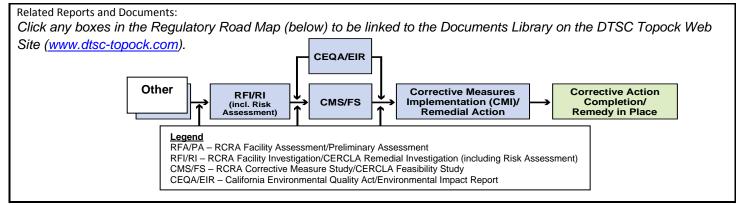
Topock Project	Executive Abstract
Document Title:	Date of Document: October 15, 2010
Topock IM3 WDR Third Quarter 2010 Monitoring Report	Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other)
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Priority Status: HIGH MED LOW Is this time critical? Yes No Type of Document: Draft Report Letter Memo Other / Explain:	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 Regional Water Board Waste Discharge Requirements/Order No. R7-2006-0060	
2010 period. The groundwater monitoring results for wells OW-CW-3M/D, and CW-4M/D will be submitted under separate cov	
Written by: PG&E Recommendations:	
This report is for your information only.	
How is this information related to the Final Remedy or Regulator	ory Requirements:
	to the Interim Measure, and is designed to monitor compliance
Other requirements of this information?	
None.	



Version 9

Curt Russell

Topock Site Manager GT&D Remediation

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October 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: Third 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: PGE20101015A)

Dear Mr. Perdue:

Enclosed is the Third 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 (Regional 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 IM3 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:

Third Quarter 2010 Monitoring Report for the IM3 Groundwater Treatment System

cc: Jose Cortez, Regional Water Board

Tom Vandenberg, State Water Resources Control Board

Aaron Yue, DTSC

Third Quarter 2010 Monitoring Report

Interim Measure No. 3 Groundwater Treatment System

Document ID: PGE20101015A

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

October 15, 2010

CH2MHILL 155 Grand Avenue, Suite 800 Oakland, CA 94612

Third 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

October 15, 2010

This report was property and der the supervision of a California California Professional Engineer

No. C68986

Dennis Fink, P.E. Project Engineer

III

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Appendix

A Third Quarter 2010 Laboratory Analytical Reports

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Acronyms and Abbreviations

IM Interim Measure

IW injection well

MRP Monitoring and Reporting Program

PG&E Pacific Gas and Electric Company

PST Pacific Standard Time

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

Basin Region

RO reverse osmosis

Truesdail Laboratories, Inc.

WDR Waste Discharge Requirements

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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 IM3. 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 (Regional 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 IM3 groundwater treatment system during the Third 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.

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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.

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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 Third 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 Third Quarter 2010. The operational run time for the IM groundwater extraction system (combined or individual pumping), by month, was approximately:

- 96.6 percent during July 2010
- 89.6 percent during August 2010
- 99.1 percent during September 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 (RO) concentrate (brine)**: Treatment byproduct that is transported and disposed of offsite at a permitted facility.
- **Sludge:** Treatment byproduct that is transported offsite for disposal at a permitted facility. Disposal occurs each time a sludge waste storage bin reaches capacity or within 90 days of the start date for accumulation in the storage container.

Activities during the Third Quarter 2010 included planned shutdowns in July, August, and September as detailed in Section 4.

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4.0 Groundwater Treatment System Flow Rates

The Third 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 RO concentrate flow rate was measured by a flow meter at the piping carrying water from RO concentrate tank T-701 to the truck load-out station (Figure TP-RP-10-10-08).

The IM3 facility treated approximately 16,792,389 gallons of extracted groundwater during the Third Quarter 2010. The IM3 facility also treated approximately 3,530 gallons of water generated from the groundwater monitoring program and 28,800 gallons of injection well backwashing/re-development water.

Two containers of solids (sludge) were transported offsite from the IM3 facility during Third Quarter 2010 (August 23, 2010 and September 9, 2010).

Periods of planned and unplanned extraction system downtime (that together resulted in approximately 4.9 percent of downtime during Third 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 July 2010

The operational run time for the IM3 groundwater extraction system (combined or individual pumping) was 96.6 percent during the July 2010 reporting period.

The IM3 facility treated approximately 5,566,352 gallons of extracted groundwater during July 2010. The IM3 facility also treated approximately 930 gallons of water generated from the groundwater monitoring program and 10,800 gallons of injection well backwashing/re-development water. No containers of solids from the IM3 facility were transported offsite during July 2010.

Periods of planned and unplanned extraction system down time (that together resulted in approximately 3.4 percent of downtime during July 2010) are summarized below. The times shown are in Pacific Standard Time (PST) to be consistent with other data collected (e.g., water level data) at the site.

- **July 1, 2010 (planned):** The extraction well system was offline from 9:40 a.m. to 1:04 p.m. and 1:24 p.m. to 7:12 p.m. for iron oxidation tank T301B maintenance. Extraction system downtime was 9 hours and 12 minutes.
- **July 1, 2010 (planned):** The extraction well system was offline from 11:00 p.m. to 11:54 p.m. for microfilter bank switch. Extraction system downtime 54 minutes.

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- **July 6, 2010 (planned):** The extraction well system was offline from 1:44 p.m. to 3:16 p.m. for microfilter bank switch. Extraction system downtime was 1 hour and 32 minutes.
- July 7, 2010 (planned): The extraction well system was offline from 9:54 a.m. to 9:56 a.m., 10:18 a.m. to 10:22 a.m., 10:32 a.m. to 10:34 a.m. and 10:38 a.m. to 10:42 a.m. for testing of the pipeline leak detection alarm system. Extraction system downtime was 12 minutes.
- **July 10, 2010 (unplanned):** The extraction well system was offline from 12:16 a.m. to 12:18 a.m. due to reduced microfilter performance. Extraction system downtime was 2 minutes.
- **July 11, 2010 (unplanned):** The extraction well system was offline from 1:40 p.m. to 2:18 p.m. due to low ferrous chloride flow. Extraction system downtime was 38 minutes.
- **July 13, 2010 (planned):** The extraction well system was offline from 7:20 a.m. to 9:14 for microfilter bank switch and maintenance. Extraction system downtime was 1 hour and 54 minutes.

4.2 August 2010

The operational run time for the IM3 groundwater extraction system (combined or individual pumping) was 89.6 percent during the August 2010 reporting period.

The IM3 facility treated approximately 5,425,523 gallons of extracted groundwater during August 2010. The IM3 facility did not treat any water generated from the groundwater monitoring program and treated 3,600 gallons of injection well backwashing/redevelopment water. One container of solids from the IM3 facility was transported offsite during August 2010.

Periods of planned and unplanned extraction system down time (that together resulted in approximately 10.4 percent of downtime during August 2010) are summarized below.

- August 3, 2010 (unplanned): The extraction well system was offline from 4:18 p.m. to 5:46 p.m. due to high water level in the raw water storage tank, T-100. Extraction system downtime was 1 hour and 28 minutes.
- August 5, 2010 (planned): The extraction well system was offline from 11:02 a.m. to 11:04 a.m. and 11:10 a.m. to 12:04 p.m. for microfilter maintenance and testing of the pipeline leak detection alarm system. Extraction system downtime 56 minutes.
- August 15, 2010 (planned): The extraction well system was offline from 10:46 a.m. to 10:58 a.m. and 11:00 a.m. to 11:02 a.m. for cleaning of T-100 strainer. Extraction system downtime was 14 minutes.
- August 17, 2010 (unplanned): The extraction well system was offline from 3:10 p.m. to 3:28 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 18 minutes.

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- August 23 26, 2010 (planned): The extraction well system was offline from 11:48 a.m. to 1:44 p.m. on August 23rd, 2:48 p.m. on August 23rd to 12:40 p.m. on August 26th, and 12:48 p.m. to 3:34 p.m. on August 26th for biannual plant outage. Extraction system downtime was 3 days 2 hours and 24 minutes.
- August 31, 2010 (unplanned): The extraction well system was offline from 11:08 a.m. to 11:24 a.m. for service of the polymer system. Extraction system downtime was 16 minutes.

4.3 September 2010

The operational run time for the IM3 groundwater extraction system (combined or individual pumping) was 99.1 percent during the September 2010 reporting period.

The IM3 facility treated approximately 5,800,514 gallons of extracted groundwater during September 2010. The IM3 facility treated 2,600 gallons of water generated from the groundwater monitoring program and 14,400 gallons of injection well backwashing/redevelopment water. One container of solids from the IM3 facility was transported offsite during September 2010.

The periods of planned and unplanned extraction system downtime (that together resulted in approximately 0.9 percent of downtime during September 2010) are summarized below.

- **September 2, 2010 (planned):** The extraction well system was offline from 4:20 p.m. to 4:21 p.m., 4:30 p.m. to 4:31 p.m., 4:34 p.m. to 4:35 p.m., 4:38 p.m. to 4:39 p.m., 4:43 p.m. to 4:44 p.m., and 4:47 p.m. to 4:48 p.m. due to testing of the pipeline leak detection alarm system. Extraction system downtime was 6 minutes.
- **September 16, 2010 (planned):** The extraction well system was offline from 12:44 p.m. to 6:39 p.m. for microfilter bank switch. Extraction system downtime was 5 hours and 55 minutes.
- **September 18, 2010 (unplanned):** The extraction well system was offline from 7:38 p.m. to 7:40 p.m. due to plant alarm that shutdown extraction wells. Extraction system downtime was 2 minutes.
- **September 30, 2010 (unplanned):** The extraction well system was offline from 12:56 p.m. to 1:07 p.m. due to reduced microfilter performance. Extraction system downtime was 11 minutes.

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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 Third Quarter 2010, analysis of pH was conducted by field method pursuant to the Regional Water Board letter dated October 16, 2007 (subject: Clarification of Monitoring and Reporting Program Requirements), authorizing pH measurements to be conducted in the field. The field method pH samples were collected at the designated sampling locations and field tested within 15 minutes of sampling.

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

Influent, effluent, RO concentrate, and sludge sampling frequency 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 Regional 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.

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6.0 Analytical Results

Laboratory reports for samples collected in Third 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 RO concentrate sampling analytical results are presented in Table 6. The sludge sampling analytical results are presented in Table 7.

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

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

The RO concentrate sample that was collected September 1, 2010 from the approved sampling station D per standard sampling schedule was considerably less salty than typical RO concentrate. The reason is that this grab sample was collected during an automatic backflushing procedure (the RO unit runs on/off, with several cycles per day, and each time it stops there is a back-flush to avoid corrosive salty water sitting stagnant in the metal pipes of the RO unit). The back-flushing uses permeate (i.e., water that has had most of the salinity removed by the RO unit). The back-flushing water and the RO concentrate both go to tank T-701, then to the RO concentrate (brine) holding tanks for offsite disposal; therefore the sample is representative of the RO concentrate waste stream at certain times. PG&E will propose to modify the sample collection procedure and/or location to ensure the sample is representative of what is shipped offsite (i.e., a mixture of the back-flush water and the RO concentrate).

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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.

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8.0 Certification

On August 12, 2005, PG&E submitted a signature delegation letter to the Regional 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.

Certification Statement:

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

Signature:	behum
Name:	Curt Russell
Company: _	Pacific Gas and Electric Company
Title:	Topock Site Manager
Date:	October 15, 2010

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

Parameter	System Influent ^{a,b} (gpm)	System Effluent ^b (gpm)	Reverse Osmosis Concentrate ^b (gpm)
July 2010 Average Monthly Flowrate	124.7	120.8	2.9
August 2010 Average Monthly Flowrate	121.5	118.8	2.0
September 2010 Average Monthly Flowrate	134.3	131.2	3.8

Notes:

gpm: gallons per minute

ES101310004139BAO/102860004 TABLES-2

^a Extraction wells TW-3D and PE-1 were operated during the Third Quarter 2010. Extraction wells TW-2D and TW-2S were not operated during the Third Quarter 2010.

^b The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during the Third Quarter 2010 is approximately 0.67 percent.

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

Parameter	Sample Collection Dates	Results
Influent ^a	July 7, 2010	See Table 4
	August 4, 2010	
	September 1, 2010	
	September 29, 2010	
Effluent ^b	July 7, 2010	See Table 5
	July 13, 2010	
	July 21, 2010	
	July 28, 2010	
	August 4, 2010	
	August 11, 2010	
	August 17, 2010	
	August 23, 2010	
	August 27, 2010	
	September 1, 2010	
	September 8, 2010	
	September 14, 2010	
	September 22, 2010	
	September 29, 2010	
Reverse Osmosis Concentrate ^c	September 1, 2010	See Table 6
Sludge ^d	September 1, 2010	See Table 7

Notes:

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

Required Sampling	g Frequency										Мо	nthly												
	Analytes Units ^b MDL	TDS mg/L 0.434	Turbidity NTU 0.0140	Specific Conductance µmhos/cm 0.0380	Field ^c pH pH units	Chromium µg/L 0.0950	Hexavalent Chromium µg/L 2.00	Aluminium μg/L 0.472	Ammonia (as N) mg/L 0.0020	Antimony µg/L 0.0990	Arsenic µg/L 0.0520	Barium µg/L 0.185	Boron mg/L 0.0042	μg/L	Fluoride mg/L 0.0600	e Lead μg/L 0.0150	Manganese µg/L 0.0600	Molybdenum μg/L 0.300	Nickel µg/L 0.0410	Nitrate (as N) mg/L 0.0950	Nitrite (as N) mg/L 0.00020	Sulfate mg/L 1.00	Iron µg/L 3.00	Zinc μg/L 0.263
Sample ID	Date																							
SC-100B-WDR-264	7/7/2010	4920	0.108	7780	7.3	961	1010	ND (50.0)	ND (0.500)	ND (10.0)	4.10	24.4	1.02	ND (5.00)	2.84	ND (10.0)	10.0	19.6	ND (10.0)	2.99 I	ND (0.0050)	552 N	√D (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	1.00	10.0	10.0	1.00	0.0050	50.0	20.0	10.0
SC-100B-WDR-268	8/4/2010	5040	0.112	7960	7.4	890	981	ND (50.0)	ND (0.500)	ND (10.0)	3.60	26.1	1.29	ND (5.00)	2.57	ND (10.0)	10.0	30.4	ND (10.0)	2.93 I	ND (0.0050)	538 N	√D (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	25.0	20.0	10.0
SC-100B-WDR-272	9/1/2010	5550	0.109	7930	7.3	995	1200	ND (50.0)	ND (0.500)	ND (10.0)	ND (10.0)	26.0	1.14	ND (5.00)	2.58	ND (10.0)	10.3	22.4	ND (10.0)	3.18		553 N	√D (20.0)	ND (10.0)
RL		250	0.100	2.00		10.0	21.0	50.0	0.500	10.0	10.0	10.0	0.200	5.00	0.500	10.0	1.00	10.0	10.0	1.00		12.5	20.0	10.0
SC-100B-WDR-276	9/29/2010				7.3																ND (0.0050)			
RL																					0.0050			

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

WDRs Effluent Limits ^b	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
	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 Sampling	g Frequency			Weekly	1											Monthly	1							
	Analytes	TDS	Turbidity	Specific Conductance	Field ^e pH	Chromium	Hexavalent Chromium	Aluminium	Ammonia (as N)	Antimony	Arsenic	Barium	Boron	Copper	Fluoride	Lead	Manganese	Molybdenum	Nickel	Nitrate (as N)	Nitrite (as N)	Sulfate	Iron	Zinc
	Units ^c	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
	MDLd	0.434	0.0140	0.0380		0.0150	0.0200	0.472	0.0020	0.0990	0.0520	0.185	0.0042	0.104	0.0600	0.0150	0.0120	0.300	0.0410	0.0950	0.00020	2.00	3.00	0.263
Sample ID	Date																							
SC-700B-WDR-264	7/7/2010	4550	0.106	7540	7.30	ND (1.00)	0.240	ND (50.0)	ND (0.500)	ND (10.0)	ND (1.00)	ND (10.0	0.932	ND (5.00)) 2.22	ND (10.0)) 1.00	15.7	ND (10.0)	2.79	ND (0.0050)	540	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	1.00	10.0	10.0	1.00	0.0050	50.0	20.0	10.0
SC-700B-WDR-265	7/13/2010	4370	ND (0.100)	7300	7.20	ND (1.00)	ND (0.200)										ND (1.00)							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-266	7/21/2010	4130	ND (0.100)	6980	7.10	ND (1.00)	ND (0.200)										ND (1.00)							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-267	7/28/2010	4120	ND (0.100)	7010	7.60	ND (1.00)	0.200										ND (1.00)							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-268	8/4/2010	4840	ND (0.100)	7490	7.40	ND (1.00)	0.200	ND (50.0)	ND (0.500)	ND (10.0)	1.00	13.3	0.952	ND (5.00)	2.17	ND (10.0)) ND (10.0)	35.3	ND (10.0)	2.79	ND (0.0050)	530	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	0.0050	50.0	20.0	10.0
SC-700B-WDR-269	8/11/2010	5680	ND (0.100)	7200	7.70	ND (1.00)	ND (0.200)										2.20							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-270	8/17/2010	4100	ND (0.100)	7400	7.10	ND (1.00)	ND (0.200)										1.20							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-271A	A 8/23/2010	5070	ND (0.100)	7720	7.30	ND (1.00)	ND (0.200)										3.20							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-271B	8 8/27/2010	4490	0.170 J	7260	7.80	ND (1.00)	ND (0.200)										14.6							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-272	9/1/2010	4550	0.117	7360	6.80	ND (1.00)	0.480	ND (50.0)	ND (0.500)	ND (10.0)	ND (10.0)	ND (10.0) 1.10	ND (5.00)	2.03	ND (10.0)) ND (1.00)	16.5	ND (10.0)	2.92		522	ND (20.0) ND (10.0)
RL		250	0.100	2.00		1.00	0.200	50.0	0.500	10.0	10.0	10.0	0.200	5.00	0.500	10.0	1.00	10.0	10.0	1.00		25.0	20.0	10.0
SC-700B-WDR-273	9/8/2010	4460	0.114	7160	6.90	1.30	ND (0.200)										2.10							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-274	9/14/2010	4020	0.106	7190	7.30	ND (1.00)	ND (0.200)										4.10							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-275	9/22/2010	4030	ND (0.100)	7130	7.00	ND (1.00)	0.210										1.00							
RL		250	0.100	2.00		1.00	0.200										1.00							
SC-700B-WDR-276	9/29/2010	4100	0.119	7100	7.00	ND (1.00)	0.320										1.10				ND (0.0050)			
RL		250	0.100	2.00		1.00	0.200										1.00				0.0050			

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TABLE 5

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

Effluent Monitoring Results a

Third 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 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 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.

