/ Time 79.5 CHAIN OF CUSTODY SIGNATURE RECORD 8, Ŷ Š Company/ Agency Company/ Company Company Company Companyi Agency и Денсу Agency Agency 8.03 Printed Printed Printed Printed Printed Printed Nаme Name Name ¥ame Name 4180 (Received) Multill Wille 0830 Signature (Relinquished) ((Relinquished) (Received)⁴ (Relinquish Signature (Received) Signature Signature/ Signature Signature



Sample Integrity & Analysis Discrepancy Form

Client	: E2	Lab 3	98 #	8154
Date I	Delivered: <u>03/03</u> /10 Time: <u>ぬい</u> り By: ロMail ぬField	Servic	e 🗆	Client .
1.	Was a Chain of Custody received and signed?	M Yes	□No	□N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes	□No	⊠ N/A
3.	Are there any special requirements or notes on the COC?	□Yes	□No	₽ N/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes	□Ño	
5 .	Were all requested analyses understood and acceptable?	⊉ Yes	□No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? 4.2° C.	⊠lYes ì	□No	□N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, dtc€Ve Ⅲ ○C	Z i Yes	□No	□N/A
8.	Were sample custody seals intact?	□Yes	□No	I N/A
g.	Does the number of samples received agree with COC?	∯Yes	□No	□N/A
10.	Did sample labels correspond with the client ID's?	Д¹Yes	□No	□N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: **CITruesdail*** \(\infty\) Client	ØdYes	□No	□N/A
12.	Were samples pH checked? pH = See C.O.C.	≱ 1Yes	□No	□N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	⊘ Yes	□No	□N/A
14,	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH	A Yes	□No	□N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Solid □Oth			e Water
16.	Comments:		5.	
17	Sample Check-In completed by Truesdail Log-In/Receiving:	6	Tuak	Punna



14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

March 25, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-246 PROJECT, SLUDGE

MONITORING,

TLI No.: 988156

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-246 project sludge monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on March 3, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

All final results and associated dilution factors are reported on a dry weight basis.

No violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted, TRUESDAIL LABORATORIES, INC.

fur Mona Nassimi

Manager, Analytical Services

For K.R.P. Iyer

Quality Assurance/Quality Control Officer

Al- Kharraf

EXCELLENCE IN INDEPENDENT TESTING



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Soil Sample Project Name: PG&E Topock Project Project No.: 392895.AA.DM Laboratory No.: 988156

Date: March 24, 2010 Collected: March 3, 2010 Received: March 3, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 300.0	Fluoride	Giawad Ghenniwa
SM 2540 B	% Moisture	Gautam Savani
SW 6010B	Metals by ICP	Kris Collins
SW 6020	Metals by ICP/MS	Romuel Chaves / Daniel Kang
SW 7199	Hexavalent Chromium	Sonya Bersudsky

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Project Name: PG&E Topock Project

Attention: Shawn Duffy

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM



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14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008

Laboratory No.: 988156

Date Received: March 3, 2010

Analytical Results Summary

SM 2540 B % Moisture	747
EPA 300.0 Fluoride	mg/kg 26.2
SW 7199 Hexavalent Chromium	mg/kg 153
Sample Time	08:00
Sample I.D.	SC-Sludge-WDR-246
Lab I.D.	988156

ND: Non Detacted (below reporting finit) mg/L: Milligrams per liter.

Results below 0.01 ppm will have two (2) significant figures.
Result above or equal to 0.01 ppm will have three (3) significant figures.
Quality Control data will always have three (3) significant figures. Note: The following "Significant Figures" rule has been applied to all results:

EXCELLENCE IN INDEPENDENT TESTING

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Contract Of Contract

Oakland, CA 94612 Attention: Shawn Duffy Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Laboratory No.: 988156 Date Received: March 3, 2010

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7003 (714) 730-6239 - FAX (714) 730-6462 - www.tuesdail.com

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Analytical Results Summary

METALS ANALYSIS: Total Metal Analyses as Requested

<u> </u>	. Date	Antimony SW 6020 03/17/10	Arsenic SW 6020 03/17/10	Barium SW 60108 03/12/10	Beryilium SW 6010B 03/12/10	Cadmium SW 6010B 03/12/10	Chromium SW 6010B 03/12/10	Cobalt SW 6010B 03/12/10	Copper SW 6010B 03/12/10	Lead SW 6010B 03/12/10
988156	SC-Sludge-WDR-246 08:00	QN N	38.8 38.8	101	111gr Kg	44.5	13200	лгу лк д 24.8	mg/kg 149	mg/kg 18.3
tab I.D.	Date of Analysis: Sample ID Time Coli.	Mercury SW 6020 03/11/10 mg/kg	Molybdenum SW 6020 03/17/10 mg/kg	Nickel SW 6010B 03/12/10 mg/kg	Selenium SW 6020 03/17/10 mg/kg	Silver SW 6010B 03/18/10 mg/kg	Thallium SW 6020 03/17/10 mg/kg	Vanadium SW 6010B 03/12/10 mg/kg	Zinc SW 6010B 03/12/10 mg/kg	
988156	SC-Sludge-WDR-246 08:00	0.592	35.1	32.0	QN	QN	Q	161	107	

NOTES:

ND: Not detected, or below limit of detection

Laboratory

Number

EXCELLENCE IN INDEPENDENT TESTING

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Soil Sample Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA,DM Prep. Batch: 03CrH10H

Relative

Percent

Laboratory No.: 988156

Date: March 24, 2010 Collected: March 3, 2010

QC Within

Received: March 3, 2010 Prep/ Analyzed: March 16, 2010

Analytical Batch: 03CrH10H

Acceptance

investigation:

Hexavalent Chromium by IC Using Method SW 7199

REPORT

Analytical Results Hexavalent Chromium

<u>TLI I.D.</u> Field I.D. Sample Time Run Time Units <u>D</u>F RL <u>Res</u>ults 988156 SC-Sludge-WDR-246 08:00 14:54 mg/kg 5.00 7.91 153

QA/QC Summary

Duplicate

Sample

	Duplic	ate	988156	Concentra 153	tion Con	entration 157	Difference 2.89%	limits	Control	
QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked	Theoretica Conc. of spiked		Yes Acceptance	QC Within Control
MS	988156	153	10.0	31.6	316	\$8mple 470	sample			
IMS	988156	153	50.0				469	100%	<u>7</u> 5-125%	Yes
PDMS	988156		1	69.0	3448	3280	3601	90.7%	75-125%	Yes
L DIAIS	300 130	153	25.0	25.3	633	777	785	98.8%	75-125%	
		QC Std	II.D. Mea	sured	Theoretica	l Percer		<u> </u>		Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
8lank	ND	<0.400		<0.400	Yes
MRCCS	2.05	2.00	103%	90% - 110%	Yes
MRCVS#1	2.03	2.00	102%	90% - 110%	Yes
LÇS	1.96	2.00	97.8%	80% - 120%	Yes

ND: Balow the reporting limit (Not Detected)

QC STD I.D.

DF: Dilution Factor.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Soil Sample Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM REPORT

Laboratory No.: 988156

Date: March 24, 2010 Collected: March 3, 2010

Received: March 3, 2010

Prep/ Analyzed: March 8, 2010 Analytical Batch: 03SOLID10B

investigation:

Total Solids by SM 2540 B

Analytical Results % Moisture

<u>TLI I.D.</u>

Field I.D.

Sample Time

<u>Units</u>

Results

988156

SC-Sludge-WDR-246

08:00

%

74.7

QA/QC Summary

QC STO I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance ilmits	QC Within Control
Duplicate	988156	74.7	74.6	0.13%	<u>< 20%</u>	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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REPORT

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Soil Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988156

Date: March 24, 2010

Collected: March 3, 2010 Received: March 3, 2010

Prep/ Analyzed: March 4, 2010

Analytical Batch: 03AN10D

Investigation:

Fluoride by Ion Chromatography using EPA 300.0

Analytical Results Fluoride

TLI I.D. Field I.D. Sample Time Run Time Units DЕ ŖL Results 988156 SC-Sludge-WDR-246 08:00 14:24 mg/kg 1.00 15.8 26.2

QA/QC Summary

	QC ST			abora Numb		Concentr	ation	•	plic ent	ration	Relative Percent Difference	Ac	ceptance limite	T	QC Within Control	
	Duplic	ate	<u> </u>	98810)9	ND.			ND		0.00%		≤ 20%	\top	Yes	
QC Std I.D.	Lab Number	unsp	c.of piked aple		ution ctor	Added Spike Conc.	_	MS nount	۱ ۹	leasured Conc. of spiked sample	Theoretic Conc. o spiked sample	F	M8% lecovery		Acceptance limits	QC Within Control
MS	988109	0.0	00	2	.00	1.00		2.00		2.12	2.00	_ -	106%	Γ.	85-115%	Yes
		Q	C Std	I.D.		easured centration	_	eoretic:		Percen Recover			QC Wit		7	
			Blani	k		ND		<0.500		***	<0.5	00	Yes		-	
			MRCC	S		4.08		4,00		102%	90% -					
		_ M	IRCV	S#1		3.14		3.00		105%	90% -	110%				
		M	IRCV	5#2		3.15		3.00		105%	90% -					

4.00

ND: Below the reporting limit (Not Detected).

LCS

4.10

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Yes

Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Samples: One (1) Soil Sample Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895,AA,DM

Investigation: Total Metal Analyses as Requested

Laboratory No.: 988156 Reported: March 24, 2010 Collected: March 3, 2010 Received: March 3, 2010 Analyzed: See Below

Analytical Results

SAMPLE ID: SC-	Sludge-WDR-246	Time Coll	ected: 08	3:00		LAB ID	988156	
Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Antimony	SW 6020	ND	10.0	mg/kg	2.00	031710A	03/17/10	14:50
Arsenic	SW 6020	38.8	10.0	mg/kg	1.60	031710A	03/17/10	14:50
Banum	SW 6010B	101	1.00	mg/kg	1.60	031210A-Th	03/12/10	11:54
Berylliu <u>m</u>	SW 6010B	2.17	1.00	mg/kg	1.60	031210A-Th	03/12/10	11:54
<u>Cadmium</u>	SW 6010B	44.5	1.00	mg/kg	1.60	031210A-Th	03/12/10	11:54
Chromium	SW 6010B	13200	20.0	mg/kg	32.0	031210B-Th	03/12/10	16:42
Cobalt	\$W 6010B	24.8	1.00	mg/kg	1,60	031210A-Th	03/12/10	11;54
Copper	SW 6010B	149	1.00	mg/kg	1.60	031210A-Th	03/12/10	11:54
_ead	SW 6010B	18.3	1.00	mg/kg	1.60	031210A-Th	03/12/10	11:54
Mercury	SW 6020	0.592	10.0	mg/kg	0.320	031110A-Hg	03/11/10	10:33
<u>Molybdenum</u>	SW 6020	35.1	10.0	mg/kg	1.60	031710A	03/17/10	14:50
Nickel	SW 6010B	32.0	1.00	mg/kg	1.60	031210A-Th	03/12/10	11:54
Selenium	SW 6020	ND	10.0	mg/kg	1.60	031710A	03/17/10	14:50
Silver	SW 6010B	ND	1.00	mg/kg	1.60	031810B-Th	03/18/10	15:06
Thallium	SW 6020	ND	10.0	mg/kg	2.00	031710A	03/17/10	14:50
√anadium	SW 6010B	161	1.00	mg/kg	1.60	031210A-Th	03/12/10	11:54
Zinc	SW 6010B	107	1.00	mg/kg	2.00	031210A-Th	03/12/10	11:54

NOTES:

Sample results and reporting limits reported on a dry weight basis.

ND: Not detected, or below limit of detection.

DF: Dilution factor.

Respectfully submitted. TRUESDAIL LABORATORIES, INC.

 \mathcal{L}_o , Mona Nassimi, Manager **Analytical Services**

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EXCELLENCE IN INDEPENDENT TESTING

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project Samples: One (1) Soil Sample Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Established 1931

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 (7) 4) 730-6239 - FAX (7) 4) 730-6462 - www.tuesdail.com

Laboratory No.: 988156

Reported: March 24, 2010 Collected: March 3, 2010

Received: March 3, 2010

Quality Control/Quality Assurance Report

			DIGES	DIGESTED BLANK		MRCCS				MRCVS			
						Observed	TRUE	>€	Control	Observed	TRUE	98	Control
Parameter	Method	Batch	Units	Blank	R	Value	Value	Rec	Limits	Value	Value	Rec	Limits %
Antimony	SW 6020	031710A	mg/kg	ON	2.00	0.0493	0.0500	89.6%	90-110%	0.0452	0.050.0	90.4%	90-110%
Arsenic	SW 6020	031710A	B ygu	QN	0.50	0.0508	0.0500	102%	90-110%	0.0493	0.0500	89.6%	90-110%
Barium	SW 6010B	031210A-Th	gy/gn	QN	1.00	4.83	5.00	96.6%	90-110%	4.65	5.00	93.0%	90-110%
Beryllium	SW 6010B	SW 6010B 031210A-Th	m g/kg	S	0.50	¥.	5.00	98.8%	90-110%	4.67	5.00	93.4%	90-110%
Cadmium	SW 6010B	031210A-Th	трле	Ð	0.50	5.02	5.00	100%	90-110%	4.80	5.00	96.0%	90-110%
Chomium	SW 60108	031210B-Th	mg/kg	Ş	1.00	4.86	2.00	97.2%	90-110%	4.65	200	93.0%	90-110%
Cobatt	SW 6010B	SW 6010B 031210A-Th	mgrAg	Q.	1.00	4.98	5.00	99.6%	90-110%	4.79	5.00	95.8%	90-110%
Copper	SW 6010B	SW 6010B 031210A-Th	mg/kg	Q	1.00	4.89	5.00	97.8%	90-110%	2.	2.00	92.8%	90-110%
Lead	SW 6010B	SW 6010B 031210A-Th	mg/kg	9	1.00	4.98	5.00	99.6%	90-110%	4.72	5.00	94.4%	90-110%
Mercury	SW 6020	031110A-Hg	mgAcg	Ð	0.100	0.00185	0.00200	92.5%	90-110%	0.00202	0.00200	101%	90-110%
Molybdenum	SW 6020	031710A	mg/kg	ND	1.00	0.0491	0.0500	98.2%	90-110%	0.0466	0.0500	93.2%	90-110%
Nickel	SW 6010B	031210A-Th	тржд	Q.	1.00	4.99	5,00	99.8%	90-110%	4.83	2.00	96.6%	90-110%
Selenium	SW 6020	031710A	mp/kg	N ON	1.00	0.0494	0.0500	98.8%	90-110%	0.0488	0.0500	97.6%	90-140%
Silver	SW 6010B	031810B-Th	mg/kg	QN	1.00	5.08	5.00	102%	90-110%	4.99	5.00	86.66	90-110%
Thallium	SW 6020	031710A	mg/kg	2	2.00	0.0512	0.0500	102%	90-110%	0.0522	0.0500	104%	90-110%
Vanadium	SW 6010B	031210A-Th	mg/kg	Q	1.00	4.85	5.00	97.0%	90-110%	4.77	5.00	95.4%	90-110%
Zinc	SW 6010B	031210A-Th	mg/kg	Q.	2.00	4.95	5.00	80.66	90-110%	4.80	5.00	%0.96	90-110%
											i !		



Report Continued

			INTERFERE	INTERFERENCE CHECK STANDARD	TANDARD	
Parameter	potte	Units	<u> 3</u>	<u>\$</u>	3R	Control
			Obe.	Theo.	Rec.	Limits
Arsenic	SW 6020	mg/kg	0.0416	0.0500	83.2%	80-120%
Cadmium	StW 6010B	mg/kg	1.98	2.00	80.66	80-120%
Chromium	SW 6010B	Вубш	1.91	2.00	95.5%	80-120%
Cobalt	SW 6010B	mg/kg	1.95	2.00	97.5%	80-120%
Copper	SW 6010B	mg/kg	1.90	2.00	95.0%	80-120%
Mercury	SW 6020	mg/kg	0.00223	0.00200	112%	80-120%
Nickel	SW 6010B	mg/kg	1.98	2.00	99.0%	80-120%
Zinc	SW 6010B	шg/kg	1.95	2.00	97.5%	80-120%

			LABORATO	LABORATORY CONTROL SAMPI	SAMPLES		SAMPLE DUPLICATES	ATES			
Parameter	Method	Units	SOT	SOT	≱¢	Control	SAMPLE	SAMPLE	ana	80	Precision
	·		Obs.	Theo.	Rec.	Limits	OJ .	RESULT	RESULT	O _O S	Limits %
Anlimony	SW 6020	mg/kg	1.86	2:00	93.0%	80-120%	988156	QN	S	%00.0	υζ>
Arsenic	SW 6020	mg/kg	1.86	2.00	93.0%	80-120%	988156	38.8	38.4	%66.0	i 8
Barium	SW 6010B	шдука	97.8	9	97.8%	80-120%	988156	101	113	11.2%	දි
Beryllium	SW 6010B	mg/kg	97.2	100	97.2%	80-120%	988156	2.17	2.50	13.8%	95
Cadmium	SW 6010B	mg/kg	97.2	100	97.2%	80-120%	988156	44.5	43.2	2.89%	8
Chromium	SW 6010B	mg/kg	97.9	8	97.9%	80-120%	988156	13200	15000	12.8%	 - -
Cobalt	SW 6010B	mg/kg	96.6	100	99.6%	80-120%	988156	24.8	28.3	13.2%	5
Copper	SW 6010B	тдла	97.4	100	97.4%	80-120%	988156	149	161	7.38%	i
Lead	SW 6010B	тдлка	97.4	100	97.4%	80-120%	988156	18.3	20.1	9.72%	5
Mercury	SW 6020	тдлед	0.00178	0.00200	89.0%	80-120%	988156	0.592	0.646	8.84%	ଚ
Molybdenum	SW 6020	таука	2.21	2.00	111%	80-120%	988156	35.1	35.0	0.27%	
Nickel	SW 6010B	mg/kg	97.9	90	97.9%	80-120%	988156	32.0	33.8	5.73%	
Selenium	SW 6020	шдука	1.72	2.00	86.0%	80-120%	988156	2	£	%00.0	5
Silver	SW 6010B	толи	93.8	100	93.8%	80-120%	988156	Q	£	%00.0	5
Thallium	SW 6020	mg/kg	2.11	2.00	106%	80-120%	988156	2	Q	%00.0	
Vanadium	SW 6010B	трука	98.9	100	98.9%	80-120%	988156	161	177	9.49%	5
Zinc	SW 6010B	трле	92.1	90	92.1%	80-120%	988156	107	124	14.7%	ଶି ଟି

				Затре		Spike	Total Amt	Theo.	SW	×	Control
Ol eldu	Sample ID Parameter	Method	Units	Result	DF	Level	of Spike	Value	O Page	æc.	Limits %
988156	Antimony	SW 6020	mg/kg	0.00	10.0	7.99	79.9	79.9	9.99	83.3%	75-125%
988156	Arsenic	SW 6020	mg/kg	38.8	10.0	2.99	79.9	119	105	82.4%	75-125%
988156	Валит	SW 6010B	mg/kg	101	1.00	320	320	420	9	93.8%	75-125%
988156	Beryllum	Shirt BO10B	mp/tg	2.17	1.00	320	320	322	307	95.4%	75-125%
988156	Cadmium	SW 6010B	талс	44.5	1.00	320	320	38	334	89.06	75-125%
988156	Chromium	SW 6010B	тдлка	13200	20.0	320	6393	19593	18400	81.3%	75-125%
988156	Cobalt	SW 6010B	mg/kg	24.8	1.00	320	320	7	305	87.5%	75-125%
988156	Copper	SW 6010B	Пg/kg	149	1.00	320	320	469	3	91.0%	75-125%
988155	Lead	SW 6010B	mgvkg	18.3	1.00	320	320	338	287	84.2%	75-125%
988156	Mercury	SW 6020	шайа	0.592	10.0	0.0379	0.379	0.971	976.0	101%	75-125%
988156	Molybdenum	SW 6020	mg/kg	35.1	10.0	7.99	79.9	115	118	104%	75-125%
981156	Nickel	SW 6010B	тдлкд	32.0	1.00	320	320	352	301	84.3%	75-125%
988156	Selenium	SW 6020	mg/kg	0.00	10.0	7.99	79.9	79.9	67.8	84.9%	75-125%
988156	Silver	SW 6010B	толка	0.00	1.00	320	320	320	282	88.3%	75-125%
988156	Thallium	SW 6020	mg/kg	0.00	10.0	7.99	79.9	79.9	76.6	95.9%	75-125%
988156	Vanadium	SW 6010B	mg/kg	161	1.00	320	320	480	449	90.1%	75-125%
988156	Zinc	SW 6010B	шаўю	107	1.00	320	320	107	3	20.00	76 10EW

ND: Not detected, or below limit of detection.