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TABLE 6

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

Reverse Osmosis Concentrate Monitoring Results ^a

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

Required Samplin	ng Frequency											Quarter	ly										
	Analytes	TDS	Specific Conductance	Field ^c pH	Chromium	Hexavalent Chromium	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Copper	Fluoride	Lead	Molybdenum	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
	Units ^D	mg/L	µmhos/cm	pH units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample ID	MDL Date	0.434	0.0380		0.000019	0.000022	0.000099	0.000052	0.00019	0.000030	0.000012	0.000075	0.00010	0.0600	0.000015	5 0.00066	0.00020	0.000041	0.00015	0.00020	0.000017	0.000012	0.00026
SC-701-WDR-27	72 9/1/2010	804	1210	6.5	0.00200	ND (0.00020)	ND (0.0100)	ND (0.0100)	ND (0.0100)	ND (0.0010)	ND (0.0030)	ND (0.0050) ND (0.0050) ND (0.50)	ND (0.010	0) ND (0.0100)	ND (0.0010)	ND (0.0100	O) ND (0.0100)	ND (0.0050) ND (0.001	0) ND (0.0050) ND (0.0100)
RL		50.0	2.00		0.0010	0.00020	0.0100	0.0100	0.0100	0.0010	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

\\\Zinfande\\\Proj\\PacificGasElectricCo\\TopockProgram\\Database\\Tuesdai\\\M3WDR\\M3_WDR_\Qtrly.mdb\\rpt_qtrly\\ReverseOsmosis pkumar2 10/08/2010 10:39:03

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^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

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

Required Sampling	g Frequency										Qua	arterly									
Sample ID	Analytes Units ^b MDL Date	Chromium mg/kg 0.123	Hexavalent Chromium mg/kg 0.236	Antimony mg/kg 0.0021	Arsenic mg/kg 0.0021	Barium mg/kg 0.0021	Beryllium mg/kg 0.00062	Cadmium mg/kg 0.00021	Cobalt mg/kg 0.00021	Copper mg/kg 0.0021	Fluoride mg/kg 0.0247	Lead mg/kg 0.0021	Molybdenum mg/kg 0.00062	Mercury mg/kg 0.00025	Nickel mg/kg 0.00062	Selenium mg/kg 0.0041	Silver mg/kg 0.0041	Thallium mg/kg 0.0411	Vanadium mg/kg 0.00062	Zinc mg/kg 0.0041	Bioassay % Survival at 750 mg/L ^c
SC-Sludge-WDR-272	2 9/1/2010	3410	22.1	25.5	3.93	52.9	ND (1.00)	7.93	6.04	50.2	97.7	5.46	3.33	0.140	19.8	ND (1.00)	ND (1.00)	ND (17.0)	76.1	27.5	100
RL		17.0	4.11	2.00	0.851	1.00	1.00	0.851	1.00	1.00	4.11	1.00	1.00	0.100	1.00	1.00	1.00	17.0	1.00	2.00	100

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.

^c Concentration of sludge per 1 liter of water. Pass/Fail test, with pass result if % Survival is >60%.

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

		Sampler	Sample	Sample		Analysis		Analysis	Lab
Location	Sample ID	Name	Date	Time	Lab	Method	Parameter	Date	Technician
SC-100B	SC-100B-WDR-264	J. Aide	7/7/2010	8:00:00 AM	TLI	EPA 120.1	SC	7/9/2010	Gautam Savani
					TLI	EPA 200.7	AL	7/15/2010	Hope Trinidad
					TLI	EPA 200.7	В	7/15/2010	Hope Trinidad
					TLI	EPA 200.7	FE	7/15/2010	Hope Trinidad
					TLI	EPA 200.7	MO	7/15/2010	Hope Trinidad
					TLI	EPA 200.8	AS	7/9/2010	Daniel Kang
					TLI	EPA 200.8	BA	7/9/2010	Daniel Kang
					TLI	EPA 200.8	CR	7/9/2010	Daniel Kang
					TLI	EPA 200.8	CU	7/9/2010	Daniel Kang
					TLI	EPA 200.8	MN	7/9/2010	Daniel Kang
					TLI	EPA 200.8	NI	7/9/2010	Daniel Kang
					TLI	EPA 200.8	РВ	7/9/2010	Daniel Kang
					TLI	EPA 200.8	SB	7/9/2010	Daniel Kang
					TLI	EPA 200.8	ZN	7/9/2010	Daniel Kang
					TLI	EPA 218.6	CR6	7/8/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	7/8/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	7/8/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	7/8/2010	Giawad Ghenniwa
					FIELD	HACH	PH	7/7/2010	J. Aide
					TLI	SM2130B	TRB	7/8/2010	Gautam Savani
					TLI	SM2540C	TDS	7/7/2010	Ethel Suico
					TLI	SM4500NH3D	NH3N	7/14/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	7/8/2010	Ethel Suico
SC-100B	SC-100B-WDR-268	Ron Phelps	8/4/2010	8:00:00 AM	TLI	EPA 120.1	SC	8/5/2010	Iordan Stavrev
					TLI	EPA 200.7	FE	8/11/2010	Ethel Suico
					TLI	EPA 200.8	AL	8/11/2010	Linda Saetern
					TLI	EPA 200.8	AS	8/11/2010	Linda Saetern
					TLI	EPA 200.8	В	8/18/2010	Linda Saetern
					TLI	EPA 200.8	BA	8/18/2010	Linda Saetern
					TLI	EPA 200.8	CR	8/16/2010	Linda Saetern
					TLI	EPA 200.8	CU	8/11/2010	Linda Saetern
					TLI	EPA 200.8	MN	8/11/2010	Linda Saetern
					TLI	EPA 200.8	MO	8/18/2010	Linda Saetern
					TLI	EPA 200.8	NI	8/11/2010	Linda Saetern
					TLI	EPA 200.8	PB	8/11/2010	Linda Saetern
					TLI	EPA 200.8	SB	8/18/2010	Linda Saetern

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

TLI EPA 200.8 AS 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 B 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 BA 9/22/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 CU 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 MN 9/22/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 MN 9/22/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 MO 9/22/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 NI 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 PB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr	Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
Till	SC-100B	SC-100B-WDR-268	Ron Phelps	8/4/2010	8:00:00 AM	TLI	EPA 200.8	ZN	8/11/2010	Linda Saetern
Til						TLI	EPA 218.6	CR6	8/5/2010	Sonya Bersudsky
Till EPA 300.0 SO4 8652010 Glawad Ghenniwa FIELD HACH PH 8442011 Ron Phelps Gautam Savari Society So						TLI	EPA 300.0	FL	8/5/2010	Giawad Ghenniwa
FIELD						TLI	EPA 300.0	NO3N	8/5/2010	Giawad Ghenniwa
Till SM2130B Till SM2540C Till SM2540C Till SM2540C Till SM30NH3D NH3N 8/6/2010 Jenny Tankunakom Je						TLI	EPA 300.0	SO4	8/5/2010	Giawad Ghenniwa
TLI SM2540C TDS						FIELD	HACH	PH	8/4/2010	Ron Phelps
Till SM4500NH3D						TLI	SM2130B	TRB	8/5/2010	Gautam Savani
SC-100B SC-100B-WDR-272						TLI	SM2540C	TDS	8/9/2010	Jenny Tankunakorn
SC-100B SC-100B-WDR-272						TLI	SM4500NH3D	NH3N	8/6/2010	Iordan Stavrev
TLI						TLI	SM4500NO2B	NO2N	8/5/2010	Jenny Tankunakorn
TLI	SC-100B	SC-100B-WDR-272	J.Aide	9/1/2010	8:00:00 AM		EPA 120.1		9/2/2010	lordan Stavrev/Gautam Savani
TLI						TLI	EPA 200.7	CR	9/29/2010	Ethel Suico
TLI							EPA 200.7	FE	9/3/2010	Ethel Suico
TLI							EPA 200.8	AL	9/3/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI						TLI	EPA 200.8	AS	9/3/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI EPA 200.8 CU 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 MN 9/22/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 MO 9/22/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 NI 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 NI 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 PB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 TN 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 TN 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 TN 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 TN 9/3/2010 Giawad Ghenniwa TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 NO3N 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 JAide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 Iordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 200.8	В	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinic
TLI EPA 200.8 MN 9/22/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 NI 9/32/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 NI 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 PB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 ZN 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 ZN 9/3/2010 Sonya Bersudsky TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 TRB 9/2/2010 Giawad Ghenniwa TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM450NNH3D NH3N 9/3/2010 lordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM450NNO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 200.8	BA	9/22/2010	Linda Saetern/Daniel Kang/Hope Trinic
TLI EPA 200.8 MO 9/22/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 NI 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 PB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SD 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 CR6 9/3/2010 Cinda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 DN 9/3/2010 Cinda Saetern/Daniel Kang/Hope Tr TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 NO3N 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 J.Aide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 Iordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 200.8	CU	9/3/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI EPA 200.8 NI 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 PB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 ZN 9/3/2010 Sonya Bersudsky TLI EPA 218.6 CR6 9/3/2010 Giawad Ghenniwa TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 J.Aide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM2540C TDS 9/7/2010 Jordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500ND3B NO2N 9/3/2010 Jenny Tankunakorn						TLI	EPA 200.8	MN	9/22/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI						TLI	EPA 200.8	MO	9/22/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI EPA 200.8 SB 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 200.8 ZN 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 218.6 CR6 9/3/2010 Sonya Bersudsky TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 NO3N 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 J.Aide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 Iordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 200.8	NI	9/3/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI EPA 200.8 ZN 9/3/2010 Linda Saetern/Daniel Kang/Hope Tr TLI EPA 218.6 CR6 9/3/2010 Sonya Bersudsky TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 NO3N 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 J.Aide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 Iordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 200.8	PB	9/3/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI EPA 218.6 CR6 9/3/2010 Sonya Bersudsky TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 NO3N 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 NO3N 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 J.Aide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 Iordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 200.8	SB	9/3/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI EPA 300.0 FL 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 NO3N 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 J.Aide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 Iordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 200.8	ZN	9/3/2010	Linda Saetern/Daniel Kang/Hope Trini
TLI EPA 300.0 NO3N 9/2/2010 Giawad Ghenniwa TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa TLI SPA 300.0 SO4 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 J.Aide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 lordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 218.6	CR6	9/3/2010	Sonya Bersudsky
TLI EPA 300.0 SO4 9/2/2010 Giawad Ghenniwa FIELD HACH PH 9/1/2010 J.Aide TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 Iordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	EPA 300.0	FL	9/2/2010	Giawad Ghenniwa
FIELD						TLI	EPA 300.0	NO3N	9/2/2010	Giawad Ghenniwa
TLI SM2130B TRB 9/2/2010 Gautam Savani TLI SM2540C TDS 9/7/2010 Jenny Tankunakorn TLI SM4500NH3D NH3N 9/3/2010 Iordan Stavrev SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn Jenny Tankunakorn TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn Jenny Tankunakorn TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn Jenny Tank						TLI	EPA 300.0	SO4	9/2/2010	Giawad Ghenniwa
SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD F						FIELD	HACH	PH	9/1/2010	J.Aide
SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	SM2130B	TRB	9/2/2010	Gautam Savani
SC-100B SC-100B-WDR-276 J.Aide 9/29/2010 12:00:00 PM FIELD HACH PH 9/29/2010 J.Aide TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	SM2540C	TDS	9/7/2010	Jenny Tankunakorn
TLI SM4500NO2B NO2N 9/30/2010 Jenny Tankunakorn						TLI	SM4500NH3D	NH3N	9/3/2010	lordan Stavrev
· · · · · · · · · · · · · · · · · · ·	SC-100B	SC-100B-WDR-276	J.Aide	9/29/2010	12:00:00 PM	FIELD	HACH	PH	9/29/2010	J.Aide
SC-700B SC-700B-WDR-264 J. Aide 7/7/2010 8:00:00 AM TLI EPA 120.1 SC 7/9/2010 Gautam Savani						TLI	SM4500NO2B	NO2N	9/30/2010	Jenny Tankunakorn
	SC-700B	SC-700B-WDR-264	J. Aide	7/7/2010	8:00:00 AM	TLI	EPA 120.1	SC	7/9/2010	Gautam Savani

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Third 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-264	J. Aide	7/7/2010	8:00:00 AM	TLI	EPA 200.7	AL	7/15/2010	Hope Trinidad
					TLI	EPA 200.7	В	7/15/2010	Hope Trinidad
					TLI	EPA 200.7	FE	7/15/2010	Hope Trinidad
					TLI	EPA 200.7	MO	7/15/2010	Hope Trinidad
					TLI	EPA 200.8	AS	7/9/2010	Daniel Kang
					TLI	EPA 200.8	BA	7/9/2010	Daniel Kang
					TLI	EPA 200.8	CR	7/9/2010	Daniel Kang
					TLI	EPA 200.8	CU	7/9/2010	Daniel Kang
					TLI	EPA 200.8	MN	7/9/2010	Daniel Kang
					TLI	EPA 200.8	NI	7/9/2010	Daniel Kang
					TLI	EPA 200.8	РВ	7/9/2010	Daniel Kang
					TLI	EPA 200.8	SB	7/9/2010	Daniel Kang
					TLI	EPA 200.8	ZN	7/9/2010	Daniel Kang
					TLI	EPA 218.6	CR6	7/8/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	7/8/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	7/8/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	7/8/2010	Giawad Ghenniwa
					FIELD	HACH	PH	7/7/2010	J. Aide
					TLI	SM2130B	TRB	7/8/2010	Gautam Savani
					TLI	SM2540C	TDS	7/7/2010	Ethel Suico
					TLI	SM4500NH3D	NH3N	7/14/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	7/8/2010	Ethel Suico
SC-700B	SC-700B-WDR-265	Ron Phelps	7/13/2010	8:00:00 AM	TLI	EPA 120.1	SC	7/15/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	7/15/2010	Linda Saetern
					TLI	EPA 200.8	MN	7/15/2010	Linda Saetern
					TLI	EPA 218.6	CR6	7/14/2010	Sonya Bersudsky
					FIELD	HACH	PH	7/13/2010	Ron Phelps
					TLI	SM2130B	TRB	7/14/2010	Iordan Stavrev
					TLI	SM2540C	TDS	7/15/2010	Ethel Suico
SC-700B	SC-700B-WDR-266	C. Knight	7/21/2010	8:00:00 AM	TLI	EPA 120.1	SC	7/22/2010	Gautam Savani
					TLI	EPA 200.8	CR	7/23/2010	Daniel Kang
					TLI	EPA 200.8	MN	7/23/2010	Daniel Kang
					TLI	EPA 218.6	CR6	7/22/2010	Sonya Bersudsky
					FIELD	HACH	PH	7/21/2010	C. Knight
					TLI	SM2130B	TRB	7/22/2010	Gautam Savani
					TLI	SM2540C	TDS	7/22/2010	Ethel Suico