DF: Dilution Factor

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

L. Com Com Ly Monager Analytical Services





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Dry Weight Calculations

Date Calculated: 3/24/10

	Sample Result Wet Welght mg/kg	Dilution Factor	% Moisture	Sample Result Dry* Welght mg/kg	Reported Value mg/kg	Reporting Limit Wet Weight mg/kg	Reporting Limit Dry Weight mg/kg
Fluoride	6.6400		7 4.7	26.2451	26.2	4.00	15.8
Hexavalent Chromium Hexavalent Chromium - Dup Hexavalent Chromium - MS Hexavalent Chromium - IMS	38.6362 39.7683 118.9608 828.867		74.7 74.7 74.7 74.7	152,712 157,187 470,201 3276,156	153 157 470 3280	2.00 2.00 4.00 20.0	7.91 7.91 15.8 79.1
Hexavalent Chromium - PDMS	196.707		74.7	777.499	777	10.0	39 <u>.5</u>
Antimony Arsenic	ND 9.82206	10.0 10.0	74.7 74.7	ND 38.8224	ND 36.8	0.404	2.00
Berium Beryllium	25.46 0.5502	1.00 1.00	74.7 74.7 74.7	100.632 2.1747	101 2.17	0.404 0.404 0.404	1.60 1.60 1.60
Cadmium Chromium Cobalt	11 25 3333 6.283	1.00 20.0 1.00	74.7 74.7 74.7	44.4664 13174	44.5 13200	0.404 8.09	1.60 32.0
Copper Lead	37.81 4.622	1.00	74.7 74.7 74.7	24.8340 149.447 18.2688	24.8 149 18.3	0.404 0.404 0.404	1.60 1.60 1.60
Mercury Molybdenum	0.1 <u>4972</u> 8.88432	10.0 10.0	74.7 74.7	0.59178 35.1159	0.592 35.1	0.0809 0.404	0.320 1.60
Nickel Selenium Silver	8.084 ND ND	1,00 10.0 1.00	74.7 74.7 74.7	31.9526 ND	32.0 ND	0.404 0.404	1.60 1.60
Thallium Vanadium	ND 40.66	10.0		ND ND 160.711	ND ND 161	0.404 0.404 0.404	1.60 2.00 1.60
Zinc	27.13	1.00	74.7	107.233	107	0.404	2.00

Sample Result in Dry Weight = [Sample_{ww} / (100-%Moisture)]*100

where:

Sampleww = Sample result in wet weight

TOTAL NUMBER OF CONTAINERS COMMENTS ¥. 6 10 Deys PAGE WARM | ջ SAMPLE CONDITIONS TURNAROUND TIME PRISE DATE 03/03/10 YES COC Number 4 000 SPECIAL REQUIREMENTS: CUSTODY SEALED RECEIVED 02-5-5 <u>a</u> CHAIN OF CUSTODY RECORD Date/NAR Time/NAR Metals (60108) Tille 22, (includes Mercun) [IM3plant-WDR-246] Date Date: Time Date/ Time Date/ Time Date CHAIN OF CUSTODY SIGNATURE RECORD (0.00E) snoinA Agency Company/ Agency Company/ 22 Agency Company! /Company/ Agency Company Company/ Agency DESCRIPTION FAX 530-339-3303 Sludge TRUESDAIL LABORATORIES, INC. 14201 Franklin Avenue, Tusén, CA 92780-7008 (714)730-6239 FAX: (714) 730-6462 뿔 03/03/10 DATE - 1-15-10 Printed Name 278.0 155 Grand Ave Ste 1000 Printed Name Printed Printed Printed Name Printed DATE Name Name Oakland, CA 94612 PG&E Topock IM3 530-229-3303 392895.AA.DM CH2M HILL www.truesdail.com SC-Sludge-WDR-246 EMS DW-5634 SAMPLERS (SIGNATURE PROJECT NAME (Relinquished) (Relinquished) (Relinquished) P.O. NUMBER SAMPLE 10. Signature (Received) COMPANY (Received) (Received) ADDRESS Signature Signature Signature Signature Signature PHONE

Sample Integrity & Analysis Discrepancy Form

lien	t: <u>CU2 M HI-CL</u>	_{Lab #} 9881
ate	Delivered: <u>Ø3/ Ø3</u> /10 Time: <u>Ø://5</u> By: □Mail ØFie	ld Service □Client
,	Was a Chain of Custody received and signed?	X1Yes □No. □N/A
•	Does Customer require an acknowledgement of the COC?	□Yes □No QIN/A
	Are there any special requirements or notes on the COC?	□Yes □No #QN/A
,	If a letter was sent with the COC, does it match the COC?	□Yes □No PN/A
	Were all requested analyses understood and acceptable?	A)Yes □No □N/A
	Were samples received in a chilled condition? Temperature (if yes)? <u>4.2°C</u>	⊠(Yes □No □N/A
	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	☑(Yes □No □N/A
	Were sample custody seals intact?	⊡Yes ⊡No AQIN/A
	Does the number of samples received agree with COC?	¥Yes □No □N/A
0.	Did sample labels correspond with the client ID's?	ØYes □No □N/A
•	Did sample:labels indicate proper preservation? Preserved (if yes) by: □Truesdail □Client	□Yes □No ⊠(N/A
	Were samples pH checked? pH =	□Yes □No QIN/A
),	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	ad(Yes □No □N/A
4.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH □ Std	Ø(Yes © No □ N/A
5.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Soil □Wipe □Paint □Solid □C	Vater
6.	Comments:	
7.	Sample Check-In completed by Trucchail tog Ne/Receiving:a	L. Steabuni

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March 22, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Avc., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-247 PROJECT, GROUNDWATER

MONITORING, TLI No.: 988272

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-247 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on March 10, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for sample SC-700B-WDR-247 and the associated matrix spike for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services

K. R. P. Syc

K.R.P. Iyor

Quality Assurance/Quality Control Officer

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 988272

Date: March 22, 2010

Collected: March 10, 2010 Received: March 10, 2010

ANALYST LIST

METHOD		ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

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14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008

Date Received: March 10, 2010 Laboratory No.: 988272

Analytical Results Summary

SM 2540C 7DS		4130	
EPA 120.1 EC	mmhos/cm	7140	
SM 2130B Turbidity	NTO	Q	•
EPA 218.6 Chromium Hexavalent	µg/L	0.21	
EPA 200.8 Chromium Total	μg/L	2	
Sample Time		08:00	,
Sample I.D.		SC-700B-WDR-247	
Lab I.D.	:	988272	

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.001 will have two (2) significant figures. Result above or equal to 0.001 will have three (3) significant figures. Quelity Control data will always have three (3) significant figures.

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REPORT

Client: £2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 031510A

Laboratory No.: 988272

Date: March 22, 2010

Collected: March 10, 2010 Received: March 10, 2010

Prep/ Analyzed: March 15, 2010

Analytical Batch: 031510A

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8

Analytical Results Total Chromium

TLI I.D. <u>Field I.D.</u> <u>Units</u> Method Run Time <u>DF</u> RLResults 988272 SC-700B-WDR-247 μg/L **EPA 200.8** 16:14 5.00 1.00 ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988250-1	61.8	60.8	1.63%	<u>≺</u> 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988250-1	61.8	5.00	50.0	250	286	312	89.7%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00		<1.00	Yes
MRCCS	47.2	50.0	94.4%	90% - 110%	Yes
MRCVS#1	47.7	50.0	95.4%	90% - 110%	Yes
MRCVS#2	45.4	50.0	90.8%	90% - 110%	Yes
MRCVS#3	48.3	50.0	96.6%	90% - 110%	Yes
ICS	42.7	50.0	85.4%	80% - 120%	Yes
LCS	48.5	50.0	07.0%	009/ 1109/	Voe

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895,AA.DM

Laboratory No.: 988272

Date: March 22, 2010

Collected: March 10, 2010

Received: March 10, 2010 Prep/ Analyzed: March 11, 2010

Analytical Batch: 03CrH10D

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D. Fleid I.D. Sample Time **Run Time** <u>Units</u> <u>DF</u> RL Results 988272 SC-700B-WDR-247 08:00 08:45 μg/L 1.05 0.20 0.21

						D/A	C Su	mmar	<u>y</u>				
	QC ST) I.D.	i .	oratory umber	Concentr	ation		olicate entration	Relative Percent Difference		eptance limits	QC Within Control	
	Dupliq	ate	98	8275-2	6.77		- 6	5.77	0.00%		≤ 20%	Yes	
QC Std I.D.	Lab Number	นกรเ	nc.of piked nple	Dilutio Factor	Added Spike Conc.	_	MS lount	Measured Conc. of spiked sample	Theoretica Conc. of spiked sample		MS% ecovery	Acceptance limits	QC Within Control
MS	988272	0.	21	1.06	1.00	1	.06	1.23	1.27		96.2%	90 - 110%	Yes
		a	C Std	I.D.	Measured Concentration		eoretical centration	Perce Recov	-		QC With Contro	_	
			Blani	k	ND		<0.200		<0.2	00	Yes		
			MRCC	s	5.03		5.00	1019	6 90% - 1	10%	Yes		
		1	ARCV5	S#1	10.0		10.0	100%	<u>4</u> 95% - 1	05%	Yes		
		<u></u>	IRCV	3#2	10.3		10.0	1039	6 95% - 1	05%	Yes		
			IRCV	S#3	10.4		10.0	1049	6 95% - 1	05%	Yes		
		^	IRCV	3 # -4	9.56		10.0	95.69	% 95% - 1	05%	Yes		
		ł	LCS	:	5.14		5.00	1039	6 90% - 1	10%	Ves		

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories,

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988272

Date: March 22, 2010

Collected: March 10, 2010

Received: March 10, 2010 Prep/ Analyzed: March 11, 2010

Analytical Batch: 03TUC10J

investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

TLI I.D.

Field I.D.

Sample Time

Units

<u>DF</u>

<u>RL</u>

<u>Results</u>

988272

SC-700B-WDR-247

08:00

NTU

1.00

0.100

ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988269-27	DO	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100		<0.100	Yes
LCS	7.79	8.00	97.4%	90% - 110%	Yes
LCS	7.70	8.00	96.3%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdall.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988272

Date: March 22, 2010

Collected: March 10, 2010

Received: March 10, 2010

Prep/ Analyzed: March 11, 2010

Analytical Batch: 03EC10H

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.

Field I.D.

Units

Method

<u>DF</u>

<u>RL</u>

Results

988272

SC-700B-WDR-247

μmhos/cm

EPA 120.1

1.00

2.00

7140

QA/QC Summary

QC S		* Concentral	tion	Duplica Concentra	•		ative Percent Difference	Ac	ceptance limits	QC Within Control
Duplic	ate 988272			7160			0.28%		<u><</u> 10%	Yes
	QC Std I.D.	Measured Concentration		Theoretical Incentration	Perc Reco		Acceptant Limits	CO	QC Withi Control	- '
	Blank	ND		<2.00			<2.00		Yes	
	ccs	705		706	99.9	%	90% - 110	%	Yes	7
	CVS#1	994		998	99.6	%	90% - 110	%	Yes]
	LCS	705		706	99.9	%	90% - 110	%	Yes	
-	LCSD	705	"	706	99.9	%	90% - 110	%	Yes	7

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988272

Date: March 22, 2010

Collected: March 10, 2010

Received: March 10, 2010

Prep/ Analyzed: March 11, 2010

Analytical Batch: 03TDS10G

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.

Field I.D.