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Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Third 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-267	J. Aide	7/28/2010	8:00:00 AM	TLI	EPA 120.1	SC	7/30/2010	lordan Stavrev
					TLI	EPA 200.8	CR	7/30/2010	Linda Saetern
					TLI	EPA 200.8	MN	7/30/2010	Linda Saetern
					TLI	EPA 218.6	CR6	8/5/2010	Sonya Bersudsky
					FIELD	HACH	PH	7/25/2010	J. Aide
					TLI	SM2130B	TRB	7/29/2010	Gautam Savani
					TLI	SM2540C	TDS	8/2/2010	Ethel Suico
SC-700B	SC-700B-WDR-268	Ron Phelps	8/4/2010	8:00:00 AM	TLI	EPA 120.1	SC	8/5/2010	Iordan Stavrev
					TLI	EPA 200.7	FE	8/11/2010	Ethel Suico
					TLI	EPA 200.8	AL	8/11/2010	Linda Saetern
					TLI	EPA 200.8	AS	8/11/2010	Linda Saetern
					TLI	EPA 200.8	В	8/13/2010	Linda Saetern
					TLI	EPA 200.8	BA	8/18/2010	Linda Saetern
					TLI	EPA 200.8	CR	8/16/2010	Linda Saetern
					TLI	EPA 200.8	CU	8/11/2010	Linda Saetern
					TLI	EPA 200.8	MN	8/11/2010	Linda Saetern
					TLI	EPA 200.8	MO	8/18/2010	Linda Saetern
					TLI	EPA 200.8	NI	8/11/2010	Linda Saetern
					TLI	EPA 200.8	PB	8/11/2010	Linda Saetern
					TLI	EPA 200.8	SB	8/18/2010	Linda Saetern
					TLI	EPA 200.8	ZN	8/11/2010	Linda Saetern
					TLI	EPA 218.6	CR6	8/5/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	8/5/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	8/5/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	8/5/2010	Giawad Ghenniwa
					FIELD	HACH	PH	8/4/2010	Ron Phelps
					TLI	SM2130B	TRB	8/5/2010	Gautam Savani
					TLI	SM2540C	TDS	8/9/2010	Jenny Tankunakorn
					TLI	SM4500NH3D	NH3N	8/6/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	8/5/2010	Jenny Tankunakorn
SC-700B	SC-700B-WDR-269	J. Aide	8/11/2010	8:00:00 AM	TLI	EPA 120.1	SC	8/13/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	8/22/2010	Linda Saetern
					TLI	EPA 200.8	MN	8/22/2010	Linda Saetern
					TLI	EPA 218.6	CR6	8/12/2010	Sonya Bersudsky
					FIELD	HACH	PH	8/11/2010	J. Aide

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-269	J. Aide	8/11/2010	8:00:00 AM	TLI	SM2130B	TRB	8/13/2010	Gautam Savani
					TLI	SM2540C	TDS	8/16/2010	Jenny Tankunakorn
SC-700B	SC-700B-WDR-270	J. Aide	8/17/2010	8:00:00 AM	TLI	EPA 120.1	SC	8/20/2010	lordan Stavrev
					TLI	EPA 200.8	CR	8/22/2010	Linda Saetern
					TLI	EPA 200.8	MN	8/22/2010	Linda Saetern
					TLI	EPA 218.6	CR6	8/18/2010	Sonya Bersudsky
					FIELD	HACH	PH	8/17/2010	J. Aide
					TLI	SM2130B	TRB	8/18/2010	Gautam Savani
					TLI	SM2540C	TDS	8/23/2010	Jenny Tankunakorn
SC-700B	SC-700B-WDR-271A	Ron Phelps	8/23/2010	1:20:00 PM	TLI	EPA 120.1	SC	8/25/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	9/3/2010	Linda Saetern
					TLI	EPA 200.8	MN	9/3/2010	Linda Saetern
					TLI	EPA 218.6	CR6	8/24/2010	Sonya Bersudsky
					FIELD	HACH	PH	8/23/2010	Ron Phelps
					TLI	SM2130B	TRB	8/24/2010	Gautam Savani
					TLI	SM2540C	TDS	8/26/2010	Jenny Tankunakorn
SC-700B	SC-700B-WDR-271B	C. Knight	8/27/2010	8:00:00 AM	TLI	EPA 120.1	SC	8/30/2010	lordan Stavrev
					TLI	EPA 200.8	CR	9/3/2010	Linda Saetern
					TLI	EPA 200.8	MN	9/3/2010	Linda Saetern
					TLI	EPA 218.6	CR6	9/2/2010	Sonya Bersudsky
					FIELD	HACH	PH	8/27/2010	C. Knight
					TLI	SM2130B	TRB	8/30/2010	Gautam Savani
					TLI	SM2540C	TDS	8/30/2010	Jenny Tankunakorn
SC-700B	SC-700B-WDR-272	J.Aide	9/1/2010	8:00:00 AM	TLI	EPA 120.1	SC	9/2/2010	lordan Stavrev/Gautam Savani
					TLI	EPA 200.7	FE	9/3/2010	Ethel Suico
					TLI	EPA 200.8	AL	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinic
					TLI	EPA 200.8	AS	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinic
					TLI	EPA 200.8	В	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	BA	9/22/2010	Linda Saetern/Daniel Kang/Hope Trinic
					TLI	EPA 200.8	CR	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinic
					TLI	EPA 200.8	CU	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	MN	9/22/2010	Linda Saetern/Daniel Kang/Hope Trinic
					TLI	EPA 200.8	MO	9/22/2010	Linda Saetern/Daniel Kang/Hope Trinic
					TLI	EPA 200.8	NI	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	РВ	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinic

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-272	J.Aide	9/1/2010	8:00:00 AM	TLI	EPA 200.8	SB	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinida
					TLI	EPA 200.8	ZN	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinida
					TLI	EPA 218.6	CR6	9/3/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	9/2/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	9/2/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	9/2/2010	Giawad Ghenniwa
					FIELD	HACH	PH	9/1/2010	J.Aide
					TLI	SM2130B	TRB	9/2/2010	Gautam Savani
					TLI	SM2540C	TDS	9/7/2010	Jenny Tankunakorn
					TLI	SM4500NH3D	NH3N	9/3/2010	Iordan Stavrev
SC-700B	SC-700B-WDR-273	J. Aide	9/8/2010	8:00:00 AM	TLI	EPA 120.1	SC	9/13/2010	lordan Stavrev
					TLI	EPA 200.8	CR	9/16/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 200.8	MN	9/16/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 218.6	CR6	9/10/2010	Sonya Bersudsky
					FIELD	HACH	PH	9/8/2010	J.Aide
					TLI	SM2130B	TRB	9/9/2010	Gautam Savani
					TLI	SM2540C	TDS	9/13/2010	Jenny Tankunakorn
SC-700B	SC-700B-WDR-274	Ron Phelps	9/14/2010	2:45:00 PM	TLI	EPA 120.1	SC	9/15/2010	lordan Stavrev
					TLI	EPA 200.8	CR	9/16/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 200.8	MN	9/16/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 218.6	CR6	9/17/2010	Sonya Bersudsky
					FIELD	HACH	PH	9/14/2010	Ron Phelps
					TLI	SM2130B	TRB	9/15/2010	Gautam Savani
					TLI	SM2540C	TDS	9/16/2010	Jenny Tankunakorn
SC-700B	SC-700B-WDR-275	C.Knight	9/22/2010	8:00:00 AM	TLI	EPA 120.1	SC	9/24/2010	lordan Stavrev
					TLI	EPA 200.8	CR	10/5/2010	Hope Trinidad
					TLI	EPA 200.8	MN	10/5/2010	Hope Trinidad
					TLI	EPA 218.6	CR6	10/1/2010	Sonya Bersudsky
					FIELD	HACH	PH	9/22/2010	C.Knight
					TLI	SM2130B	TRB	9/23/2010	Gautam Savani
					TLI	SM2540C	TDS	9/24/2010	Jenny Tankunakorn
SC-700B	SC-700B-WDR-276	J.Aide	9/29/2010	8:00:00 AM	TLI	EPA 120.1	SC	9/30/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	10/1/2010	Daniel Kang
					TLI	EPA 200.8	MN	10/1/2010	Daniel Kang
					TLI	EPA 218.6	CR6	10/1/2010	Sonya Bersudsky

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TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-276	J.Aide	9/29/2010	8:00:00 AM	FIELD	HACH	PH	9/29/2010	J.Aide
					TLI	SM2130B	TRB	9/30/2010	Gautam Savani
					TLI	SM2540C	TDS	9/30/2010	Jenny Tankunakorn
					TLI	SM4500NO2B	NO2N	9/30/2010	Jenny Tankunakorn
SC-701	SC-701-WDR-272	J.Aide	9/1/2010	1:30:00 PM	TLI	EPA 120.1	SC	9/2/2010	lordan Stavrev/Gautam Savani
					TLI	EPA 200.8	AG	9/22/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	AS	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	BA	9/22/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	BE	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	CD	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	CO	9/22/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	CR	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	CU	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	HG	9/8/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	MO	9/22/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	NI	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	PB	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	SB	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	SE	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 200.8	TL	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinic
					TLI	EPA 200.8	V	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinic
					TLI	EPA 200.8	ZN	9/3/2010	Linda Saetern/Daniel Kang/Hope Trinid
					TLI	EPA 218.6	CR6	9/3/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	9/2/2010	Giawad Ghenniwa
					FIELD	HACH	PH	9/1/2010	J.Aide
					TLI	SM2540C	TDS	9/7/2010	Jenny Tankunakorn
Phase Seperator	SC-Sludge-WDR-272	J.Aide	9/1/2010	8:00:00 AM	TLI	EPA 300.0	FL	9/2/2010	Giawad Ghenniwa
					TLI	EPA 6010B	AG	9/13/2010	Ethel Suico
					TLI	EPA 6010B	AS	9/13/2010	Ethel Suico
					TLI	EPA 6010B	BA	9/13/2010	Ethel Suico
					TLI	EPA 6010B	BE	9/13/2010	Ethel Suico
					TLI	EPA 6010B	CD	9/13/2010	Ethel Suico
					TLI	EPA 6010B	CO	9/13/2010	Ethel Suico
					TLI	EPA 6010B	CR	9/15/2010	Ethel Suico
					TLI	EPA 6010B	CU	9/13/2010	Ethel Suico
					TLI	EPA 6010B	MO	9/13/2010	Ethel Suico

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Third 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
Phase Seperator	SC-Sludge-WDR-272	J.Aide	9/1/2010	8:00:00 AM	TLI	EPA 6010B	NI	9/13/2010	Ethel Suico
					TLI	EPA 6010B	PB	9/13/2010	Ethel Suico
					TLI	EPA 6010B	SB	9/13/2010	Ethel Suico
					TLI	EPA 6010B	SE	9/27/2010	Ethel Suico
					TLI	EPA 6010B	TL	9/15/2010	Ethel Suico
					TLI	EPA 6010B	V	9/13/2010	Ethel Suico
					TLI	EPA 6010B	ZN	9/13/2010	Ethel Suico
					TLI	SM2540B	MOIST	9/15/2010	Gautam Savani
					TLI	SW 6020A	HG	9/15/2010	Daniel Kang/Hope Trinidad
					TLI	SW 7199	CR6	9/9/2010	Sonya Bersudsky

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Third 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
Phase Seperator	SC-Sludge-WDR-272	J. Aide	09/1/2010	8:00:00 AM	ATL	96-Hour Acute Aquatic Toxicity Screening Test	BIO	9/4/2010 - 09/8/2010	Joe LeMay

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).

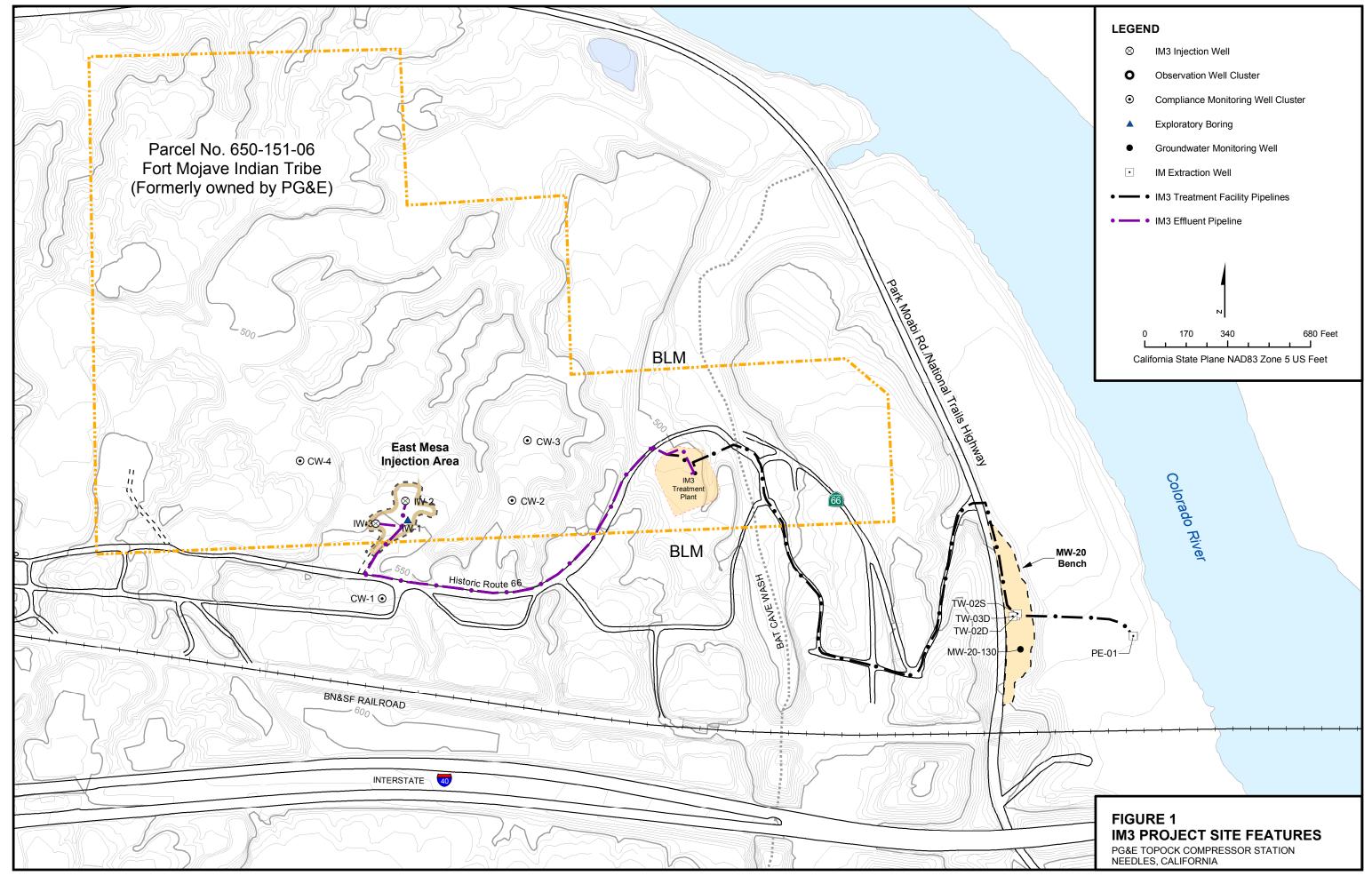
SC-100B = Sampling location for all influent samples is tap on pipe from extraction wells into tank T-100 (see attached P&ID TP-PR-10-10-04).