Units

<u>Method</u>

<u>RL</u>

Results

988272

SC-700B-WDR-247

mg/L

SM 2540C

250

4130

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988272	4130	4240	1.31%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LĊS	499	500	99.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

www.truesdail.com

TRUESDAIL LABORATORIES, INC. 14201 Franklin Averue, Tustin, CA 92780-7009 (714)730-6239 FAX: (714) 730-5462

CHAIN OF CUSTODY RECORD

988272 [IM3Plant-WDR-247]

TURNAROUND TIME COC Number

ЭE

10 Days PAGE 1

OATE 03/10/10

TOTAL MUMBER OF CONTAINERS COMMENTS NUMBER OF CONTAINERS Ø Rec'd 03/10/10 Rec'd Trenp (OE 15 WR) (SMS) (OF 12) 200. Space Conductance (120,1) 1514 Total Chiomium 157 .001 B DESCRIPTION FAX (530) 339-3303 Water Ŧ. 63 TAN Daylono OSO AUATIUSS 7180 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 (530) 229-3303 392895.AA.DM PG&E Topock 1:416 0200 SAMPLERS (SYGNATURE SC-700B-WDR-247 낊 Sc. NaB PROJECT NAME P.O. NUMBER SAUPLE ID. COMPANY ADDRESS 품

evel III (

For Sample Conditions See Form Attached

9 "	CHAIN OF CUSTODY SIGNATU	IGNATURE RECORD	3-10-10	SAMPLE CONDITIONS
Signature (Relinquished)	Printed / ALDE	Company! Agency Off	Date/	RECEIVED COOL WARM *F
Signature (Market Co.)	Printed & BOCKES	Company/	Date/ 3/15/19 Time 15:30	CUSTODY SEALED YES NO
Signature (Relinquished)	Printed AL CONS	Company!	Date/ 3/10/10	SPECIAL REQUIREMENTS:
1. Shallyn	Luda	Company! 747	Date/ 2/10/10 1/:0]	
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	
Signature (Received)	Printed Name	Compeny! Agency	Dete√ Tíme	





Sample Integrity & Analysis Discrepancy Form

Clien	CHEMENUL - E 2-	Lab # <u>9</u> 8	<u>827</u> 2
Date	Delivered: 3 / 10/10 Time: 21:05 By: 🗆 Mail 🗹 Field	d Service □(Client
1.	Was a Chain of Custody received and signed?	'Yes □No	□N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No	DAN/A
3.	Are there any special requirements or notes on the COC?	□ Yes □No	THINA
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No	TAN /A
5 .	Were all requested analyses understood and acceptable?	☑Yes □No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>4° C</u> .	122√es □No	□N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	ØYes □No	□N/A
8.	Were sample custody seals intact?	□Yes □No	□N/A
9.	Does the number of samples received agree with COC?	ØYes □No	□N/A
10.	Did sample labels correspond with the client ID's?	☑Yes □No	□N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: Diffruesdail DClient	ØZYes □No	□N/A
12.	Were samples pH checked? pH = Sec C-O·C	ØYes □No	□N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	DaYes □No	□ <i>N/A</i> .
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH □ Std	TVes □No	□N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Wa □Sludge □Soil □Wipe □Paint □Solid dott	ater □Waste her / / A 7	_
16.	Comments:		<u> </u>
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Kapal	Davila



April 6, 2010

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

REVISED CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-248 PROJECT, GROUNDWATER MONITORING, TLI NO.: 988362

Truesdail Laboratorics, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-248 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on March 16, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for sample SC-700B-WDR-248 and the associated matrix spike for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

Al. Khang

for Mona Nassimi

Manager, Analytical Services

K.R.P. Pyc

K.R.P. Iyer

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project Project No.: 392895.AA.DM

Laboratory No.: 988362 Date: March 26, 2010

Collected: March 16, 2010 Received: March 16, 2010

<u>ANALYST LIST</u>

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Daniel Kang
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 [714] 730-6239 - FAX [714] 730-6462 - www.tuesdail.com

Date Received: March 16, 2010

Laboratory No.: 988362

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Analytical Results Summary

SM 2540C TDS		mg/L	4170
EPA 120.1 EC		штноѕ/ст	7210
SM 2130B Turbidity) L	0.134
EPA 218.6 Chromium	Hexavalent	J/Bri	0.44
EPA 200.8 Chromium	Total	ug/L	QN
Sample Time			08:00
Sample I.D.			SC-700B-WDR-248
<u> </u>			988362

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.001 will have two (2) significant figures. Result above or equal to 0.001 will have three (3) significant figures. Quality Control data will always have three (3) significant figures.

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 031810B

REPORT

Laboratory No.: 988362

Date: March 26, 2010 Collected: March 16, 2010

Received: March 16, 2010

Prep/ Analyzed: March 18, 2010

Analytical Batch: 031810B

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8

Analytical Results Total Chromium

<u>TLI I.D.</u> Field I.D. <u>Units</u> <u>Method</u> Run Time DF _RL <u>Results</u> 988362 SC-700B-WDR-248 **EPA 200.8** μg/L 15:22 5.00 1.00 ND

QA/QC Summary

	QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
L	Duplicate	988362	ND	ND	0.00%	<u><</u> 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988362	0.00	5.00	50.0	250	241	250	96.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00		≺1.00	Yes
MRCCS	49.0	50.0	98.0%	90% - 110%	Yes
MRCVS#1	50.2	50.0	100%	90% - 110%	Yes
MRCVS#2	47.5	50.0	95.0%	90% - 110%	Yes
MRCVS#3	49.7	50.0	99.4%	90% - 110%	Yes
ICS	48.5	50.0	97.0%	80% - 120%	Yes
LCS	48.8	50.0	97.6%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.; 988362

Date: March 26, 2010

Collected: March 16, 2010 Received: March 16, 2010

Prep/ Analyzed: March 17, 2010 Analytical Batch: 03CrH10J

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

<u> TLI I.D.</u>	Field I.D.	Sample Time	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
988362	SC-700B-WDR-248	08:00	12:01	μg/L	1.05	0.20	0.44

QA/QC Summary

	QC ST		N	umber		Concentr	ation	1	licate ntration	Percent Difference		eptance imits	QC Within Control	
	Duplic	ate	988	3308-2	3	10.5		10	0.6	0.95%	•	20%	Yes	
QC Std I.D.	Lab Number	uns	nc.of piked nple	Dilut Faci		Added Spike Conc.	_	MS Jount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample		M\$% scovery	Acceptance limits	QC Within Control
MS	988362	0.	44	1.0	6	1.00	1	.06	1.43	1.50		93.4%	90 - 110%	Yes
		۵	C Std	1.D.		Measured ncentration		eoretical centration	Perce Recov	}		QC With		

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200		<0.200	Yes
MRCCS	5.15	5.00	103%	90% - 110%	Yes
MRCVS#1	10.0	10.0	100%	95% - 105%	Yes
MRCVS#2	10.0	10.0	100%	95% - 105%	Yes
MRCVS#3	10.2	10,0	102%	95% - 105%	Yes
MRCVS#4	10.0	10.0	100%	95% - 105%	Yes
LCS	5.18	5.00	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988362

Date: March 26, 2010 Collected: March 16, 2010

Received: March 16, 2010 Prep/ Analyzed: March 17, 2010

Analytical Batch: 03TUC10M

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

 TLI I.D.
 Field I.D.
 Sample Time
 Units
 DF
 RL
 Results

 988362
 SC-700B-WDR-248
 08:00
 NTU
 1,00
 0.100
 0.134

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988269-27	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100		<0.100	Yes
LCS	7.58	8.00	94.8%	90% - 110%	Yes
LCS	7.60	8.00	95.0%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF; Oilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

— Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895,AA,DM P.O. No.: 392895,AA,DM Laboratory No.: 988362

Date: March 26, 2010

Collected: March 16, 2010

Received: March 16, 2010 Prep/ Analyzed: March 17, 2010

Analytical Batch: 03EC10J

Investigation;

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D. Field I.D. Units Method DF <u>RL</u> Results 988362 SC-700B-WDR-248 μmhos/cm EPA 120.1 1.00 2.00 7210

QA/QC Summary

QC ST	D Laborato Numbe	* 1 Concentrati	ion	Duplica Concentra			tive Percent ifference		ceptance limits	QC Within
Duplica	te 988362	7210		7230			0.28%	:	≤ 10%	Yes
	QC Std I.D.	Measured Concentration		heoretical ncentration	Perce		Acceptane Limits	CO CO	QC Withi	
	Blank	ND		<2.00			<2.00		Yes	┪
	CCS	704		706	99.7	%	90% - 110	%	Yes	7
	CV\$#1	997		1000	99.7	%	90% - 110		Yes	7
	LCS	705		706	99.9	%	90% - 110	%	Yes	7
	LCSD	705		706	90.0	٥,	00% 440	0/	1 700	┥

Respectfully submitted. TRUESDAIL LABORATORIES, INC.

≁∠ Mona Nassimi, Mànager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988362

Date: March 26, 2010

Collected: March 16, 2010

Received: March 16, 2010 Prep/ Analyzed: March 17, 2010

Analytical Batch: 03TD\$10I

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.

Field I.D.

<u>Units</u>

<u>Method</u>

RL

Results

988362

SC-700B-WDR-248

mg/L

SM 2540C

250

4170

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988362	4170	4160	0,12%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LCS	499	500	99.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Maneger Analytical Services

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TRUESDAL LABORATORIES, INC. 14201 Franklin Avenue, Tuetin, CA \$2780-7068 (714)730-5239 FAX: (714) 730-8462 www.truesdail.com

CHAIN OF CUSTODY RECORD

(IM3Plant-WDR-248)

9882 TURNAROUND TIME OCHENO

COC Number

뜽

10 Days PAGE 1

COMMENTS 9-40 NUMBER OF CONTAINERS 10 883627 03/16/10 Ō Rec'd (DETS.MS) VAIDMENT TOS (SM2SAOC) Specific Conductainse (1201) Total Chromium DESCRIPTION Water FAX (530) 339-3303 ٣ 03/16/10 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 (530) 229-3303 392895.AA.DM PG&E Topock SAMPLERS (SIGNATURE SC-700B-WDR-248 2 PROJECT NAME P.O. NUMBER SAMPLE 1.D. COMPANY ADDRESS PHONE

Level III

For Sample Conditions See Form Attached

TOTAL NUMBER OF CONTAINERS

C	CHAIN OF CUSTODY SIGNATURE	ATURE RECORD		SAMPLE CONDITIONS
Signature (Relinquished)	Printed Compa	Companyl OTM /	Date: 3-16-10 Time 15:30	RECEIVED COOL WARM "F
Signature (Received)	Printed Tolon Romps	>Company! / X /	Date 7 - 16-10	CUSTODY SEALED YES \ \text{NO } \
Signature (Refinquished)	Printed Faling (Age	ZXJ /kuedunog	96	PPECIAL REQUIREMENTS:
Signeture (Mableum M.)	May Name Aud & Age	Company 77	Date/ 3/16/10	
Signeture D(Relinquished)	Printed Compar Name Agency	Company/ Agency	Dated A.V. 370 Time	
Signature (Received)	Printed Compa Name Agency	Company! Agency	Date/ Time	

Sample Integrity & Analysis Discrepancy Form

Clien	t: <u>E</u> 2	Lab # 9 8	88362
Date .	Delivered: <u>03 //6</u> /10 Time: <u>40:30</u> By: □Mail ⊠Field	Service 🗆	Client .
1.	Was a Chain of Custody received and signed?	ÄYes □No	□N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No	X IN/A
3.	Are there any special requirements or notes on the COC?	□Yes □No	ZAN/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No	CON/A
5 .	Were all requested analyses understood and acceptable?	X QYes □No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>4,/°C</u>	Ø Yes □ No	□N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	d Yes □No	□N/A
8.	Were sample custody seals intact?	□Yes □No	ØN/A
9.	Does the number of samples received agree with 1000	☑Yes □No	□N/A
10.	Did sample labels correspond with the client ID. Did sample labels indicate proper preservation?	Yes □No	□N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □Truesdail □Client	MaYes □No	MN/A
12.	Were samples pH checked? pH = <u>Sel C</u> O.C.	MaYes □No	□N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Managar.	XŽYes □ <i>No</i>	□N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH ☑ Std	p∆Yes □No	□N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Wa □Sludge □Soil □Wipe □Paint □Solid 図Oth	111	e Water
16.	Comments:		
17	Sample Check-In completed by Truesdail Log-In/Receiving:	. Shale	intro