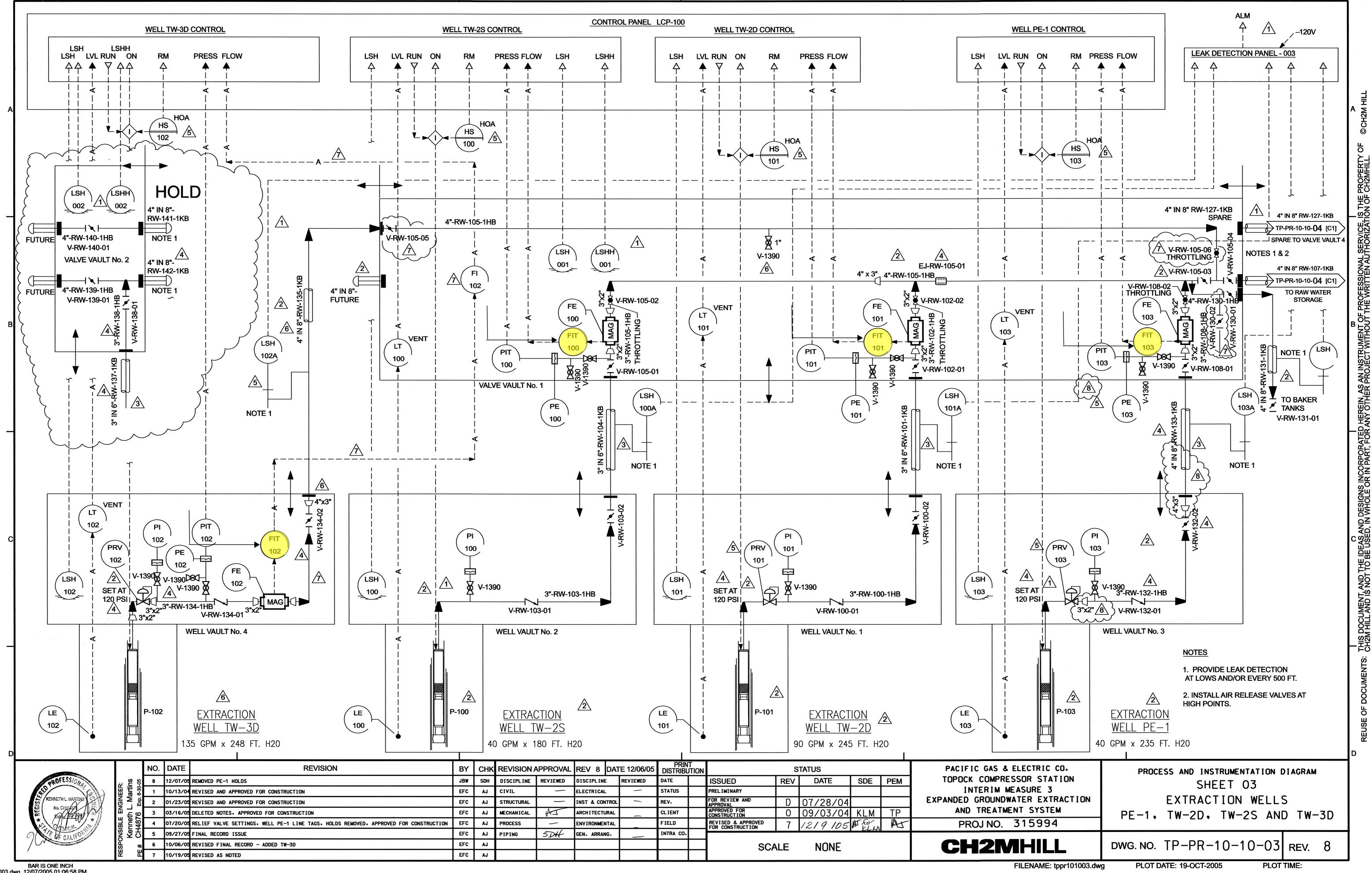
SC-701 = Sampling location for all reverse osmosis samples is tap on pipe T-701 (see attached P&ID TP-PR-10-10-08).

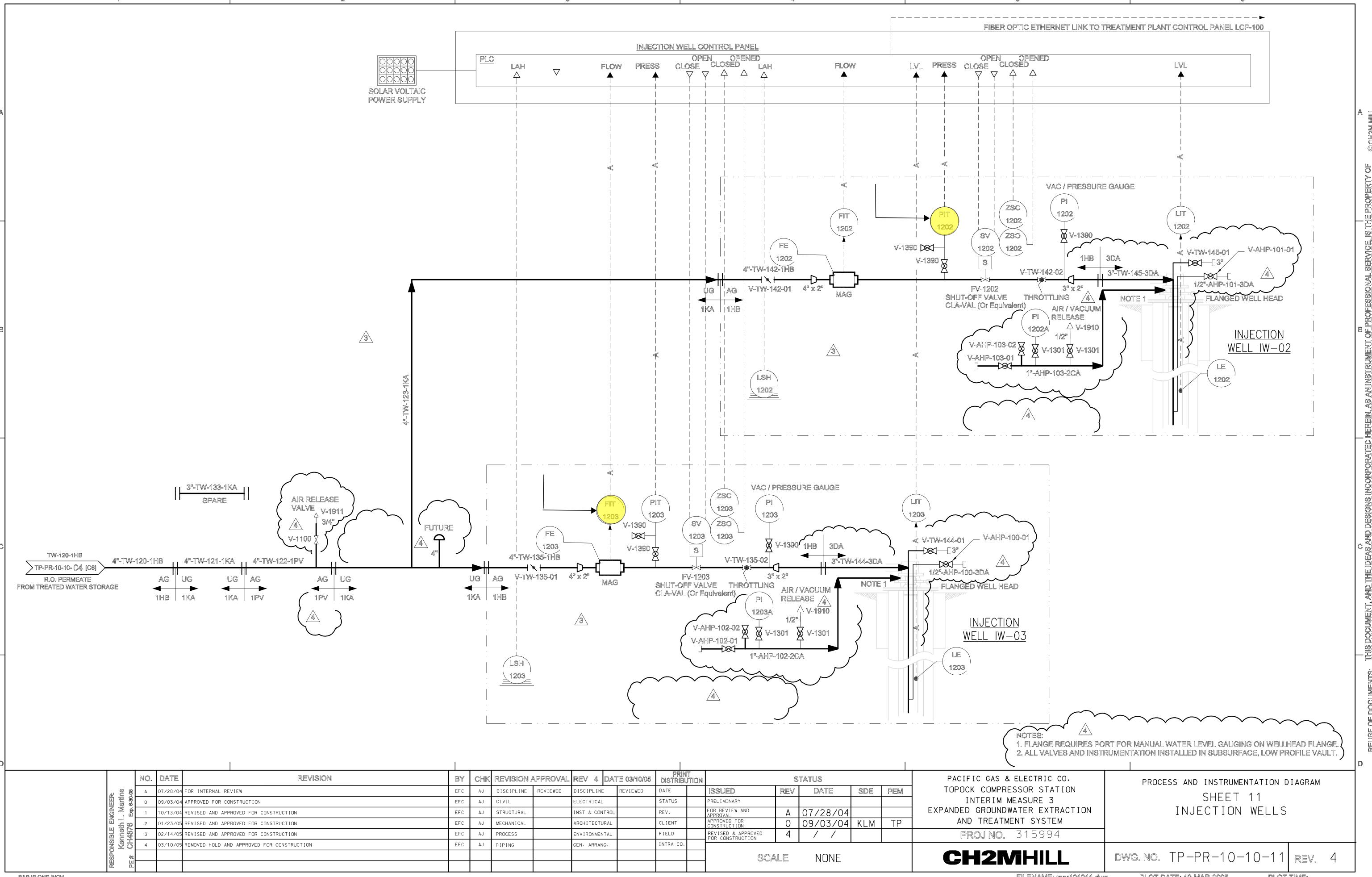
Prior to April 11, 2007 the analytical methods listed in the 40 CFR Part 136 for pH and TDS were E150.1 and E160.1, respectively. Per EPA and Department of Health Services guidelines, the analytical methods listed in the current 40 CFR Part 136 have changed to SM4500-H B and SM2540C as shown on the table.

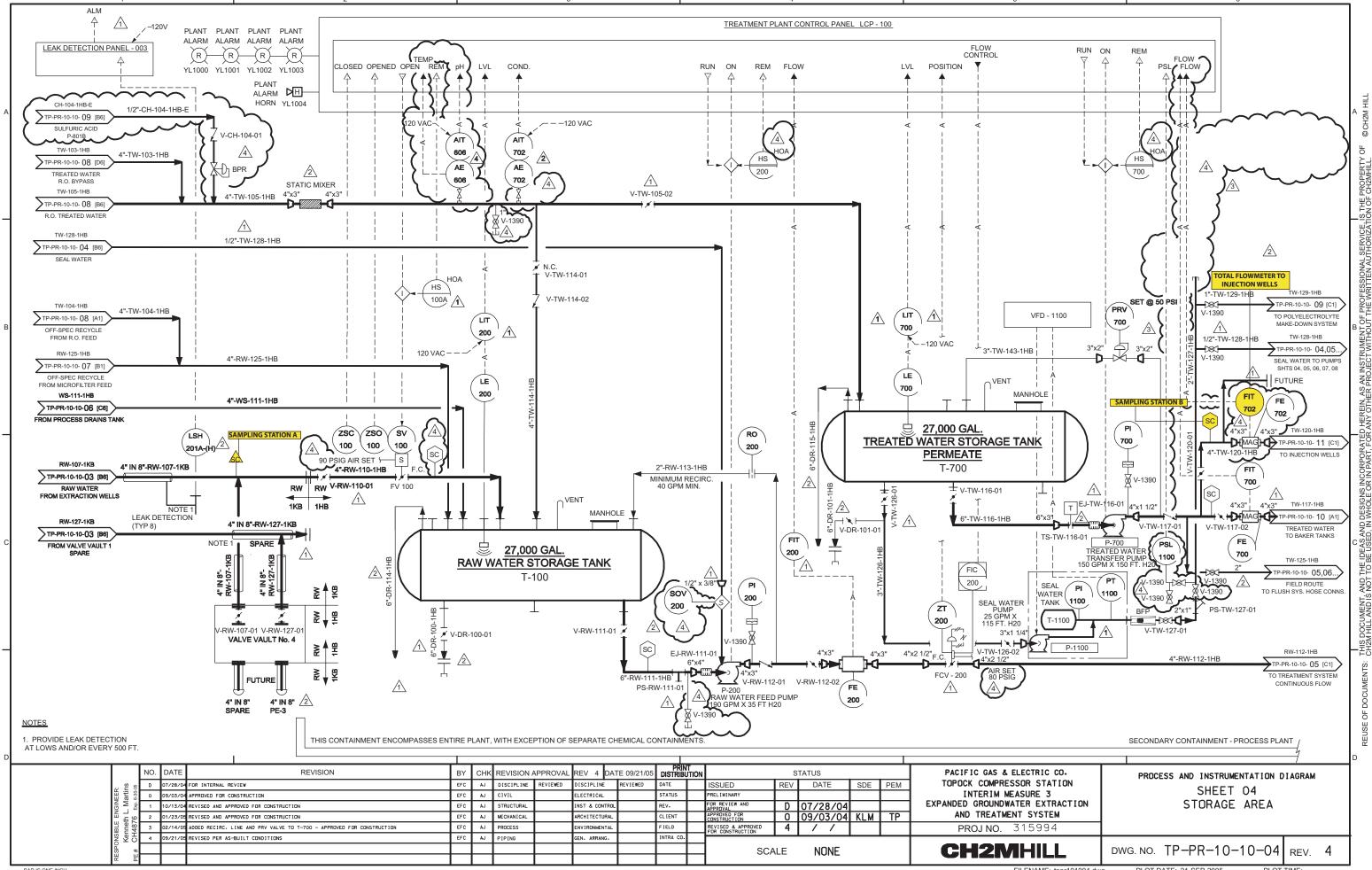
AL = Ag = AS = B = BA = BE = CO = CCR = CR6 = CU = FE = FL = MN =	aluminum silver arsenic boron barium beryllium cadmium cobalt chromium hexavalent chromium copper iron fluoride mercury	NH3N = NI = NO2N = NO3N = PB = PH = SB = SC = SC = TDS = TL = TLI = TRB = V =	ammonia (as N) nickel nitrite (as N)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











FILENAME: PR-10-03.dgn

PLOT DATE: 11/19/2009

PLOT TIME: 10:27:54 AM

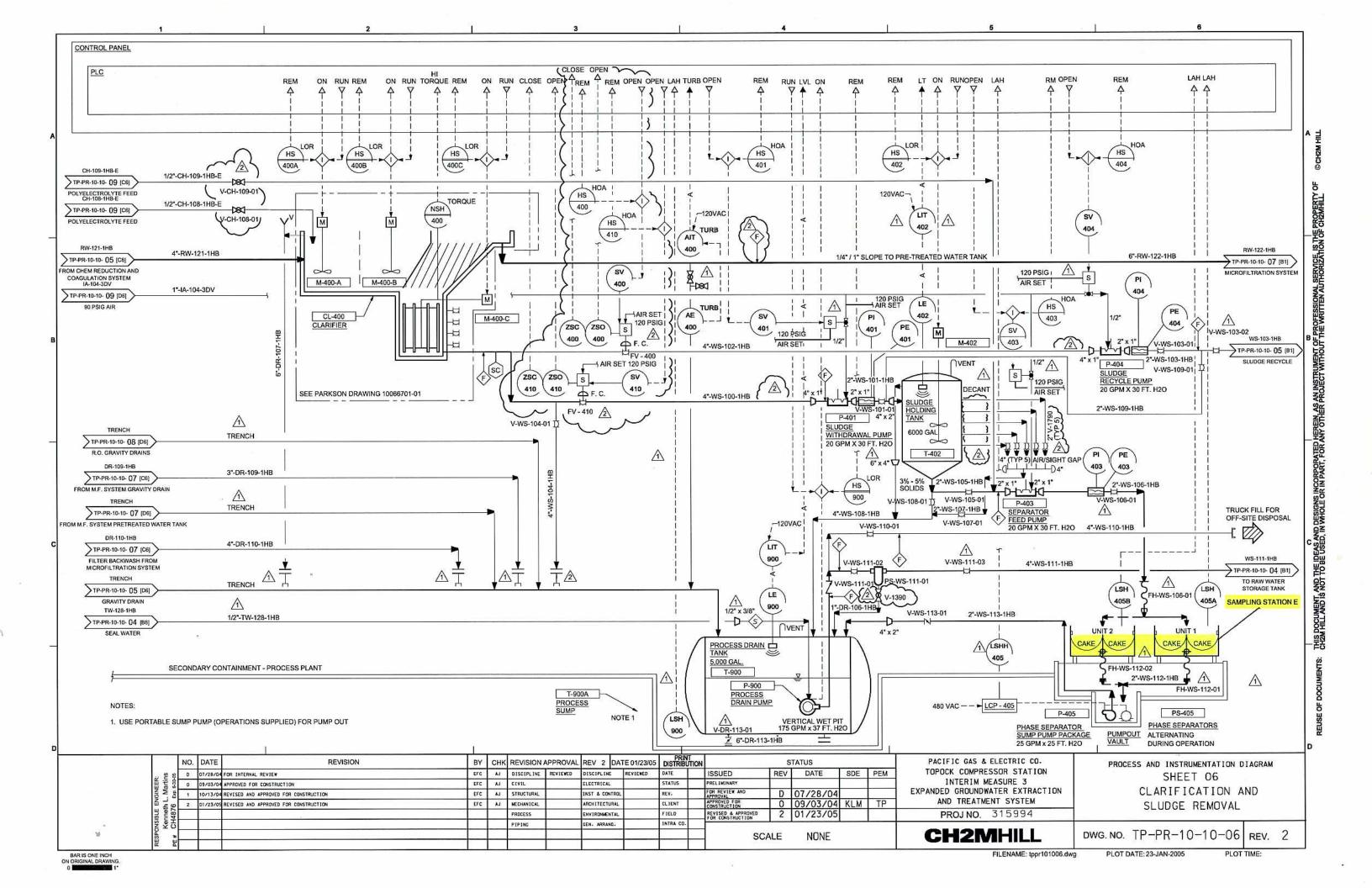
BAR IS ONE INCH ON ORIGINAL DRAWING.

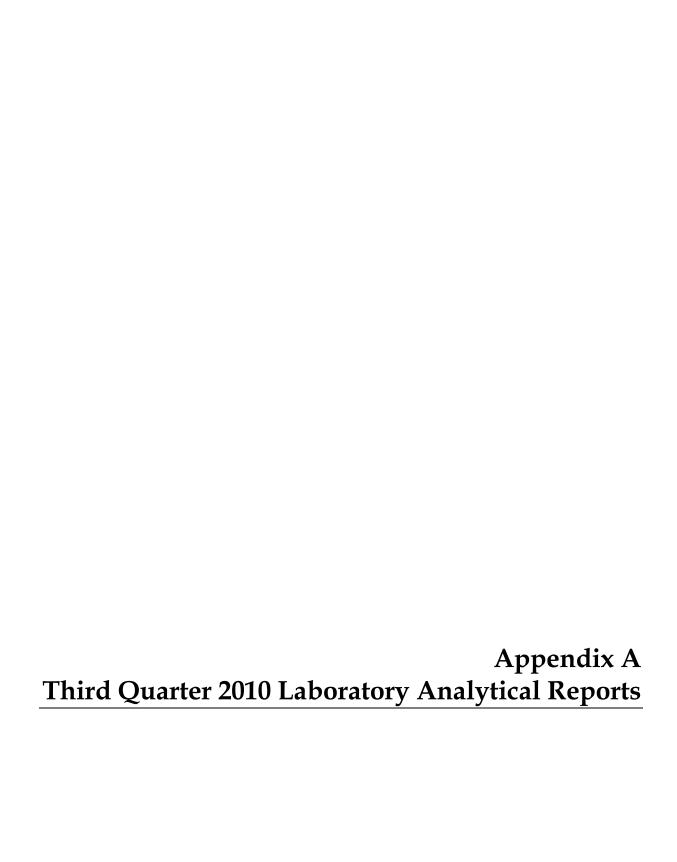
TO SEAL WATER TRUNK LINE PR-10-03 (HS 701 1 1/2" TW-154-1HB LOCATED IN CHEMICAL STORAGE AREA LOCATED NEAR EXISTING RO PR-10-03 -1/2" CH-112-1HB TO PRIMARY RO FROM P-2301 HCI ACID PUMP /-1/2" CH-114-1HB HYDRO-CHLORIC ACID (HCI) HCI ACID TOTE PUMP SKID SEE CROWN ANTISCALANT FEED PUMP SKID SEE CROWN SECONDARY RO PRIMARY RO ANTI-SCALANT CHEMICAL DRUM ANTI-SCALANT CHEMICAL DRUM 1A-102-3DV 1"-1A-108-3DV TP-PR-10-10-09(06) 90 PSIG AIR 1/4" CH-115-1HB FROM P-2402 120VAC 1 1/2" TW-152-1HB TO PRIMARY RO FROM P-2401 ANTI-SCALANT FEED PUMP RECYCLE COND COND 701 701 ST STAGE RO CONCENTATE V-1390 1 1/2"-TW-148-1HB PR-10-03 2"x1 1/2" NO SECONDARY REVERSE OSMOSIS SKID SEE CROWN SOLUTION DWG: PS-0689-08 1 1/2" TW-149-1HB T-2601 SECONDARY 1" TW-146-1HB SECONDAR RO FEED TANK SEE CROWN RO FEED PUMP SEE _x 701 (NOTE 3) TO T-603 TANK (LE) CROWN DWG PS-0689-07 V-1390 1 1/2" TW-151-1HB SAMPI ING 701 <u></u> ∩ VENT STATION D PR-10-03 O CONCENTRATE 701 CLOSE FROM PRIMARY RO FLOWMETER Oběv 5 T-701 FE 8000 GAL. 701 SEAL WATER TS-TW-111-01 9 ₹ T 6"x1 1/2" ▼ 3"x1" 3"x1" V-TW-112-01 V-TW-112-03 **RECORD DRAWINGS** SOV V-TW-112-03 701 J PORCELLA 6"-TW-111-1HB P-107 THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS, THEY ARE △ 1/2"x3/8" SEAL WATER RO CONCENTRATE TP-PR-10-10-08 [B6] NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TRANSFER PUMP 80 GPM X 85 FT H20 TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR 1" TW-147-1HB OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS. TW-112-1RB TP-PR-10-10 [C1] TO TRENCH DRAIN RO CONCENTRATE REVISION BY CHK PRINT DISTRIBUTION DATE REVISION APPROVAL REV 0 DATE 10/02/09 STATUS PACIFIC GAS & ELECTRIC CO. PROCESS AND INSTRUMENTATION DIAGRAM REV DATE TOPOCK COMPRESSOR STATION A 2/12/09 INTERNAL REVIEW DISCIPLINE REVIEWED DISCIPLINE REVIEWED ISSUED SDE PEM REVERSE OSMOSIS SYSTEM 2/12/09 JP INTERIM MEASURE 3 ORIGINALLY STAMPED /12/09 CLIENT REVIEW ELECTRICAL STATUS PREL [M] NARY R REVIEW AND SHEET TWO OF TWO 4/01/09 FOR REVIEW AND APPROVA PLANT PERFORMANCE IMPROVEMENTS 4/01/09 AND SIGNED BY: PPROVED FOR ONSTRUCTION JOHN PORCELLA 1/17/09 FINAL RECORD ISSUE JR MECHAN1CAL ARCH | TECTURAL LIENT CALIFORNIA PE NO. C70145 PROCESS FIELD **PROJ NO.** 362032 0 10/02/09 ON 04-01-2009 INTRA CO PIPING SJ GEN. ARRANG. **CH2M**HILL DWG. NO. PR-10-04 SCALE NONE REV. 0 BAR IS ONE INCH ON ORIGINAL DRAWING. FILENAME: PR-10-04.dgn PLOT DATE: 11/19/2009 PLOT TIME: 10:28:26 AM

COND

RUN ON FLOW

THIS DOCUMENT, AND THE IDEAS AND DESIGNS INCORPORATED HEREIN AS AN INSTRUMENT OF PROFESSIONAL SERVICE. IS THE PROPERTY CHZM HILL AND IS NOT TO BE USED, IN WHOLE OR IN PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CHZMHILL.







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July 20, 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-264 PROJECT, GROUNDWATER

MONITORING,

TLI No.: 990068

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-264 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 July 7, 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-264 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 straight run agree with those from the 5x dilution, 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.

-Mona Nassimi

Manager, Analytical Services

K.R.P. gyer

K.R.P. Iyer

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.: 990068

Date: July 20, 2010 Collected: July 7, 2010 Received: July 7, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Gautam Savani
SM 2540C	Total Dissolved Solids	Ethel Suico
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	Ethel Suico
EPA 200.7	Metals by ICP	Hope Trinidad
EPA 200.8	Metals by ICP/MS	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.truesdail.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

Laboratory No.: 990068

Date Received: July 7, 2010

Revision 1; July 21, 2010

Analytical Results Summary

		Analysis	Extraction	Sample	Sample				
Lab Sample ID	Field ID	Method	Method	Date	Time	Parameter	Result	Units	RL
990068-001	SC-700B-WDR-264	E120.1	NONE	7/7/10	8:00	EC	7540	umhos/cm	2.00
990068-001	SC-700B-WDR-264	E200.7	NONE	7/7/10	8:00	Aluminum	Q	ug/L	50.0
990068-001	SC-700B-WDR-264	E200.7	NONE	7/7/10	8:00	BORON	932	ug/L	200
990068-001	SC-700B-WDR-264	E200.7	NONE	7/7/10	8:00	Iron	Q	ng/L	20.0
990068-001	SC-700B-WDR-264	E200.7	NONE	7/7/10	8:00	Molybdenum	15.7	ng/L	10.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Antimony	Q	ng/L	10.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Arsenic	Q	ug/L	1.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Barium	2	ng/L	10.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Chromium	Q	ng/L	1.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Copper	Q	ug/L	5.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Lead	Q	ng/L	10.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Manganese	1.0	ng/L	1.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Nickel	Q	ng/L	10.0
990068-001	SC-700B-WDR-264	E200.8	NONE	7/7/10	8:00	Zinc	Q	ng/L	10.0
990068-001	SC-700B-WDR-264	E218.6	LABFLT	7/7/10	8:00	Chromium, hexavalent	0.24	ng/L	0.20
990068-001	SC-700B-WDR-264	E300	NONE	7/7/10	8:00	Fluoride	2.22	mg/L	0.500
990068-001	SC-700B-WDR-264	E300	NONE	7/7/10	8:00	Nitrate as N	2.79	mg/L	1.00
990068-001	SC-700B-WDR-264	E300	NONE	7/7/10	8:00	Sulfate	540	mg/L	50.0
990068-001	SC-700B-WDR-264	SM2130B	NONE	7/7/10	8:00	Turbidity	0.106	N	0.100
990068-001	SC-700B-WDR-264	SM2540C	NONE	7/7/10	8:00	Total Dissolved Solids	4550	mg/L	250
990068-001	SC-700B-WDR-264	SM4500NH3D	NONE	7/7/10	8:00	Ammonia-N	QN	mg/L	0.500
990068-001	SC-700B-WDR-264	SM4500NO2B	NONE	7/7/10	8:00	Nitrite as N	Q	mg/L	0.0050

Revision 1; July 21, 2010

	占	2.00	50.0	200	20.0	10.0	10.0	1.0	10.0	1.0	5.0	10.0	1.0	10.0	10.0	21.0	.500	00.1	50.0	100	250	.500	0.0050
		_																					J
	Units	umhos/cm	ug/L	ng/L	ng/L	ug/L	ug/L	ng/L	ug/L	ng/L	mg/L	mg/L	mg/L	N E	mg/L	mg/L	mg/L						
	Result	7780	Q	1020	Q	19.6	2	4.1	24.4	961	Q	Q	10.0	Q	Q	1010	2.84	2.99	552	0.108	4920	Q	2
	Parameter	EC	Aluminum	BORON	Iron	Molybdenum	Antimony	Arsenic	Barium	Chromium	Copper	Lead	Manganese	Nickel	Zinc	Chromium, hexavalent	Fluoride	Nitrate as N	Sulfate	Turbidity	Total Dissolved Solids	Ammonia-N	Nitrite as N
Sample	Time						8:00																
Sample	Date	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10	7/7/10
Extraction	Method	NONE	LABFLT	NONE	NONE	NONE	NONE	NONE	NONE	NONE													
Analysis	Method	E120.1	E200.7	E200.7	E200.7	E200.7	E200.8	E218.6	E300	E300	E300	SM2130B	SM2540C	SM4500NH3D	SM4500NO2B								
	Field ID	SC-100B-WDR-264	SC-100B-WDR-264	SC-100B-WDR-264	SC-100B-WDR-264	SC-100B-WDR-264	SC-100B-WDR-264	SC-100B-WDR-264	SC-100B-WDR-264														
	Lab Sample ID	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002	990068-002

ND: Non Detected (below reporting limit) mg/L; Milligrams per liter.

Note: The following "Significant Figures" rule 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. Quality Control data will always have three (3) significant figures.

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 these laboratories.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 392895.AA.DM Project Number: 392895.AA.DM Laboratory No. 990068

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Printed 7/20/10

Samples Received on 7/7/10 9:30:00 PM

Field ID				Lab ID	Colle	ected	Matri	x
SC-700B-WDR-264				990068-001		2010 08:00	Wate	
SC-100B-WDR-264				990068-002	07/07/2	2010 08:00	Wate	er
Anions By I.C EPA 3	0.00		Batch	07AN10 D				
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990068-001 Fluoride		mg/L	07/08	/2010 10:14	5.00	0.0600	0.500	2.22
Nitrate as Nitr	ogen	mg/L	07/08	/2010 10:14	5.00	0.0950	1.00	2.79
Sulfate		mg/L	07/08	/2010 11:00	100	4.00	50.0	540.
990068-002 Fluoride		mg/L	07/08	/2010 10:49	5.00	0.0600	0.500	2.84
Nitrate as Nitr	ogen	mg/L	07/08	/2010 10:49	5.00	0.0950	1.00	2.99
Sulfate	-	mg/L	07/08	/2010 10:34	100	4.00	50.0	552.
Method Blank				<u> </u>	•	•		
Parameter	Unit	DF	Result					
Fluoride	mg/L	1.00	ND					
Nitrate as Nitrogen	mg/L	1.00	ND					
Sulfate	mg/L	1.00	ND					
Duplicate							Lab ID =	990068-001
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	nce Range
Fluoride	mg/L	5.00	2.19	2.22		1.36	0 - 20	_
Nitrate as Nitrogen	mg/L	5.00	2.76	2.79		1.08	0 - 20	
Sulfate	mg/L	100	524.	540.	;	3.01	0 - 20	
Lab Control Sample	е							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Fluoride	mg/L	1.00	3.99	4.00	,	99.8	90 - 110	,
Nitrate as Nitrogen	mg/L	1.00	3.96	4.00	,	99.0	90 - 110)
Sulfate	mg/L	1.00	19.7	20.0		98.5	90 - 110)

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.

Report Continued

Client: E2 Consulting Eng	jineers, Ind	c.	Project Name: Project Number:	PG&E Topock Pro 392895.AA.DM	oject	Page 2 of 14 Printed 7/20/10
Matrix Spike						Lab ID = 990068-001
Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Fluoride	mg/L	5.00	22.6	22.2(20.0)	102	85 - 115
Nitrate as Nitrogen	mg/L	5.00	23.2	22.8(20.0)	102	85 - 115
Sulfate	mg/L	100	1040	1040(500)	100.	85 - 115
MRCCS - Secondary						
Parameter	Unit	ĎF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	4.09	4.00	102	90 - 110
Nitrate as Nitrogen	mg/L	1.00	3.99	4.00	99.8	90 - 110
Sulfate	mg/L	1.00	20.0	20.0	100.	90 - 110
MRCVS - Primary						•••
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	3 .12	3.00	104.	90 - 110
Sulfate	mg/L	1.00	15.0	15.0	100.	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	3.14	3.00	105	90 - 110
Nitrate as Nitrogen	mg/L	1.00	2.99	3.00	99.7	90 - 110
Sulfate	mg/L	1.00	15.1	15.0	101	90 - 110



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895.AA.DM

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Printed 7/20/10

Nitrite	SM.	450O.	NO2	

D-1-6	07NO210D
Hatch	11/68/37/11/1
Dawii	OF BUILDING TOLD

				011102100				
Parameter		Unit	Anal	lyzed [)F	MDL	RL	Result
990068-001 Nitrite as Nitrogen	1	mg/L	07/08	/2010 15:46 1.	.00	0.000200	0.0050	ND
990068-002 Nitrite as Nitrogen	<u>, </u>	mg/L	07/08	/2010 15:50 1.	.00	0.000200	0.0050	ND
Method Blank					<u> </u>		,,	
Parameter	Unit	DF	Result					
Nitrite as Nitrogen	mg/L	1.00	ND					
Duplicate							Lab ID = 9	90068-001
Parameter	Unit	DF	Result	Expected	RPD)	Acceptar	ice Range
Nitrite as Nitrogen	mg/L	1.00	ND	o o	0		0 - 20	go
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Rece	overy	Acceptar	ice Range
Nitrite as Nitrogen	mg/L	1.00	0.0453	0.0450	10	1	90 - 110	
Matrix Spike							Lab ID = 9	90068-001
Parameter	Unit	DF	Result	Expected/Added	d Reco	overy	Acceptar	ce Range
Nitrite as Nitrogen	mg/L	1.00	0.0199	0.0200(0.0200	99	.5	75 - 125	
Matrix Spike Duplicate							Lab ID ≃ 9	90068-001
Parameter	Unit	DF	Result	Expected/Added	d Reco	overy	Acceptar	ice Range
Nitrite as Nitrogen	mg/L	1.00	0.0200	0.0200(0.0200	10	-	75 - 125	3 -
MRCCS - Secondary				·				
Parameter	Unit	DF	Result	Expected	Reco	overy	Acceptan	ce Range
Nitrite as Nitrogen	mg/L	1.00	0.0284	0.0270	10	•	90 - 110	, ,90
MRCVS - Primary							-	
Parameter	Unit	DF	Result	Expected	Reco	overy	Acceptan	ce Range
Nitrite as Nitrogen	mg/L	1.00	0.0199	0.0200	99	•	90 - 110	94