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462

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April 1, 2010

E2 Consulting Engineers, Inc.
Mr. Shawn Duffy
155 Grand Ave., Suite 1000

Dear Mr. Duffy:

Oakland, California 94612

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-249 PROJECT, GROUNDWATER MONITORING, TLI NO.: 988498

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-249 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on March 24, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for sample SC-700B-WDR-249 and the associated matrix spike for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

to Mona Nassimi

Manager, Analytical Services

K. R. P. Syca

K.R.P. Iyer

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING



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Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895 AA DM

Laboratory No.: 988498

Date: April 1, 2010 Collected: March 24, 2010

Received: March 24, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Daniel Kang
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky



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Established 1931

Date Received: March 24, 2010

Laboratory No.: 988498

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Dakland, CA 94612 Attention: Shawn Duffy Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Analytical Results Summary

		: . !
SM 2540C 7DS	mg/L	4060
EPA 120.1 EC	umhos/cm	7160
SM 2130B Turbidity	WTC	2
EPA 218.6 Chromium Hexavalent	ng/L	0.47
EPA 200.8 Chromium Total	μg/L	2
Sample Time		08:00
Sample I.D.		SC-700B-WDR-249
<u>Lab I.D.</u>		988498

ND: Now Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.001 will have two (2) significant figures. Result above or equal to 0.001 will have three (3) significant figures. Quality Control data will always have three (3) significant figures.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895 AA DM P.O. No.: 392895.AA.DM

Prep. Batch: 032910B

Laboratory No.: 988498

Date: April 1, 2010

Collected: March 24, 2010

Received: March 24, 2010 Prep/ Analyzed: March 29, 2010

Analytical Batch: 032910B

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer

using EPA 200.8

Analytical Results Total Chromium

TLI 1.D. Field I.D. Units Method Run Time DF RLResults 988498 SC-700B-WDR-249 μg/L **EPA 200.8** 17:09 5.00 1.00 ND

QA/QC Summary

	QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Į	Duplicate	988498	ND	20	0.00%	<u><</u> 20%	. Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance fimits	QC Within Control
MS	988498	0.00	5.00	50.0	250	208	250	83.2%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00		<1.00	Yes
MRCCS	46.4	50.0	92.8%	90% - 110%	Yes
MRCVS#1	45.6	50.0	91.2%	90% - 110%	Yes
MRCVS#2	47.5	50.0	95.0%	90% - 110%	Yes
MRCVS#3	49.2	50.0	98.4%	90% - 110%	Yes
ICS	45.6	50.0	91.2%	80% - 120%	Yes
LCS	46.6	50.0	93.2%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

🚣 / Mona Nassimi, Manager

Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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REPORT

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988498

Date: April 1, 2010

Collected: March 24, 2010

Received: March 24, 2010

Prep/ Analyzed: March 25, 2010

Analytical Batch: 03CrH10M

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D. Fleid I.D. Sample Time Run Time <u>Units</u> <u>DF</u> RL Resuite 988498 SC-700B-WDR-249 08:00 08:51 μg/L 1.05 0.20 0.47

QA/QC Summary

	QC ST		N	orator umber	_	Concentra	ation		olicate entration	P	elative ercent ference		eptance imits	QC Within Control	
	Duplic	ate	98	8467- <u>1</u>		38.0		3	7.0	2	2.67%	4	20%	Yes	
QC Std I.D.	Lab Number	uns	nc.of piked nple	Diluti Fact		Added Spike Conc.	_	AS ount	Measured Conc. of spiked sample		heoretical Conc. of spiked sample		MS% ecovery	Acceptance limits	QC Within Control
MS	988498	0	.47	1.06	5	1.00	1	.06	1.58		1.53	Т	105%	90 - 110%	Yes
		C	IC Std	I.D.		Measured Incentration		eoretical centration	Perce		Accepta: Limits		QC Witi Contre	*****	
			Rlan	,		NID		-0.200			-0.00	$\overline{}$		⊣	

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200		<0.200	Yes
MRCCS	5.35	5.00	107%	90% - 110%	Yes
MRCVS#1	9.53	10.0	95.3%	95% - 105%	Yes
MRCVS#2	10.0	10.0	100%	95% - 105%	Yes
MRCV\$#3	10.1	10.0	101%	95% - 105%	Yes
LCS	5.18	5.00	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUE\$DAIL LABORATORIE\$, INC.

Mona Nassimi, Manager Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988498

Date: April 1, 2010

Collected: March 24, 2010

Received: March 24, 2010 Prep/ Analyzed: March 25, 2010

Analytical Batch: 03TUC10Q

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

TLI I.D.

Field I.D.

Sample Time

Units

DF

<u>RL</u>

Results

988498

SC-700B-WDR-249

08:00

NTU

1.00

0.100

ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988478-1	0.160	0.162	1.24%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	•••	<0.100	Yes
LCS	8.02	8.00	100%	90% - 110%	Yes
LCS	8.00	8.00	100%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Laboratory

LCSD

705

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.; 988498

Date: April 1, 2010

Collected: March 24, 2010

Received: March 24, 2010 Prep/ Analyzed: March 25, 2010

Analytical Batch: 03EC10L

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

 TLI I.D.
 Field I.D.
 Units
 Method
 DF
 RL
 Recults

 988498
 SC-700B-WDR-249
 μmhos/cm
 EPA 120.1
 1.00
 2.00
 7160

QA/QC Summary

1	1.D.	. Numbe	r	 Concentration			Difference		limits	Control
	Duplio	ate 988498	7160	7180			0.28%		<u>≤</u> 10%	Yes
		QC Std I.D.	Measured Concentration	Theoretical oncentration	Perce Recov		Acceptance Limits		QC Within	n
		Blank	ND	<2.00			<2.00		Yes]
		ccs	705	706	99.9	%	90% - 110	%	Yes	
		CV\$#1	994	1000	99.4	%	90% - 110	%	Yes	

99.9%

99.9%

706

706

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Yes

Yes

Mona Nassimi, Manager Analytical Services

Relative Percent | Acceptance | QC Within

90% - 110%

90% - 110%

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988498

Date: April 1, 2010

Collected: March 24, 2010

Received: March 24, 2010

Prep/ Analyzed: March 25, 2010

Analytical Batch: 03TDS10L

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

<u>TLI I.D.</u>

Field I.D.

<u>Units</u>

Method

RL

Results

988498

SC-700B-WDR-249

mg/L

SM 2540C

250

4060

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988498	4060	4070	0.12%	<u>≺</u> 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LCS	498	500	99.6%	90% - 110%	Yes

ND; Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

/__ Mona Nassimi, Manager

Analytical Services

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from Truesdail Laboratories.

TRUESDAL LABORATORIES, INC. 14201 Franklin Avame, Tuetin, CA 92780-7008 (714)730-6235 FAX: (714) 730-6462 www.truesdail.com

CHAIN OF CUSTODY RECORD

PM3Plant-MDR-249]

10 Days PAGE 1 TURNAROUND TIME DATE 03/24/10

5

COC Number

TOTAL NUMBER OF CONTAINERS COMMENTS NUMBER OF CONTAINERS Ü 988498 Rec'dTurbidity (SAV2130) Specific Conductance (120.1) DESCRIPTION FAX (530) 339-3303 7 88 03/24/10 155 Grand Ave Ste 1000 M M Oakland, CA 94612 (530) 229-3303 392895.AA.DM PG&E Topock BAMPLERS (SIGNATURE П SC-700B-WDR-249 PROJECT NAME P.O. NUMBER SAMPLEID COMPANY ADDRESS PHONE

pH 6.9 EC 7.50 C,6:001 TOTAL,003 HXA14513 8080 4080 51.80 JIMIL <u>0</u> 0800 0 828 0 30SP

0802

For Sample Condition | Level III See Form Attached

	CHAIN OF CUSTODY SIGNATU	SIGNATURE RECORD	01-62-8	SAMPLE CONDITIONS
Signature (Relinquished)	Printed And	Company! OMIT	Dated Time /5-36	RECEIVED COOL WARM "F
Signature Bornfacio	infació Daygg Name 18.0AYAG	Company/ Agency 727	Dated 3-24-10	CUSTODY SEALED YES NO
Signature (Refinquished) 13 . Downgra	S. Daylog Name 13. OAYAG Agency	Ga Agency 72.7	Date 3-24-10 Time 2630	SPECIAL REQUIREMENTS:
Signeture (Received) X	Pheley Wing Name Lung	Company 71 I	Date MAR 24 2010	
Signature (Relinquished)	Printed Name	Company/ Agency	Date AC: 3C	
Signature (Received)	Printed Name	Company! Agency	Date/ Time	





Sample Integrity & Analysis Discrepancy Form

Client	:E	Lab # 98	<u>84</u> 98
Date I	Delivered: <u>3 / 24</u> /10 Time: <u>20°3</u> ∂ By: □Mail □Field	Servige □	Client
1.	Was a Chain of Custody received and signed?	t Yes □No	ONA
2.	Does Customer require an acknowledgement of the COC?	□Yes □No	N/A
3.	Are there any special requirements or notes on the COC?	□Yes □No	DANIA
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No	□ N/A
5.	Were all requested analyses understood and acceptable?	ØYes □No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>4° C</u> .	ØYes □No	□N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	□Yes □No	□N/A
8.	Were sample custody seals intact?	□Yes □No	□N/A
9.	Does the number of samples received agree with COC?	Mes □No	□N/A
10.	Did sample labels correspond with the client ID's?	ØYes □No	□N/A
11.	Did sample:labels indicate proper preservation? Preserved (if yes) by: datruesdail □Client	r Yes □No	□N/A
12.	Were samples pH checked? pH = SEC C . O . C	ØYes □No	□N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	ØYes □No	□N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): RUSH RIST	ØYes □No	□N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Solid □Drinking Water □Solid	ter □Waste er_ <i>W</i> _A_7	
16.	Comments:		 /
17.	Sampla Check-In completed by Truesdail Log-In/Receiving:	Lafael	Davila

www.truesdail.com



April 5, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-250 PROJECT, GROUNDWATER

MONITORING, TLI No.: 988581

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-250 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on March 31, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for sample SC-700B-WDR-250 and the associated matrix spike for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody with Mr. Shawn Duffy's approval.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

FO/ Mona Nassimi

Manager, Analytical Services

Ali Khangt

K-R, O. Syc

K.R.P. Iver

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 988581 Date: April 5, 2010

Collected: March 31, 2010 Received: March 31, 2010

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Sayani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky



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Established 1931

Date Received: March 31, 2010

Laboratory No.: 988581

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project Project No.: 392895.AA.DM

P.O. No.: 392895.AA.DM

Analytical Results Summary

SIM 2540C 7DS	ma/L	4130
EPA 120.1 EC	umhos/cm	7290
SM 2130B Turbidity	NTU	S
EPA 218.6 Chromium Hexavalent	l'en	2
EPA 200.8 Chromium Total	нgЛ	S
ample Time		08:00
Sample F.D. S		SC-700B-WDR-250
<u>Lab I.D.</u>		988581

ND: Non Detected (below reporting limit)

Note: The following "Significant Figures" rule has been applied to all results: Results below 0.001 will have two (2) significant figures. Result above or equal to 0.001 will have three (3) significant figures. Quality Control data will always have three (3) significant figures.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988581