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895.AA.DM

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Number: 392895,AA.DM Printed 7/20/10

Specific Conductivity - E	PA 120.1			Batch	07EC10C			7/9/10	
Parameter		Unit		Ana	lyzed	DF	MDL	RL	Result
990068-001 Specific Conduct 990068-002 Specific Conduct	•	umhos umhos			0/2010 0/2010	1.00	0.0380	2.00	7540 7780
Method Blank		· ·					0.0000	2.00	7700
Parameter Specific Conductivity Duplicate	Unit umhos	DF 1.00	Re Ni	sult D				Lab ID ≃	990070-008
Parameter Specific Conductivity Lab Control Sample	Unit umhos	DF 1.00	Re 95	sult 2.	Expected 951.	RF (PD 0.105		nce Range
Parameter Specific Conductivity Lab Control Sample Di	Unit umhos uplicate	DF 1.00	Re 69	sult 8.	Expected 706.		ecovery 98.9	Accepta 90 - 110	nce Range
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1,00	Re: 69	sult 6.	Expected 706.		Recovery 98.6		nce Range
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Res 69	sult 2.	Expected 706.		covery 8.0	Accepta 90 - 110	nce Range
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Re: 98		Expected 1000		covery 8.5	Accepta 90 - 110	nce Range
Parameter Specific Conductivity	Unit umhos	DF 1.00	Res 98		Expected 1000		covery 8.1	Accepta 90 - 110	nce Range

Report Continued

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Project Name: PG&E

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Parameter		Unit	Ana	alyzed	DF	MDL	RL	Result
990068-001 Chromium, Hexa	velent	ug/L	07/08	3/2010 13:05	1.05	0.0190	0.20	0.24
990068-002 Chromium, Hexa	valent	ug/L	07/08	3/2010 13:46	105	2.00	21.0	1010
Method Blank					•			
Parameter	Unit	DF	Result					
Chromium, Hexavalent	ug/L	1.00	ND					
Duplicate							Lab ID =	990068-002
Parameter	Unit	DF	Result	Expected	F	RPD	Accepta	ince Range
Chromium, Hexavalent	ug/L	105	1020	1010		0.985	0 - 20	ŭ
Lab Control Semple								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	1.00	4.90	5.00		98.0	90 - 110)
Matrix Spike							Lab ID =	990068-001
Parameter Chromium Hoveyelest	Unit	DF	Result	Expected/Adde	ed F	Recovery	-	nce Range
Chromium, Hexavalent Matrix Spike	ug/L	1.06	1.26	1.30(1.06)		96.2	90 - 110	
•							Lab ID =	990068-002
Parameter Chromium, Hexavalent	Unit ug/L	DF 105	Result	Expected/Adde	ed R	Recovery		nce Range
Matrix Spike	ug/L	105	2020	2060(1050)		96.2	90 - 110	
Parameter	Unit	DE	D "					990069-001
Chromium, Hexavalent	ug/L	DF 1.09	Result 29.9	Expected/Adde 30.1(16.4)	ed R	Recovery		nce Range
Matrix Spike	- 9/-2	1.03	25.5	30.1(10.4)		98.8	90 - 110	
Parameter	Unit	DF	Result	Exercise al (A al al a				990068-001
Chromium, Hexavalent	ug/L	5.25	5.53	Expected/Adde 5.25(5.25)	:a H	lecovery 105	90 - 110	nce Range
MRCCS - Secondary	-0		0,00	0.20(0.20)		100	9 0 - 110	
Parameter	Unit	DF	Result	Expected	D	decovery	A	D
Chromium, Hexavalent	ug/L	1.00	4.97	5.00		99.4	90 - 110	nce Range
MRCVS - Primary							000	
Parameter	Unit	DF	Result	Expected	R	ecovery	Accente	nce Range
Chromium, Hexavalent	ug/L	1.00	9.83	10.0		98.3	95 - 105	v
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	1.00	10.4	10.0		104.	95 - 105	_



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Metals by EPA 200.7, To	tal		Batch	071510A-Th				
Parameter		Unit	Ana	alyzed (OF .	MDL	RL	Result
990068-001 Aluminum		ug/L	07/15	5/2010 15:18 1	.00	1.00	50.0	ND
Boron		ug/L	07/15	5/2010 15:18 1	.00	5.00	200.	932.
tron		ug/L	07/15	5/2010 15:18 1	.00	3.00	20.0	ND
Molybdenum		ug/L	07/15		.00	0.300	10.0	15.7
990068-002 Aluminum		ug/L	07/15		.00	1.00	50.0	ND
Boron		ug/L	07/15		.00	5.00	200.	1020
Iron		ug/L			.00	3.00	20.0	ND
Molybdenum		ug/L			.00	0.300	10.0	19.6
Method Blank						0.300	10.0	19.0
Parameter	Unit	DF	Result					
Aluminum	ug/L	1.00	ND					
Boron	ug/L	1.00	ND					
Iron	ug/L	1.00	ND					
Molybdenum	ug/L	1.00	ND					
Duplicate							Lab ID =	990068-001
Parameter	Unit	DF	Result	Expected	RPD			
Aluminum	ug/L	1.00	ND	0	0		0 - 20	nce Range
Boron	ug/L	1.00	921 .	932.	1.1	9	0 - 20	
Iron	ug/L	1.00	ND	0	0	•	0 - 20	
Molybdenum	ug/L	1.00	14.9	15.7	5.2	3	0 - 20	
Lab Control Sample						•	0 20	
Parameter	Unit	DF	Result	Expected	Reco	Verv	Accenta	nce Range
Aluminum	ug/L	1.00	5140	5000	103		90 - 110	
Boron	ug/L	1.00	4640	5000	92.		90 - 110	
Iron	ug/L	1.00	4920	5000	98.		90 - 110	
Molybdenum	ug/L	1.00	4860	5000	97.:		90 - 110	
Matrix Spike								990068-001
Parameter	Unit	DF	Result	Expected/Added	i Reco	verv		nce Range
Aluminum	ug/L	1.00	2050	2000(2000)	102	•	75 - 125	
Boron	ug/L	1.00	2630	2930(2000)	84.9		75 - 125	
Iron	ug/L	1.00	2000	2000(2000)	100		75 - 125	
Molybdenum	ug/L	1.00	1680	2020(2000)	83.2	2	75 - 125	



Client: E2 Consulti	ng Engineers, In	C.	Project Name: Project Number:	PG&E Topock 392895.AA.DI	c Project VI	Page 7 of 14 Printed 7/20/10
MRCCS - Seco	ndary					
Parameter	Unit	DF	Result	Expected	Recovery	Accomtage Days
Aluminum	ug/L	1.00	•	5000	100.	Acceptance Range 90 - 110
Boron	ug/L	1.00	4920	5000	98.4	90 - 110
Iron	ug/L	1.00	5090	5000	102	90 - 110
Molybdenum	ug/L	1.00	4990	5000	99.8	90 - 110
MRCVS - Prima	ıry				•••	30 - 110
Parameter	Unit	DF	Result	Expected	D	
Aluminum	ug/L	1.00		5000	Recovery 100	Acceptance Range
Boron	ug/L	1.00	- -	5000	92.6	90 - 110
Iron	ug/L	1.00	4920	5000	98.4	90 - 110
Molybdenum	ug/L	1.00	4500	5000	90.0	90 - 110
Interference Che	-		1000	5000	90.0	90 - 110
Parameter	Unit	DF	Result	F	_	
Aluminum	ug/L	1.00	1920	Expected 2000	Recovery	Acceptance Range
Boron	ug/L	1.00	ND	0	96.0	80 - 120
Iron	ug/L	1.00	2090	2000	404	
Molybdenum	ug/L	1.00	ND	0	104	80 - 120
Interference Che	•	1,00	NO	V		
Parameter	Unit	DF	Daniell	.	_	
Aluminum	ug/L	1.00	Result 2100	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	ND	2000	105.	80 - 120
Iron	ug/L	1.00	2060	0		
Molybdenum	ug/L	1.00	ND	2000 0	103.	80 - 120
Interference Che	-	1.00	NO	U		
Parameter		D.E				
Aluminum	Unit ug/L	DF 1.00	Result 1920	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	ND ND	2000	96.0	80 - 120
lron	ug/L	1.00	2100	0		
Molybdenum	ug/L	1.00	ND ND	2000	105.	80 - 120
Interference Che	_	1.00	NO	0		
Parameter	_	D.	D	_		
Aluminum	Unit ug/L	DF 1.00		Expected	Recovery	Acceptance Range
Boron	ug/L ug/L	1.00	2110 ND	2000	106	80 - 120
ron	ug/L ug/L	1.00	ND 2000	0		
Molybdenum	•		2080	2000	104.	80 - 120
	ug/L	1.00	ND	0		

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Meta	la bv	EPA	200.	8. Total

Metals by EPA 200.8, Total		Batch 070910A				
Parameter	Unit	Analyzed	DF	MDL	RL	Result
990068-001 Antimony	ug/L	07/09/2010 15:38	5.00	0.495	10.0	ND
Arsenic	ug/L	07/09/2010 15:38	5.00	0.140	1.0	ND
Barium	ug/L	07/09/2010 15:38	5.00	0.210	10.0	ND
Chromium	ug/L	07/09/2010 15:38	5.00	0.0960	1.0	ND
Copper	ug/L	07/09/2010 15:38	5.00	0.520	5.0	ND
Lead	ug/L	07/09/2010 15:38	5.00	0.0750	10.0	ND
Manganese	ug/L	07/09/2010 15:38	5.00	0.0600	1.0	1.0
Nickel	ug/L	07/09/2010 15:38	5.00	0.205	10.0	ND
Zinc	ug/L	07/09/2010 15:38	5.00	1.32	10.0	ND
990068-002 Antimony	ug/L	07/09/2010 15:59	5.00	0.495	10.0	ND
Arsenic	ug/L	07/09/2010 15:59	5.00	0.140	1.0	4,1
Barium	ug/L	07/09/2010 15:59	5.00	0.210	10.0	24.4
Chromium	ug/L	07/09/2010 15:59	5.00	0.0960	1.0	961.
Соррег	ug/L	07/09/2010 15:59	5.00	0.520	5.0	ND
Lead	ug/L	07/09/2010 15:59	5.00	0.0750	10.0	ND
Manganese	ug/L	07/09/2010 15:59	5.00	0.0600	1.0	10.0
Nickel	ug/L	07/09/2010 15:59	5.00	0.205	10.0	ND
Zinc	ug/L	07/09/2010 15:59	5.00	1.32	10.0	ND

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Parameter	Unit	DF	Result
Antimony	ug/L	1.00	ND
Arsenic	ug/L	1.00	ND
Barium	ug/L	1.00	ND
Chromium	ug/L	1.00	ND
Copper	ug/L	1.00	ND
Lead	ug/L	1.00	ND
Manganese	ug/L	1.00	ND
Nickel	ug/L	1.00	ND
Zinç	ug/L	1.00	ND



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Duplicate						Lab ID = 990068-001
Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Antimony	ug/L	5.00	ND	o o	0	0 - 20
Arsenic	ug/L	5.00	ND	0	0	0 - 20
Barium	ug/L	5.00	ND	5.66	0	0 - 20
Chromium	u g /L	5.00	ND	0	0	0 - 20
Copper	ug/L	5.00	ND	0	0	0 - 20
Lead	ug/L	5.00	ND	0	0	0 - 20
Manganese	ug/L	5.00	1,1	1.0	9.52	0 - 20
Nickel	ug/L	5.00	ND	0	0	0 - 20
Zinc	ug/L	5.00	ND	0	0	0 - 20
Lab Control Sample						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1,00	52.1	50.0	104	90 - 110
Arsenic	ug/L	1.00	53.5	50.0	107.	90 - 110
Barium	ug/L	1.00	52.5	50.0	105.	90 - 110
Chromium	ug/L	1.00	51.8	50.0	104	90 - 110
Copper	ug/L	1.00	53.8	50.0	108	90 - 110
Lead	ug/L	1.00	51.9	50.0	104	90 - 110
Manganese	ug/L	1.00	52.3	50.0	105	90 - 110
Nickel	ug/L	1.00	53.9	50.0	108	90 - 110
Zinc	ug/L	1.00	54.0	50.0	108.	90 - 110
Matrix Spike						Lab ID = 990068-001
Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Antimony	ug/L	5.00	247.	250.(250)	98.8	75 - 125
Arsenic	ug/L	5.00	269.	250.(250)	108	7 5 - 12 5
Barium	ug/L	5.00	252.	256(250)	98.5	75 - 12 5
Chromium	ug/L	5.00	250.	250.(250)	100.	75 - 12 5
Copper	ug/L	5.00	250.	250.(250)	100.	75 - 125
Lead	ug/L	5.00	227.	250.(250)	90.8	75 - 125
Manganese	ug/L	5.00	246.	251.(250)	98.0	75 - 125
Nickel	ug/L	5.00	250.	250.(250)	100.	75 - 125
Zinc	u g /L	5.00	247.	250.(250)	98.8	75 - 125



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Matrix Spike Dupli	icate					Lab ID = 990068-001
Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Antimony	ug/L	5.00	251.	250.(250)	100	75 - 125
Arsenic	ug/L	5.00	270 .	250.(250)	108.	75 - 125
Barium	ug/L	5.00	255 .	256(250)	99.7	75 - 125
Chromium	ug/L	5.00	247.	250.(250)	98.8	75 - 125
Copper	ug/L	5.00	248.	250.(250)	99.2	75 - 125
Lead	ug/L	5.00	230 .	250.(250)	92.0	75 - 125
Manganese	ug/L	5.00	248.	251(250)	98.8	75 - 125
Nickel	ug/L	5.00	249.	250.(250)	99.6	75 - 125
Zinc	ug/L	5.00	247.	250.(250)	98.8	75 - 125
MRCCS - Seconda	ary					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1.00	52.3	50.0	105	90 - 110
Arsenic	ug/L	1.00	54.3	50.0	109	90 - 110
Barium	ug/L	1.00	52.7	50.0	105	90 - 110
Chromium	ug/L	1.00	52.0	50.0	104.	90 - 110
Copper	ug/L	1.00	54.0	50.0	108.	90 - 110
Lead	ug/L	1.00	51.5	50.0	103.	90 - 110
Manganese	ug/L	1.00	52.1	50.0	104	90 - 110
Nickel	ug/L	1.00	54.6	50.0	109	90 - 110
Zinc	ug/L	1.00	54.7	50.0	109	90 - 110
MRCVS - Primary	_					00 110
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1.00	48.2	50.0	96.4	90 - 110
Arsenic	ug/L	1.00	51.4	50.0	103	90 - 110
Barium	ug/L	1.00	48.5	50.0	97.0	.90 - 110
Chromium	ug/L	1.00	50.0	50.0	100.	90 - 110
Copper	ug/L	1.00	51,7	50.0	103	90 - 110
Lead	ug/L	1.00	47.0	50.0	94.0	90 - 110
Manganese	ug/L	1.00	49.8	50.0	99.6	90 - 110
Nickel	ug/L	1.00	52.2	50.0	104	90 - 110
Zinc	ug/L	1.00	50.6	50.0	101	90 - 110