Date: April 1, 2010

Collected: March 31, 2010

Received: March 31, 2010 Prep/ Analyzed: April 2, 2010

Analytical Batch: 04CrH10A

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

<u>TLI I.D.</u>	<u>Field I.D.</u>	<u>Sample Time</u>	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	RL	Results
988581	SC-700B-WDR-250	08:00	08:08	μg/L	1.05	0.20	ND

QA/QC Summary

	QC ST		N	umbe	<u>-</u>	Concentr	ation		licate ntration	Percent Difference	eptance limits	QC Within Control	
	Duplic	ate	98	8597-	1	2.25		2.	26	0.44%	 <u>< 20%</u>	Yes	
QC Std I,D,	Lab Number	unsi	ic.of piked nple	Dilut Fac		Added Spike Conc.	•	AS ount	Measured Conc. of spiked sample	Theoretica Conc. of spiked sample	MS% ecovery	Acceptance limit	QC Within Control
MS	988581	0.1	145	1.0)6	1.00	1	.06	1.26	1,21	105%	90 - 110%	Yes
		a	C Std	I.D.		Measured Incentration		eoretical centration	Perce Recove		QC With Contro		

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200		<0.200	Yes
MRCCS	5.09	5.00	102%	90% - 110%	Yes
MRCVS#1	9.73	10.0	97.3%	95% - 105%	Yes
MRCVS#2	9.84	10.0	98.4%	95% - 105%	Yes
LCS	5.09	5.00	102%	90% - 110%	Vec

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Ali- Khangt

For Mona Nassimi, Manager Analytical Services

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM

Prep. Batch: 040110A

Laboratory No.: 988581

Date: April 1, 2010

Collected: March 31, 2010

Received: March 31, 2010 Prep/ Analyzed: April 1, 2010

Analytical Batch: 040110A

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8

Analytical Results Total Chromium

REPORT

TLI I.D. Field I,D. <u>Units</u> Method Run Time <u>DF</u> RL <u>Results</u> 988581 SC-700B-WDR-250 μg/L EPA 200.8 11:22 5.00 1.00 ND

QA/QC Summarv

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988581	ND	ND	0.00%	≤20%	Yes

QC SI	d Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	M8 Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988581	0.00	5.00	50.0	250	226	250	90.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	_	<1.00	Yes
MRCCS	46.7	50,0	93.4%	90% - 110%	Yes
MRCVS#1	47,3	50.0	94.6%	90% - 110%	Yes
ICS	47.3	50.0	94.6%	80% - 120%	Yes
LCS	49.8	50.0	99.6%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Ah. Khanas

Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895,AA,DM P.O. No.: 392895,AA,DM Laboratory No.: 988581

Date: April 1, 2010

Collected: March 31, 2010

Received: March 31, 2010 Prep/ Analyzed: April 1, 2010

Analytical Batch: 04TUC10A

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

 TLI I.D.
 Field I.D.
 Sample Time
 Units
 DF
 RL
 Results

 988581
 SC-700B-WDR-250
 08:00
 NTU
 1.00
 0.100
 ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988581	NĎ	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Concentration		Percent Recovery	Acceptance Limits	QC Within Control
Blank	D	<0.100	•••	<0.100	Yes
LCS	7.90	8.00	98.8%	90% - 110%	Yes
LCS	7.83	8.00	97.9%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Khanas

 Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM P.O. No.: 392895.AA.DM Laboratory No.: 988581

Date: April 1, 2010

Collected: March 31, 2010 Received: March 31, 2010

Prep/ Analyzed: April 1, 2010 Analytical Batch: 04EC10A

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

<u>TLI I.D.</u>

<u>Field I.D.</u>

<u>Units</u>

<u>Method</u>

<u>DF</u>

<u>RL</u>

<u>Results</u>

988581

SC-700B-WDR-250

μmhos/cm

EPA 120.1

1.00

2.00

7290

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	l		0.14%	≤ 10%	Yes	
						·

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00		<2.00	Yes
ccs	704	706	99.7%	90% - 110%	Yes
CVS#1	995	1000	99.5%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,

TRÚESDÁIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895,AA,DM P.O. No.: 392895,AA,DM Laboratory No.: 988581

Date: April 1, 2010

Collected: March 31, 2010 Received: March 31, 2010

Prep/ Analyzed: April 1, 2010 Analytical Batch: 04TDS10A

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

<u>TLI I.D.</u>

Field I.D.

<u>Units</u>

<u>Method</u>

<u>RL</u>

Recults

988581

SC-700B-WDR-250

mg/L

SM 2540C

250

4130

QA/QC Summary

QC STD I,D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988581	4130	4190	0.72%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0		<25.0	Yes
LCS	497	500	99.4%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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TRUESDAL LABORATORIES, INC. 14291 Frankin Avenue, Tustin, CA 12780-7408 (714)730-8239 FAX: (714) 739-8462 www.truesdail.com

CHAIN OF CUSTODY RECORD

18581 [IM3Plant-WDR-250]

COC Number

DATE 03/51/HO

6 Deyr PAGE 1 TURNAROUND TIME

COMMENTS						ï	7	ONTAINERS		1	Hion:	
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		FAX (530) 339-3303	1 1	TEAM		Ī	0380	CISHMAN	6080	H180	228	1080
			Ste 1000 1612	:	Jak 1	DATE	03/31/10					,
E 2	PG&E Topock	(530) 229-3303	156 Grand Ave Sta 1000 Oakland, CA 94612	382896.AA.DM	TURE A		250		7.0	258	, 68. 5	78.6
COMPANY	ROJECT NAME	#0#E	LOORE 6.5	P.O. HUMBER	SHIPLERS (BICHATURE	044091510	BC-700B-WDR-250		HY	Z,	1.18 Hoth	ONOT

,	CHAIN OF CUSTODY SIGNAT	GNATURE RECORD	3-31-10	SAMPLE CONDITIONS	
Signature (Referensiehen	Printed HOM	Company! Off	Date/ Time /530	RECEIVED COOL WARM	۴
Signature ()	Name // 00//	Companyl Agency	Date 3-7-10 Time /5:20	CUSTODY SEALED YES 🔲 NO 🗆	# 1 HILL
Signature (Reinquished)	Printed /// De///	Agency +	Time \$ 20,45	SPECIAL REQUIREMENTS:	
Signature & Robins	Volume Stale	Company / T. Z.	Time MAR 31 2010		
Co Seneture (Reference)	Printed Name	Company/ Agency	Date 20:45		
Signature (Received)	Printed Name	Compeny! Agency	Delet Time		

Sample Integrity & Analysis Discrepancy Form

Client	t: <u>E2</u>	_{Lab} # 98	858
Date I	Delivered:03/3//10 Time:40:45 By:□Mail ØFiel	d Service 📮	Client
1.	Was a Chain of Custody received and signed?	M Yes □No	□N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No	M N/A
3.	Are there any special requirements or notes on the COC?	□Yes □No	MN/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No	SQN/A
5 .	Were all requested analyses understood and acceptable?	Maryes □No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>4. / ° C</u> .	A (Yes □No	□N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	Æ Yes □No	□N/A
8.	Were sample custody seals intact?	□Yes □No	Ø N/A
9.	Does the number of samples received agree with COC?	∮ Yes □No	□N/A
10.	Did sample labels correspond with the client ID's?	MoYes □No	□N/A
11.	Did sample:labels indicate proper preservation? Preserved (if yes) by: □Truesdail □Client	□Yes □No	⊠ N/A
12.	Were samples pH checked? pH = Sel L. P. L.	⊠ Yes □No	□N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	d Yes ⊡No	□N/A
14.	Have Project due dates been becked and accepted? Turn Around Time (TAT): 150 States	%¶Yes □No	□N/A
15.	Sample Matrix:	′ater □Waste	e Water
	□Sludge □Soil □Wipe □Paint □Solid Ø Oi	ther Water	
16.	Comments:		
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	l. Shabu	nina

Table of Contents TLI Laboratory Data Package

For Laboratory Number: 987414

I <u>TEM</u>	Section
Case Narrative	1.0
Summary Table of Final Results	2.0
Final Reports	3.0
Wet Chem Analysis/ Raw Data, Standard, Quality Control and Chain of Custody Records	4.0
Established Retention Time Window and Analytical Raw Data	5.0

Section 1.0

Case Narrative



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

February 1, 2010

E2 Consulting Engineers, Inc. Mr. Shawn Duffy 155 Grand Ave., Suite 1000 Oakland, California 94612

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3PLANT-SW-002 PROJECT, STORMWATER

MONITORING,

TLI NO.: 987414

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-SW-002 project stormwater monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on January 22, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Mr. Shawn Duffy of CH2MHill noted that this sample is from Location 2 of the stormwater monitoring project

The sample for pH analysis by SM 4500-H B was past the holding time upon arrival. Mr. Shawn Duffy was informed and approved the analysis.

No other violations or nonconformance actions occurred for this data package.

If you have any questions or require additional information, please contact me at (714) 730-6239 ext. 200.

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

≁, _ Mona Nassimi

Manager, Analytical Services

K. R. P. Tyer

Quality Assurance/Quality Control Officer

Section 2.0

Summary Table of Final Results

EXCELLENCE IN INDEPENDENT TESTING

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project Project No.: 379209.01.02

P.O. No.: 379209.01.02

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14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 [714] 730-6239 - FAX (714) 730-6462 - www.tusesdail.com

Laboratory No.: 987414

Date Received: January 22, 2010

Analytical Results Summary

15:10 Sample Time	

ND: Non Detected (below reporting limit)

mg/L: Miligrams per liter.

Nots: The following "Significant Figures" rufe has been applied to all results:
Results below 0.001ppm will have two (2) significant figures.
Result above or equal to 0.001ppm will have three (3) significant figures.
Quafty Control data will always have three (3) significant figures.



14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 [714] 730-6239 - FAX (714] 730-6462 - www.tuesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project Project No.; 379209.01.02

P.O. No.: 379209.01.02

Laboratory No.: 987414 Date Received: January 22, 2010

Analytical Results Summary

METALS ANALYSIS: Total Metal Analyses as Requested

Iron EPA 200.7 01/29/10	HQ/L	9420
Silver EPA 200.8 01/31/10	#g/L	Ð
Selenium EPA 200.8 01/31/10	µg/L	Q.
Mercury EPA 200.8 01/29/10	rBr.	Q
Magnesium EPA 200.7 01/29/10	μg/L	5530
Lead EPA 200.8 01/31/10	ug/L	10.1
Chromium EPA 200.8 01/31/10	hg/L	12.9
Cadmium EPA 200.8 01/31/10	µg/L	3.35
Arsenic EPA 200.8 01/31/10	rg/L	6.09
Date of Analysis:	Time Coll.	15:10
	Lab I.D. Sample ID	SC-IM3-SW-002
	Lab I.D.	987414

NOTES:

ND: Not detected, or below limit of detection

Section 3.0

Final Reports

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02 Prep. Batch: 01CrH10G REPORT

Laboratory No.: 987414

Date: February 1, 2010

Collected: January 21, 2010 Received: January 22, 2010 Prep/ Analyzed: January 25, 2010

Analytical Batch: 01CrH10G

Investigation:

Hexavalent Chromium by IC Using Method EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D. Field I.D. Sample Time Run Time Units DF RL Results 987414 SC-IM3-SW-002 15:10 15:50 μg/L 1.05 0.200 ND

QA/QC Summary

	QC STE) I.D.		ratory nber	Sample Concentra			plicate entration	Relative Percent Difference	Acceptance limits	QC Within Control	
	 Duplic	ate	9873	89-19	NĐ	- 1		ND	0.00%	<u>< 20%</u>	Yes	
QC S	Lab Number	Conc.o unspike sample	d Dilut	ion Factor	Added	_	MS nount	Measured Conc. of spiked sample		MS% Recovery	Acceptance limits	QC Within Control
MS	987414	0.095		1.06	1.00		1.06	1.21	1.16	105%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200		<0.200	Yes
MRCCS	5.21	5.00	104%	90% - 110%	Yes
MRCVS#1	10.3	10.0	103%	95% - 105%	Yes
MRCVS#2	10.2	10.0	102%	95% - 105%	Yes
MRCVS#3	10.1	10.0	101%	95% - 105%	Yes
LCS	5.36	5.00	107%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

007

Mona Nassimi, Manager Analytical Services

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample

Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02 Laboratory No.: 987414

Date: February 1, 2010

Collected: January 21, 2010

Received: January 22, 2010

Prep/ Analyzed: January 23, 2010

Analytical Batch: 01PH10Y

Investigation:

pH by SM 4500-H B

REPORT

Analytical Results pH

 TLI I.D.
 Field I.D.
 Sample Time
 Run Time
 Units
 RL
 Results

 987414
 SC-IM3-SW-002
 15:10
 10:00
 pH
 2.00
 8.25 J

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	987414	8.25	8.25	0.00	+ 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
MRCVS	7.02	7.00	0.02	<u>+</u> 0.100 Units	Yes
LCS	7.03	- 7.00	0.03	<u>+</u> 0.100 Units	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

Analytical Services

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample
Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02 Laboratory No.: 987414

Date: February 1, 2010

Collected: January 21, 2010

Received: January 22, 2010 Prep/ Analyzed: January 25, 2010

Analytical Batch: 01TSS10K

Total Suspended Solids by SM 2540 D

REPORT

Investigation:

Analytical Results Total Suspended Solids

<u>TLI I.D.</u>

Field I.D.

<u>Units</u>

<u>Method</u>

RL

<u>Results</u>

987414

SC-IM3-SW-002

mg/L

SM 2540 D

5.00

157

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance Ilmits	QC Within Control
Duplicate	987329-3	43.2	43.4	0.23%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0		<10.0	Yes
LCS	99.0	100	99.0%	90% - 110%	Yes
LCSD	98.0	100	98.0%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample

Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02 Laboratory No.: 987414

Date: February 1, 2010

Collected: January 21, 2010 Received: January 22, 2010

Prep/ Analyzed: January 28, 2010

Analytical Batch: 01TOC10P

Investigation:

Total Organic Carbon by SM 5310 C

Analytical Results for Total Organic Carbon

TLI I.D.	Field I.D.	Sample Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
987414	SC- M3-SW-002	15:10	mg/L	1.00	0.300	1.20

QA/QC Summary

QC STD I.D. Laboratory Number		Concentra	Concentration		Duplicate Concentration		elative ercent fference	Acceptance limits		QC Within Control	
Duplicate	98741	4	1.20		1.29		7.23%		1.0	20%	Yes
· [asured		eoretical	Perce	ent	Accept	ance	QC Withi	n

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.300	***	<0.300	Yes
MRCCS	9.98	10.0	99.8%	90% - 110%	Yes
MRCVS#1	9.58	10.0	95.8%	90% - 110%	Yes
LCS	18.8	20.0	94.0%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DE: Dilution Eactor

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

010

Mona Nassimi, Manager Analytical Services

EXCELLENCE IN INDEPENDENT TESTING



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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample

Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02

Laboratory No.; 987414

Date: February 1, 2010 Collected: January 21, 2010

Received: January 22, 2010 Prep/ Analyzed: January 26, 2010

Analytical Batch: 01NH3-E10C

Investigation:

Ammonia as N by Method SM 4500-NH3 D

REPORT

Analytical Results Ammonia as N

TLI I.D.	Field I.D.	Sample Time	<u>Method</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
987414	SC-IM3-SW-002	15:10	SM 4500-NH3 D	mg/L	1.00	0.500	ND

QA/QC Summary

	QC ST) I.D.		umb		Concentra	ation	-	ntration		ercent ference		mits	Control	
	Duplio	ate	9	8741	4	ND		1	9	(0.00%	Υļ	20%	Yes	
QC Std I.D.	Lab Number	unspil	onc.of spiked ample		ution ctor	Added Spike Conc.	l .	MS nount	Measured Conc. of spiked sample		heoretical Conc. of spiked sample	1 '	MS% covery	Acceptance limits	QC Within Control
MS	987414	0.00	<u> </u>	1.	.00	6.00	Ŭ	6.00	6.10		6.00	_	02%	75-125%	Yes
		QC	Std I	.D.		esured centration		neoretical ncentratio			Accepta Limits		QC With	1	
			Blank			ND		<0.500			<0.50	0	Yes		

102%

99.2%

103%

6.00

6.00

10.0

ND: Below the reporting limit (Not Detected).

MRCCS

MRCVS#1

5.95

10.3

DF: Dilution Factor.

Respectfully submitted,

90% - 110%

90% - 110%

90% - 110%

TRUESDAIL LABORATORIES, INC.

Yes

Yes

Yes

, Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample

Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02 Laboratory No.: 987414

Date: February 1, 2010

Collected: January 21, 2010 Received: January 22, 2010

Prep/ Analyzed: February 1, 2010

Analytical Batch: 02COD10A

Investigation:

Chemical Oxygen Demand by EPA 410.4

Analytical Results for Chemical Oxygen Demand

TLI I.D.	Field I.D.	Sample Time	<u>Units</u>	<u>DF</u>	<u>RL</u> ·	<u>Results</u>
987414	SC-1M3-SW-002	15:10	mg/L	2.00	20.0	75.1

QA/QC Summary

Relative

	QC ST) 1.D.		nber	Concentra	ation	Concen		Percent Difference		eptance imits	Control	ı
	Duplic	ate	987	414	75.1		83	.9	11.1%		20%	Yes	,
QC Std I.D.	Lab Number	Conc.c unspike sample	d [Ollution Factor	Added Spike Conc.	M Amo		Measured Conc. of spiked sample	Theoretical Conc. of spiked sample		MS%	Acceptance limits	QC Within Control
MS	987414	75.1		2.00	34.3	68	1.6	141	144	9	6.1%	75-125%	Yes
		QC S	Std I.D		easured	1	oretical	Percei	nt Accepta		QC With		

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0		<10,0	Yes
MRCCS	180	172	105%	90% - 110%	Yes
MRCVS#1	108	100	108%	90% - 110%	Yes
LCS	374	343	109%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

NE Dilution Eactor

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample

Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02 Laboratory No.: 987414

Date: February 1, 2010

Collected: January 21, 2010

Received: January 22, 2010 Prep/ Analyzed: January 25, 2010

Analytical Batch: 01CN10G

Investigation:

Cyanide by Method SM 4500CN

Analytical Results Cyanide

 TLI I.D.
 Field I.D.
 Sample Time
 Method
 Units
 DF
 RL
 Results

 987414
 SC-IM3-SW-002
 15:10
 SM 4500CN
 mg/L
 1.00
 0.0100
 ND

QA/QC Summary

QC STD I.	Number		Concentration		Duplicate Concentration		Relative Percent Difference		Acceptance limits		QC Within Control	
Duplicate	е	987414		ND		ND		0	0.00%		20%	Yes
	Q	QC Sta I.D. I		asured entration			Percent Recovery		Acceptance Limits		QC Within Control	

QC Std I,D.	Concentration	Concentration	Recovery	Limits	Control
Blank	ND	<0.01		< 0.01	Yes
MRCCS	0.0800	0.0800	100%	90% - 110%	Yes
MRCVS#1	0.0807	0.0800	101%	90% - 110%	Yes
LCS	0.0827	0.0800	103%	90% - 110%	Yes
LCSD	0.0832	0.0800	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF; Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Hona Nassimi, Manager Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample

Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02 Laboratory No.: 987414

Date: February 1, 2010

Collected: January 21, 2010 Received: January 22, 2010

Prep/ Analyzed: January 25, 2010

Analytical Batch: 01EC10H

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

<u>TLI I.D.</u>

Field I.D.

Units

Method

<u>DF</u>

RL

Results

014

987414

SC-IM3-SW-002

umhos/cm

EPA 120.1

1.00

2.00

117

QA/QC Summary

QC STD I.D.	Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate		117	119	1.69%	<u>≺</u> 10%	Yes

QC Std 1.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00		<2.00	Yes
ccs	704	706	99.7%	90% - 110%	Yes
CVS#1	996	998	99.8%	90% - 110%	Yes
LCS	706	706	100%	90% - 110%	Yes
LCSD	706	706	100%	90% - 110%	Yes

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Stormwater Sample Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02 Prep. Batch: 012810 Laboratory No.: 987414

Date: February 1, 2010 Collected: January 21, 2010

Received: January 22, 2010 Prep/ Analyzed: January 28, 2010

Analytical Batch: 012810

Investigation:

Diesel by EPA 8015 (Modified)

REPORT

Analytical Results Diesel

TLLI.D.

Field I.D.

Sample Time

Run Time

<u>Units</u>

<u>DF</u>

RL

<u>Results</u>

987414

SC-IM3-SW-002

15:10

11:56

μg/L

5.00

500

ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Dupilcate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	987414	ND	NŌ	0.0%	≤ 20%	Yes
		T	Марента	1 Theoretics	al r	

QC S I.D.	d Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	987414	0.00	5.00	2000	10000	9750	10000	97.5%	70-130%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<100		<100	Yes
MRCCS	885	1000	88.5%	85% - 115%	Yes
MRCVS#1	1030	1000	103%	85% - 115%	Yes
(S) MB	89.6	100	89.6%	70% - 130%	Yes
(\$) LCS	106	100	106%	70% - 130%	Yes
(S) LCSD	119	100	119%	70% - 130%	Yes
(S) 987414	98	100	98.4%	70% - 130%	Yes
(S) MS	104	100	104%	70% - 130%	Yes
LCS	1880	2000	94.0%	70% - 130%	Yes
LCSD	2180	2000	109%	70% - 130%	Yes

(8): Surrogate o-Terphenyl

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING



Established 1931

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Samples: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 379209.01.02 P.O. No.: 379209.01.02

Investigation: Total Metal Analyses as Requested

Laboratory No.: 987414

Reported: February 1, 2010 Collected: January 22, 2010 Received: January 22, 2010

Analyzed: See Below

Analytical Results

SAMPLE ID:	SC-IM3-SW-002	Time Col	lected:	15:10		LAB ID:	987414	
		Reported	•				Date	Time
Parameter	Method	Value	DF	. Units	RL.	Batch	Analyzed	Analyzed
Arsenic	EPA 200.8	6.09	5.56	μg/L	1.11	013110A	01/31/10	21:05
Cadmium	EPA 200.8	3.35	5.56	μ g/L	3.00	013110A	01/31/10	21:05
Chromium	EPA 200.8	12.9	5.56	μg/L	1,11	013110A	01/31/10	21:05
Lead	EPA 200.8	10.1	5.56	μg/L	10.0	013110A	01/31/10	21:05
Magnesium	EPA 200.7	5530	1.11	μg/L	555	012910A-Th	01/29/10	13:11
Mercury	EPA 200.8	ND	5.55	μg/L	1.11	012910-Hg	01/29/10	14:06
Selenium	EPA 200.8	ND	5.56	μg/L	10.0	0131 1 0A	01/31/10	21:05
Silver	EPA 200.8	ND	5.56	μg/ L	5.00	013110A	01/31/10	21:05
Iron	EPA 200.7	9420	11.1	μg/L	111	012910A-Th	01/29/10	13:35

ND: Not detected or below limit of detection.