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Client: E2 Consultin	g Engineers, ind	c .	Project Name: Project Number:	PG&E Topock P 392895.AA.DM	^o roject	Page 11 of 14 Printed 7/20/10
Interference Che	ck Standard A					
Parameter Antimony	Unit ug/L	DF 1.00	Result ND	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	_	0		
Barium	ug/L	1.00		0		
Chromium	ug/L	1.00		0		
Соррег	ug/L	1.00				
Lead	ug/L	1.00	–	0		
Manganese	ug/L	1.00		0		
Nickel	ug/L	1.00		0		
Zinc	ug/L	1.00		0		
Interference Che	_	7.00	140	U		
Parameter	Unit	DF	Result	Eveneted	0	
Antimony	ug/L	1.00	ND	Expected 0	Recovery	Acceptance Range
Arsenic	ug/L	1.00	ND	0		
Barium	ug/L	1.00	ND	ō		
Chromium	ug/L	1.00	ND	0		
Copper	ug/L	1.00	ND	0		
Lead	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		
Nickel	ug/L	1.00	ND	0		
Zinc	ug/L	1.00	ND	Ō		
Interference Chec	ck Standard AB			-		
Parameter	Unit	DF	Result	Expected	Recovery	Accontance Bonce
Antimony	ug/L	1.00	ND	0	recovery	Acceptance Range 80 - 120
Arsenic	ug/L	1.00	50.5	50.0	101,	80 - 120
Barium	ug/L	1.00	ND	0		80 - 120
Chromium	ug/L	1.00	48.4	50.0	96.8	80 - 120
Copper	ug/L	1.00	50.8	50.0	102	80 - 120
Lead	ug/L	1.00	ND	0		80 - 120
Manganese	ug/L	1.00	48.4	50.0	96.8	80 - 120
Nickel	ug/L	1.00	50.6	50.0	101	80 - 120
Zinc	ug/L	1.00	49.7	50.0	99.4	80 - 120
						



Client: E2 Consulting E	Engineers, ir		Project Name: Project Numbe	PG&E Topo er: 392895.AA.	ock Projed DM	ct	Page 12 of 14 Printed 7/20/10		
Interference Check	Standard AB								
Parameter	Unit	DF	Result	Expected		decovery	A ====+=	D	
Antimony	ug/L	1.00	ND	0		ecovery	80 - 120	nce Range	
Arsenic	ug/L	1.00	51.8	50.0		104	80 - 120		
Barium	ug/L	1.00	ND	0		104			
Chromium	ug/L	1.00	49,9	50.0	00.0		80 - 120		
Copper	ug/L	1.00	52.8	50.0	99.8		80 - 120		
Lead	ug/L	1.00	ND	0	106		80 - 120		
Manganese	ug/L	1.00	50.0	50.0	400		80 - 120		
Nickel	ug/L	1.00	52.3	50.0	100.		80 - 120		
Zinc	ug/L	1.00	51.8	50.0 50.0		105 104	80 - 120 80 - 120		
Total Dissolved Solids Parameter	by SM 254	0 C Unit		07TD\$10C lyzed	DF	MDL	7/7/10 RL	Doorth	
990068-001 Total Dissolved	Solids	mg/L		/2010				Result	
990068-002 Total Dissolved		mg/L		72010 72010	1.00	0.434	250.	4550	
Method Blank			07107	72010	1.00	0.434	250.	4920	
Parameter Total Dissolved Solids Duplicate	Unit mg/L	DF 1.00	Result ND						
Parameter							Lab ID = 9	90069-002	
Total Dissolved Solids Lab Control Sample	Unit mg/L	DF 1.00	Result 5140	Expected 5280	RPD 2.69		Acceptan 0 - 5	ice Range	
Parameter Total Dissolved Solids	Unit mg/L	DF 1.00	Result 491,	Expected 500.		ecovery 98.2	Acceptan 90 - 110	ce Range	

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Ammonia Nitrogen by SN	u+000-141		Batch	07NH3-E10A		7/14/10			
Parameter		Unit	Ana	alyzed	DF		MDL	RL	Result
990068-001 Ammonia as N		mg/L	07/14	4/2010	1.00		0.00200	0.500	ND
990068-002 Ammonia as N		mg/L	07/14	1/2010	1.00		.00200	0.500	ND
Method Blank								0.500	ND
Parameter	Unit	DF	Result						
Ammonia as N	mg/L	1.00	ND						
Duplicate								Lab ID = 0	990068-002
Parameter	Unit	DF	Resuit	Expected					
Ammonia as N	mg/L	1.00	ND	O		RPD 0		Acceptar 0 - 20	nce Range
Lab Control Sample	•			Ü		Ü		0 - 20	
Parameter	Unit	DF	Result	Expected		D			
Ammonia as N	mg/L	1.00	10.2	10.0		Recovery 102.			nce Range
Matrix Spike	•			.0.0		IVZ.		90 - 90	90068-002
Parameter	Unit	DF	Result	Expected/Adde	5.d	Dagg			
Ammonia as N	mg/L	1.00	6.03	6.00(6.00)	c q	Recove 100	ery	Acceptar 75 - 125	ice Range
Matrix Spike Duplicate				1100(0.00)		100			90068-002
Parameter	Unit	DF	Resuit	Expected/Adde	الم	D			
Ammonia as N	mg/L	1.00	5.99	6.00(6.00)	ea -	Recovi 99.8	ery		ice Range
MRCCS - Secondary	•			0.00(0.00)		33.0		75 - 125	
Parameter	Unit	DF	Result	Expected		Recove		4	.
Ammonia as N	mg/L	1.00	5.84	6.00		97.3	ei y	90 - 110	ice Range
MRCCS - Secondary						57.5		50 - 110	
Parameter	Unit	DF	Result	Expected	,	Donessa			_
Ammonia as N	mg/L	1.00	5.97	6.00	ı	Recove 99.5	ery	Acceptan 90 - 110	ce Range
MRCVS - Primary	-			5.50		89.Q		30 - 110	
Parameter	Unit	ĎF	Result	Expected	r	Poce :-		A = = = 4 =	- .
Ammonia as N	mg/L	1.00	5.85	6.00	•	Recove 97.5	rı y	Acceptan 90 - 110	ce Range



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Turbidity by SM 2130 B		Batch	07TUC10F		7/8/10			
Parameter	_	Unit	Ana	ilyzed	DF	MDL	RL	Result
990068-001 Turbidity		NTU	07/08	3/2010	1.00	0.0140	0.100	0.106
990068-002 Turbidity		NTU	07/06/2010		1.00	0.0140	0.100	0.108
Method Blank	·····					0.0140	0.100	0.108
Parameter	Unit	DF	Result					
Turbidity	NTU	1.00	ND					
Duplicate							Lab ID = 9	990068-002
Parameter	Unit	DF	Result	Expected	RPD			
Turbidity	NTU	1.00	0.107	0.108		0.930	Acceptance Range 0 - 20	
Lab Control Sample					Ì	0.000	0 - 20	
Parameter	Unit	DF	Result	Expected	Re	covery	Accenta	neo Peneo
Turbidity	NTU	1.00	7.76	8.00	97.0		90 - 110	nce Range
Lab Control Sample De	uplicate				`		30 - 110	
Parameter	Unit	ÐΕ	Result	Expected	Re	covery	Accenter	nce Range
Turbidity	NTU	1.00	7.70	8.00		96.2	90 - 110	-

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services

Total Dissolved Solids by SM 2540 C

Calculations

Batch: 07TD\$10C

Date Calculated: 7/12/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, 9	Exceeds 0,5mg? Yes/No	Residue weight.g	Filterable residue, ppm	ŘL, ppm	Reported Value, ppm	DF
BLANK	100	68.1215	68.1220	68,1218	0.0002	No	0,0003	3.0	25.0	ND.	1
990024	50	75.0552	75.1348	75.1348	0.0000	No	0.0796	1592.0	50.0	1592.0	1
990036-16	50	69.8214	69.8652	69.865	0.0002	No	0.0436	872,0	50.0	872.0	1
990071	475	110.3648	110.3667	110.3667	0.0000	No	0.0019	4.0	5.3	ND	. 1
990068-1	10	47.9726	48.0185	48.0181	0.0004	No	0.0455	4550.0	250.0	4550.0	1
990068-2	10	49.5594	49,6088	49.6086	0.0002	No	0.0492	4920,0	250.0	4920.0	11
990069-1	10	47.2935	47.3274	47.327	0,0004	No	0.0335	3350.0	250.0	3350.0	<u>1</u>
990069-2	10	48.1860	48.2389	48.2388	0.0001	No	0.0528	5280.0	250.0	5280.0	<u> 1</u>
990069-2d	10	50.5850	50.6367	50,6364	0.0003	No	0,0514	5140.0	250.0	5140.0	1_
						7.7			.,		
					- 14-7						
LCS	100	68.5299	68.5793	68.579	0.0003	No	0.0491	491.0	25.0	491.0	1

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A - B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit,

ND = not detected (below the reporting limit)

Analyst Printed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 07TDS10C Date Calculated: 7/12/10

Laboratory Number	ÉC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.85)	Measured TOS / Calc TOS <1.3
990024	2210	0.72	1436.5	1.11
990036-15	1440	0.61	936	0.93
990071	7.97	ND	5.1805	ND
990068-1	7500	0.61	4875	0,93
990068-2	7880	0.62	5122	0.96
990069-1	5520	0.61	3588	0.93
990069-2	8580	0.62	5577	0.95
990069-2d	8580	0.60	5577	0,92
				-
-				
<u> </u>				

ES 7/12/4

X

TRUESDARL 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-264] **990 06** §

COC Number

TURNAROUND TIME 10 Days

DATE 07/07/10 PAGE 1

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90068 TURNAROUN

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COMPANY	CH2M HILL Æ2							a	•		•	•	•		_	-	1	1	_	_		
PROJECT NAME P	PG&E Topock IM3	IM3				-		542			40/	•		10							COMMENIS	
PHONE	530-229-3303		FAX 530	FAX 530-339-3303		*****	300	8:00-	_	•	18 IS			S '20								
ADDRESS 1	155 Grand Ave Ste 1000	Ste 1000	l			Per	<0	***********		•	7 es	-	A, E	******		•	*****	7-1/	52-			
·	Oakland, CA 94612	1612			****	Fills	(50	•		0.(1.	(E)AN		ο ν <u>'</u>	-	200	-	*****	// <i>P</i> //				
P.O. NUMBER	392895.AA.DIM	<u></u>	1			(o \$/7 8/e 9e7 (g		(3	_	1-009 002) s	002)	J (0'0))(0)(c) (c) (c) (c)	(SOO)	00-		_	Voo.				
SAMPLERS (SIGNATURE	IRE A	11	\ \		6,5)	S Wet	حں سے	0052	_ +	/e _{lej}) e	000	0188	P/e/a/	•		93	O 11				
		\			(h	5 9	2).	S	10	PLULU 	UOJI	1010	200	/ /e;	•	•	8 _W					
SAMPLE 1D.	7	DATE	HWE.	DESCRIPTION	/S/	nu	1	7/2/	_ ~	<u> </u> ₹	(4)	/ ∡ /	2	0/	/	/	^∧	_				
SC-700B-WDR-264	R-264	07/10/10 08/00	080		×	Ĥ	×	×	×	×		×					h			B=HO	27	
SC-100B-WDR-264	R-264	01/20/10	080		×	\vdash	×	×	×	×		×	-				h			176	27	
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		SIGNATURE RECURD	7././	SAMPLE CONDITIONS
Signature Pri (Relinquished)	Printed HOLE	Companyl OM t	Date /530	RECEIVED COOL WARM "F
Signature (Pri Pri () () Pri () Pri () Pri	Printed A far	Company T. K. T	Date/フーフー/ D	CUSTODY SEALED YES \ \text{NO} \ \text{INO} \ \qquad \qua
Signature Pri (Relinquished) 10 01 Ma	Printed Rate	Company! T. K.T.	Date 7-7-70 Time 2/.30	SPECIAL REQUIREMENTS:
Signature English Pri Pri (Received) Study In the Na	Printed Gueller Name	Company, 'L'Z	TimeJUL 07 7010	The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, Mo, Ni, Fe, Zn,
Signature Pri (Relinquished) Na	Printed Name	Company/ Agency	Date/ Time	The contract of the contract o
Signature Pris (Received) Nat	Printed Name	Company/ Agency	Date/ Time	Tor Sample Conditions

TOTAL NUMBER OF CONTAINERS

do

1.18

10146

305

8.09

7.3

ANNLYSS OSO 6 0809

50-700B.

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Sc-100B.

See Form Attached





Sample Integrity & Analysis Discrepancy Form

Client	CH2N HILL	_{Lab #} 990068
Date E	Delivered: 7 / 7 /10 Time: 21:30 By: 🗆 Mail 🗹 Fiel	ld Service
1.	Was a Chain of Custody received and signed?	BYes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No ØN/A
3.	Are there any special requirements or notes on the COC?	☐Yes ☐No ☐MA
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?	Maryes □No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? 4°C	Tarres Ino In/A
7,	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	Maryes □No □N/A
₿.	Were sample custody seals intact?	□Yes □No □N/A
9.	Does the number of samples received agree with COC?	de Yes DNO DNA
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 □ C lient	ØYes □No □N/A
12.	Were samples pH checked? pH = See C-o C	der es □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	des □No □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground V □Sludge □Soil □Wipe □Paint □Solid □C	Vater □Waste Water Sther_U_A-TEP
16.	Comments:	
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Lafael Davilo



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

July 27, 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-265 PROJECT, GROUNDWATER

MONITORING, TLI NO.: 990169

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-265 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 July 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 result from the matrix spike for sample SC-700B-WDR-265 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 and Total Manganese were 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.

La- Mona Nassimi

Manager, Analytical Services

K. R. P. Sylv

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: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 990169

Date: July 27, 2010

Collected: July 13, 2010 Received: July 13, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 2540C	Total Dissolved Solids	Ethel Suico
SM 2130B	Turbidity	lordan Stavrev
EPA 200.8	Total Metals	Linda Saetern
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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

Oakland, CA 94612

Established 1931

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Laboratory No.: 990169

Date Received: July 13, 2010

Project Name: PG&E Topock Project

Attention: Shawn Duffy

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

Analytical Results Summary

Lab Sample ID Field ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	귐
990169-001	SC-700B-WDR-265 E120.1	E120.1	NDNE	7/13/10	8:00	EC	7300	umhos/cm	2.00
990169-001	SC-700B-WDR-265	E200.8	NONE	7/13/10	8:00	Chromium	2	ng/L	1.0
990169-001		E200.8	NONE	7/13/10	8:00	Manganese	2	ng/L	1.0
990169-001	SC-700B-WDR-265	E218.6	LABFLT	7/13/10	8:00	Chromium, hexavalent	2	ng/L	0.20
990169-001	SC-700B-WDR-265	SM2130B	NONE	7/13/10	8:00	Turbidity	용	UTN	0.100
990169-001	SC-700B-WDR-265	SM2540C	NONE	7/13/10	8:00	Total Dissolved Solids	4370	тgЛ	250

ND: Non Detected (below reporting limit)

mg/L: Mäligrams per liter.

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

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 392895,AA,DM Project Number: 392895,AA,DM Laboratory No. 990169

Page 1 of 6

Printed 7/27/10

Samples Received on 7/13/10 9:15:00 PM

Field ID				Lab ID	Colle	ected	Mat	rix
SC-700B-WDR-265				990169-001	07/13/2	010 08:00	Wat	ег
Specific Conductivity - E	PA 120.1		Batci	07EC10E			7/15/10	
Parameter		Unit	Ana	alyzed	DF	MDL	RL	Result
990169-001 Specific Conducti	vity	umhos/cn	07/1:	5/2010	1.00	0.0380	2.00	7300
Method Blank								
Parameter	Unit	DF	Result					
Specific Conductivity	umhos	1.00	ND					
Duplicate							Lab ID =	990169-001
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	ance Range
Specific Conductivity	umhos	1.00	7330	7300	,	0.410	0 - 10	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ance Range
Specific Conductivity	umhos	1.00	695.	706.	!	98.4	90 - 110	່
Lab Control Sample De	uplicate							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ance Range
Specific Conductivity	umhos	1.00	699.	706.	!	99.0	90 - 11	•
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ance Range
Specific Conductivity MRCVS - Primary	umhos	1.00	698.	706.	!	98.9	90 - 11	0
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ance Range
Specific Conductivity	umhos	1.00	990 .	1000		99.0	90 - 11	-

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.