DF: Dilution factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

 Mona Nassimi, Manager Analytical Services

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016

EXCELLENCE IN INDEPENDENT TESTING

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 • FAX (714) 730-6462 · www.truesdail.com

Established 1931

Client: E2 Consulting Engineers, Inc.

Oakland, CA 94612 Attention: Shawn Duffy

155 Grand Ave. Suite 1000

Samples: Two (2) Groundwaters Project Name: PG&E Topock Project

Project No.: 379209.01.02

P.O. No.: 379209.01.02

Reported: February 1, 2010 Laboratory No.: 987414

Collected: January 22, 2010 Received: January 22, 2010

Quality Control/Quality Assurance Report

:				BLANK		MRCCS				MRCVS			
						Observed	TRUE	%	Control	Observed	TRUE	*	Control
Parameter	Method	Batch	Units	Blank	교	Value	Value	æ	Limits	Value	Value	Rec	Limits %
Arsenic	EPA 200.8	013110A	μĐ/L	₽	0.200	49.4	90.0	98.8%	90-110%	48.5	50.0	81.0%	90-110%
Cadmium	EPA 200.8	013110A	Hg/L	Q	3.00	47.9	50.0	95.8%	90-110%	47.0	50.0	94.0%	90-110%
Chromium	EPA 200.8	013110A	ug/L	2	8	48.4	50.0	36.8 %	90-110%	47.2	20.0	94.4%	90-110%
Lead	EPA 200.8	013110A	µg/L	ON	10.0	50.9	50.0	102%	90-110%	51.7	50.0	103%	90-110%
Magnesium	EPA 200.7	012910A-Th	Jrg/L	QN	100	5030	2000	101%	95-105%	5160	2000	103%	90.110%
Mercury	EPA 200.8	EPA 200.8 012910-Hg	T/Bri	Q	0.200	1.99	2.00	89.5%	90-110%	2.01	2.00	101%	90-110%
Selenium	EPA 200.8	EPA 200.8 013110A	rigy.	Q.	10.0	47.5	50.0	95.0%	90-110%	46.5	50.0	93.0%	90-110%
Silver	EPA 200.8	013110A	HO4	Q	2.00	51.6	50.0	103%	90-110%	50.6	50.0	101%	90-110%
lion	EPA 200.7	EPA 200.7 012910A-Th	hôr	ON.	20.0	4800	2000	%0.96	95-105%	5330	2000	107%	90-110%

			INTERFERE	INTERFERENCE CHECK STANDARD	STANDARD		,	1	•
Parameter	Method	Units	S	និ	*	Control			
			Obs.	Theo.	Rec.	Limits			
Arsenic	EPA 200.8	μg/L	49.2	50.0	98.4%				
Cadmium	EPA 200.8	μg/L	48.4	50.0	96.8%	80-120%			
Chromium	EPA 200.8	μg/L	47.5	50.0	95.0%				!
Magnesium	EPA 200.7	Light.	2050	2000	103%	80-120%			ļ
Mercury	EPA 200.8	Light.	1.94	2.00	97.0%	80-120%			
Silver	EPA 200.6	μg/L	50.6	50.0	102%	80-120%			
Iron	EPA 200.7	₽bn	1950	2000	97.5%	80-120%			

			LABORATO	LABORATORY CONTROL SAMPLES	SAMPLES		SAMPLE DUPLICATES	LICATES			
			!								Precision
Parameter	Method	Units	SOT	SOT	*	Control	SAMPLE	SAMPLE	OUP	%	Control
			Obs.	Theo.	Rec i	Limits	O	RESULT	RESULT	RPD	Limits %
Arsenic	EPA 200.8	нgЛ	1950	2000	97.5%	90-110%	987414	60.9	6.26	2.75%	520
Cadmium	EPA 200.8	μg/Ł	1930	2000	96.5%	90-110%	987414	3.35	3.49	4.09%	0025
Chromium	EPA 200.8	rgr T	2050	2000	103%	90-110%	987414	12.9	13.0	0.77%	- 63
Lead	EPA 200.8	Hgh!	2100	2000	105%	90-110%	987414	10.1	10.4	2.93%	. 220
Magnesium	EPA 200.7	ug/L	4930	2000	98.6%	90-110%	987414	5530	5770	4.25%	ğ
Mercury	EPA 200.8	Mg/L	1.83	2.00	91.5%	90-110%	987414	9	9	0.00%	: :
Selenium	EPA 200.8	rg.	1920	2000	%0.96	90-110%	987414	Q	9	0.00%	220
Silver	EPA 200.8	ng.	2040	2000	102%	90-110%	987414	Ð	Q	0.00%	\$20
lron	EPA 200.7	ng/L	4860	2000	97.2%	90-110%	987414	9420	9520	1.06%	975

TRUESDAIL	

	Darameter
MATRIX SPIKE	Cl dames

MATRIX SPIKE	11.										Accuracy
				Sample		Spike	Total Amt.	Theo.	MS	32	Control
Sampie ID	Parameter	Method	Units	Result	Ъ	Level	of Spike	Value	Obs.	Rec.	Limits %
987414	Arsenic	EPA 200.8	hgy.	60.09	11.1	200	2220	2226	2180	97.9%	75-125%
987414	Cadmium	EPA 200.8	µgvl.	3.35	11.1	200	2220	2223	2170	97.6%	75-125%
987414	Chromium	EPA 200.8	ндЛ	12.9	11.1	200	2220	2233	2330	104%	75-125%
987414	Lead	EPA 200.8	нgА	10.1	11.1	200	2220	2230	2340	105%	75-125%
987414	Magnesium	EPA 200.7	μg/L	5530	1.11	2000	2220	7750	8040	113%	75-125%
987414	Mercury	EPA 200.8	μg/L	0.00	5.55	2.00	11.1	11.1	10.9	98.2%	75-125%
987414	Selenium	EPA 200.8	μg/L	0.00	11.1	200	2220	2220	2160	97.3%	75-125%
987414	Silver	EPA 200.8	Ton.	0.00	11.1	200	2220	2220	2280	103%	75-125%
987414	lron	EPA 200.7	µg/L	9420	11.1	2000	22200	31620	31700	100%	75-125%
					,						

ND: Not detected, or below limit of detection.

DF: Dilution Factor

TRUESDAIL LABORATORIES, INC. Respectfully submitted,

/ ノつ つか/ ト Analytical Services Rec'd 01/22/19 4

RUSH

TURNAROUND TIME COC Number

er IND TIME 5 Bays 122-10 PAGE 1 OF 1	NUMBER OF CONTAINERS	19 PH-2		* ,.	TOTAL NUMBER OF CONTAINERS
	W W	1			0
COC A TURNA DATE		\vdash		1 9	
				3	
		\vdash			15
;	35 John D. S.			1 8	3
e	(LOP)	×		9	
COR	12/ (335 No. (8:3) No.	1			2
DY RE	Total Metals (200.7, 245.7) See list below Cr(VI) (EPA 218.6) Cond (10.4)	×		- 7	2
CHAIN OF CUSTODY RECORD [M3Plant-SW-002]	NH3 (SM4500-NH3), COD (410.4) Co(VI) (EPA 218	×		1.5	99
OF CU	SS (SM2640), PH (SM4500HB)	×			
₹ 2	SS (SNZSAO), DA	×	1 1	-	1
₹ 💳	,	,	 	= Ծ	
7	FAX (530) 339-3303	Storm water			
100 C	30) 33	\sqr		41	
\$ C	Fax (5)	15:10		1415	31
623	1 2 2 2	01-12-1			†
TORIES 9, Tusti 714) 73	2M HILL opock IM3 19-3303 nd Ave Ste 1000 CA 94612 CA 94612 CA LULLALA	-	1 1		+
ABORA Avenu FAX: (E2 / CH2M HILL PG&E Topock IM3 (530) 229-3303 155 Grand Ave Ste Oakland, CA 94612 379209 01.02			2	
TRUESDAIL LABORATORIES, INC. 14201 Franklin Avenue, Tustin, CA 9 (714)730-6239 FAX: (714) 730-6462 www.truesdail.com	E2 / C (530) 379 379 379	200			
TRUES 14201 (714)73 www.tb	FR (SIGNA)	SC-IM3-SW-002			
	COMPANY E21 PG8 PROJECT NAME PG8 PHONE (53 NOORESS 155 NOORESS 33 NOORESS 33 NOORESS 33	SC-II			

	CHAIN OF CUSTODY SIGNA	GNATURE RECORD		SAMPLE CONDITIONS
Signature (Relinquished)	Cudde Printed C. His least	Company! OM! CH2M	Date: 1-22-(0 Time 2:23	RECEIVED COOL WARM "F
Signature (Received)	an Day Nome Rafed	Company/ T. K. I	Date/ (-22 - /0) Time /5:00	CUSTODY SEALED YES 🔲 NO 🗍
Signature Relinquished	La Day Etieme Da fall	Company! L. I.	Time 27.00 SPECIAL REQUIREMENTS:	SPECIAL REQUIREMENTS:
Signature Received	A Printed A for	Company 7.1.T	Deta 1-22-1 D	Metals list: Mg. As, Cd, Pb, Hg, Se, Ag, Cr, and Fe
Signature (Relinquished)	Printed	Company/ Agency	Date/ Time	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	

Sample Integrity & Analysis Discrepancy Form

	ent:E2	Lab# 987414
Dat	e Delivered:0 <u>/</u> / <u>\$2</u> /10 Time: <u>2/:0</u> 0 By: □Mail XiFi€	eld Service
1.	Was a Chain of Custody received and signed?	MaYes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No MAN/A
3.	Are there any special requirements or notes on the COC?	□Yes □No. MaN/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No MAN/A
5 .	Were all requested analyses understood and acceptable?	¥Yes □No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>4.2° C</u>	XÍYes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	ØYes □No □N/A
8.	Were sample custody seals intact?	□Yes □No MAN/A
9.	Does the number of samples received agree (1970)	/DYes DNo DN/A
10.	Did sample labels correspond with the client ID's?	es DNo DN/A
11,	Did sample labels indicate proper preservation? Preserved (if yes) by: Truesdail □Client	Yes DNo DN/A
12.	Were samples pH checked? pH = \underline{See} C. \mathcal{O} , C.	⊉Yes ⊡No □N/A
13,	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	ØYes □No □N/A
14.	Have Project due dates been checked an eccept on the Turn Around Time (TAT): ★ RUSH □ Sta	Ley Yes □No □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground W □Sludge □Soil □Wipe □Paint □Solid ☑Oi	ater □Waste Water ther_Shokm_Wastek
16.	Comments:	
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	l Shobunina