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895.AA.DM

Page 2 of 6 Printed 7/27/10

Chrome VI by EPA 218.6 Batch 07CrH10D

Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990169-001 Chromium, Hexa	valent	ug/L	07/14	/2010 13:13	1.05	0.0190	0.20	ND
Method Blank								
Parameter Chromium, Hexavalent Duplicate	Unit ug/L	DF 1.00	Result ND				Lab ID =	990128-001
Parameter	Unit	DF	Result	Expected		RPD		ance Range
Chromium, Hexavalent Lab Control Sample	ug/L	1.05	ND	0		0	0 - 20	ince Kange
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.00	Result 4.95	Expected 5.00		Recovery 99.0	90 - 110	ance Range) 990128-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1,06	Result 1,11	Expected/Ac 1.06(1:06)	dded	Recovery 105	90 - 110	ance Range) 990128-004
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.08	Expected/Ac 1.06(1.06)		Recovery 102	90 - 110	ance Range 0 990128-005
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.12	Expected/Ac 1.06(1.06)		Recovery 106	Accepta 90 - 11	ance Range
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.11	Expected/Ar 1,06(1,06)		Recovery 105	90 - 11	ance Range 0 : 990128-002
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.04	1.06(1.06)		Recovery 98.1	90 - 11	ance Range 0 : 990169-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.08	Expected/A 1.06(1.06)		Recovery 102	90 - 11	ance Range 0 : 990169-001
Parameter Chromium, Hexavalent	Unit ug/L	DF 5.25	Result 5.34	Expected/A 5.25(5.25)		Recovery 102	Accept 90 - 11	ance Range 0

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Client: E2 Consulting Eng	gineers, Ind		Project Name: PG&E Topock Project Project Number: 392895.AA.DM			Page 3 of 6 Printed 7/27/10		
Matrix Spike						Lab ID = 990128-010		
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1,10	Expected/Added 1.06(1.06)	Recovery 104	Acceptance Range 90 - 110 Lab ID = 990128-011		
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.09	Expected/Added 1.06(1.06)	Recovery 103	Acceptance Range 90 - 110 Lab ID = 990128-007		
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.11	Expected/Added 1.06(1.06)	Recovery 105	Acceptance Range 90 - 110 Lab ID = 990128-006		
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.12	Expected/Added 1.06(1.06)	Recovery 106	Acceptance Range 90 - 110 Lab ID = 990128-009		
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.15	Expected/Added 1.06(1.06)	Recovery 108	Acceptance Range 90 - 110 Lab ID = 990128-008		
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 1.06	Result 1.13	Expected/Added 1.06(1.06)	Recovery 107	Acceptance Range 90 - 110		
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 4.94	Expected 5.00	Recovery 98.8	Acceptance Range 90 - 110		
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.92	Expected 10.0	Recovery 99.2	Acceptance Range 95 - 105		
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.1	Expected 10.0	Recovery 101.	Acceptance Range 95 - 105		
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 9.63	Expected 10.0	Recovery 96.3	Acceptance Range 95 - 105		

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Report Continued

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895.AA.DM

Page 4 of 6

Printed 7/27/10

Metals by EPA 200.8, Tot	el		Batch	071510A			•	
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990169-001 Chromium		ug/L	07/15	5/2010 15:41	5.00	0.0750	1.0	ND
Manganese		ug/L	07/15		5.00	0.0600	1.0	ND
Method Blank								
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab iD ≖	990169-001
Parameter	Unit	DF	Result	Expected	R	PD		nce Range
Chromium	ug/L	5.00	ND	0		0	0 - 20	ince ivalige
Manganese	ug/L	5.00	ND	0		0	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Chromium	ug/L	1.00	51.1	50.0	•	102	90 - 110	-
Manganese	ug/L	1.00	51.6	50.0		103	90 - 110	
Matrix Spike								990169-001
Parameter	Ųnit	DF	Result	Expected/Add	ed R	ecovery	Accepta	ince Range
Chromium	ug/L	5.00	248.	250.(250)		99.2	75 - 12	
Manganese	ug/L	5.00	249.	250.(250)		99.6	75 - 125	
Matrix Spike Duplicate				, ,				990169-001
Parameter	Unit	DF	Result	Expected/Addd	ed R	ecovery	Accepta	ince Range
Chromium	ug/L	5.00	248.	250.(250)		99.2	75 - 125	_
Manganese	ug/L	5.00	244.	250.(250)		97.6	75 - 125	
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Chromium	ug/L	1.00	51.0	50.0		102.	90 - 110	_
Manganese	ug/L	1.00	51.6	50.0		103	90 - 110)
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Chromium	ug/L	1.00	46.9	50.0		93.8	90 - 110	•
Manganese	ug/L	1,00	48.0	50.0		96.0	90 - 110)
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Chromium	u g /L	1.00	49.2	50.0		98.4	90 - 110	
Manganese	ug/L	1.00	49.9	50.0		99.8	90 - 110	

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Client: E2 Consulting En	gineers, In		roject Name: roject Numbe	PG&E Topo r: 392895.AA.I	•	et	Printed 7	Page 5 of 6 7/27/10
Interference Check S	tandard A							
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ance Range
Chromium	ug/L	1.00	ND	o o		,	, 1000 p.	and right
Manganese	ug/L	1.00	ND	0				
Interference Check S	tandard A							
Parameter	Unit	DF	Result	Expected	R	ecovery	Accents	ance Range
Chromium	ug/L	1.00	ND	0	• • • • • • • • • • • • • • • • • • • •		Лоосра	ance realige
Manganese	ug/L	1.00	ND	0				
Interference Check S	tandard AB							
Parameter	Unit	DF	Result	Expected	R	ecovery	Acconts	ance Range
Chromium	ug/L	1.00	47.1	50.0	• • • • • • • • • • • • • • • • • • • •	94.2	80 - 120	_
Manganese	ug/L	1.00	47.5	50.0	94.2 95.0		80 - 120	
Interference Check S	tandard AB						45 .2.	
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepts	ance Range
Chromium	ug/L	1.00	50.0	50.0	.,	100.	80 - 120	
Manganese	ug/L	1.00	50.3	50.0		101	80 - 120	
Total Dissolved Solids t	ov SM 2540) C	Batch	07TD\$10F		•	7/15/10	- 1 - 11111
Parameter	•	Unit	Ana	lyzed	DF	MDL	RL	Result
990169-001 Total Dissolved	Solids	mg/L		/2010	1.00	0.434	250.	4370
Method Blank			-		1.00	V.707	2,00,	4370
Parameter	Unit	DF	Result					
Total Dissolved Solids	mg/L	1,00	ND					
Duplicate	g . =		,,,,				Lab ID =	990169-001
Parameter	Unit	DF	Result	Expected	R	PD	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	4390	4370		0.457	0 - 5	J
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ince Range
Total Dissolved Solids	mg/L	1.00	499.	500.		99.8	90 - 110	_



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895.AA.DM

Page 6 of 6

Printed 7/27/10

Turbidity by SM 2130 B			Batch	07TUC10		7/14/10			
Parameter		Unit	Ana	Analyzed		MDL	RL	Result	
990169-001 Turbidity		NTU	07/14	/2010	10 1.00		0.100	ND	
Method Blank									
Parameter	Unit	DF	Result						
Turbidity	NTU	1.00	ND						
Duplicate							Lab ID =	990169-001	
Parameter	Ųnit	DF	Result	Expected	RE	סי	Accepta	nce Range	
Turbidity	NTU	1.00	ND	0	(0 - 20		
Lab Control Sample									
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range	
Turbidity	NTU	1.00	7.45	8.00		93.1	90 - 110	_	
Lab Control Sample Do	uplicate								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range	
Turbidity	NTU	1.00	7.52	8.00		94.0	90 - 110	_	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

*t*u∽ Mona Nassimi

Manager, Analytical Services

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Total Dissolved Solids by SM 2540 C

Calculations

Batch: 07TDS10F

Date Calculated: 7/19/20

Laboratory Number	\$ample ∨olume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
_BLANK	100	69,2479	69.2488	69.2488	0.0000	No	0.0009	9.0	25.0	ND ND	1
990169	10	71.7820	71.8258	71.8257	0.0001	No	0.0437	4370.0	250.0	4370,0	<u>·</u>
990169D	10_	69.3231	69.3672	69.367	0.0002	No	0.0439	4390.0	250.0	4390.0	— <u>'</u>
990207-1	100	111.1891	111.2486	111.2486	0.0000	No	0.0595	595.0	25.0	595.0	— <u> </u>
990207-2	100	102.7296	102.7897	102.7896	0.0001	No	0.0600	600.0	25.0	600.0	1
											
· · · ·		-				_					
		_	<u>-</u>	. <u>.</u>						-	<u> </u>
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			"			·		<u>.</u> .			
		_		<u>.</u>			-		` <u> </u>		`
	-					_		_		-	
	7	-									
					-						
					77-	-				1.4	
								_			
LCS	100	76.5291	76.5793	76.579	0.0003	No	0,0499	499.0	25.0	499.0	1

Calculation as follows:

Filterable residue (TD\$), mg/L =
$$\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered,

RL= reporting limit.

ND = not detected (below the reporting limit)

Applyet Bristed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 07TDS10F Date Calculated: 7/19/20

Laboratory Number	EC	TDS/EC Ratio: 0.659	Calculated TDS (EC*0.65)	Measured TDS / Cal TDS <1.3
990169	7300		_	
990169D	7300	0.60	4745	0.92
990207-1		0.60	4745	0.93
990207-2	935	0.64	607.75	0.98
330207-2	936_	0.64	608.4	0.99
			 	
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ES 7/19/a

www.truesded.com

TRUESDAL LABORATORIES, INC. 14201 Franklin Avenue, Tustin, CA 92781-7008 (714)730-5239 FAX: (714) 730-6462

CHAIN OF CUSTODY RECORD

(M3Plant-WDR-265)

COC Number

TURNAROUND TIME

10 Days PAGE 4

능

DATE 07/13/10

COMMENTS ホッンセント 9 NUMBER OF CONTAINERS m Turbidity (SIM2130) × × DESCRIPTION ₩ater FAX (530) 339-3303 1 07113/10 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 (530) 229-3303 392896 AA.DM PG&E Topock 囧 SAMPLERS (SIGNATURE SC-7008-MDR-265 PROJECT NAME P.O. NUMBER SANPLE 1.D. COMPANY ADDRESS ¥e£

16mp - 88.7 i 04 - 7.2 -806 EE - 7.47 Cd - 1002

Level III QC ALERT !!

For Sample Conditions See Form Attached

TOTAL NUMBER OF CONTAINERS

3

<u>پ</u> WARM | ջ SAMPLE CONDITIONS YES **□** SPECIAL REQUIREMENTS: CUSTODY SEALED RECEIMED Date 7-13-10 Date 7/3/10
Time 7/3/10
Date
Time
Date
Time 21-81-1 PHO Date 7-13 CHAIN OF CUSTODY SIGNATURE RECORD Company! Company/ Agency // Company/ Agency Company! Agency Company/ Agency Company/ Agency Agency Printed Mame Name Printed Name & Pyfiled Name Printed Name Printed Name (Relinquished) (Relinquished) (Relinquished) Signature (Received)~ Signature (Received) Signature / (Received) Signature Signature Signature

Sample Integrity & Analysis Discrepancy Form

Client	: <u>E</u> 2	Lab #	0/69
Date i	Delivered:のチ/23/10 Time: <u>2///</u> 5 By: ロMail ぬField	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	風 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 □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)? Y°C ALERT!!	¥Yes □No	□ <i>N/A</i>
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles eceve III QC	Yes □No	□N/A
₿.	Were sample custody seals intact?	☐Yes ☐No	DIN/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?	⊉ Yes □No	□N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □ Truesdail □Client	□Yes □No	Æ ¶N/A
12.	Were samples pH checked? pH = Set C-0. C.	ØYYes □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 checked and accepted? Turn Around Time (TAT): □ RUSH	#AYes □No	□N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Wa □Sludge □Soil □Wipe □Paint □Solid MOt	ater □Wast her <u> Wa</u>	
16.	Comments:	0.	
17	Sample Check-In completed by Truesdail Log-In/Receiving:	Hobus	nuy



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

July 29, 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-266 PROJECT, GROUNDWATER

MONITORING, TLI No.: 990296

Truesdail Laboratorics, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-266 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 July 21, 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 result from the matrix spike for sample SC-700B-WDR-266 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 and Total Manganese were 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. Jyca

K.R.P. Iyer

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: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 392895.AA.DM

Laboratory No.: 990296

Date: July 29, 2010

Collected: July 21, 2010 Received: July 21, 2010

ANALYST LIST

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

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

Oakland, CA 94612

Established 1931

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

Laboratory No.: 990296 Date Received: July 21, 2010

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

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

Project No.: 392895.AA.DM

Analytical Results Summary

귍	2.00 1.0 1.0 0.20 0.100 250
Units	umhos/cm ug/L ug/L ug/L NTU
Result	8980 ON ON
Parameter	8:00 EC 8:00 Chromium 8:00 Manganese 8:00 Chromium, hexavalent 8:00 Turbidity 8:00 Total Dissolved Solids
Sample Time	000000000000000000000000000000000000000
Sample Date	721/10 721/10 721/10 721/10 721/10
Extraction Method	NONE NONE NONE LABFLT NONE
Analys is Method	E120.1 E200.8 E200.8 E218.6 SM2130B SM2540C
Field ID	SC-700B-WDR-266 E120.1 SC-700B-WDR-266 E200.8 SC-700B-WDR-266 E218.6 SC-700B-WDR-266 E218.6 SC-700B-WDR-266 SM213 SC-700B-WDR-266 SM254
Lab Sample ID Field ID	990296-001 990296-001 990296-001 990296-001 990296-001

ND: Non Detected (below reporting limit)

mg/L: Miligrams per liter

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

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Established 1931

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REPORT

Client: E2 Consulting Engineeers, Inc.

155 Grand Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 392895.AA.DM

Project Number: 392895.AA.DM

Laboratory No. 990296

Page 1 of 5

Printed 8/8/2010

Revision 1

Samples Received on 7/21/2010 9:30:00 PM

Field ID				Lab ID	Colle	ected	Matr	ix
SC-700B-WDR-266		,		990296-001	07/21/2	2010 08:00	Wat	er
Specific Conductivity - E	PA 120.1	e ta la	Batch	07EC10H		en vinantj	7/22/2010	
Parameter	eter		Ana	lyzed	DF	MDL	RL	Result
990296-001 Specific Conducti	90296-001 Specific Conductivity		umhos/cm 07/22/2010		1.00	0.0380	2.00	6980
Method Blank						•		
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result ND					
Duplicate							Lab ID =	990296-001
Parameter Specific Conductivity Lab Control Sample	Unit umhos	DF 1.00	Result 6990	Expected 6980	RPD 0.143		Acceptance Range 0 - 10	
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 698.	Expected 706.		ecovery 98.9	Accepta 90 - 110	ance Range)
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 696.	Expected 706.		ecovery 98.6	Accepta 90 - 110	ance Range)
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 950.	Expected 1000		ecovery 95.0	Accepta 90 - 110	ance Range



Client: E2 Consulting Engineeers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895.AA.DM

Page 2 of 5 Printed 7/29/10

Chrome VI by EPA 218.6			Batch	07CrH10F				
Parameter		Unit	Ana	lyzed (DF	MDL	RL	Result
990296-001 Chromium, Hexa	valent	ug/L	07/22	2/2010 09:13 1	.05	0.0190	0.20	ND ND
Method Blank								• • •
Parameter	Unit	DF	Result					
Chromium, Hexavalent	ug/L	1.00	ND					
Duplicate							Lab ID ≖	990194-001
Parameter	Unit	DF	Result	Expected	R	PD	Accepta	ance Range
Chromium, Hexavalent	ug/L	52.5	702 .	694.		1.15	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	R	есочегу	Accepta	ance Range
Chromium, Hexavalent	ug/L	1.00	4.95	5.00		99.0	90 - 110)
Matrix Spike							Lab IĎ =	990296-001
Parameter	Unit	DF	Result	Expected/Adde	ed R	ecovery	Accepta	ance Range
Chromium, Hexavalent	ug/L	1.06	1.18	1.25(1.06)		93.4	90 - 110)
Matrix Spike							Lab ID =	990296-001
Parameter	Unit	DF	Result	Expected/Adde	d R	ecovery	Accepta	ance Range
Chromium, Hexavalent	ug/L	5.25	5.27	5.55(5.25)		94.7	90 - 110	כ
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	R	есочегу	Accepta	ance Range
Chromium, Hexavalent	ug/L	1.00	5.11	5.00		102	90 - 110	ם .
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ance Range
Chromium, Hexavalent	ug/L	1.00	9.74	10.0		97.4	95 - 10	5
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ance Renge
Chromium, Hexavalent	ug/L	1.00	9.82	10.0		98.2	95 - 10	5

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Client: E2 Consulting Engineeers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895.AA,DM

Page 3 of 5 Printed 7/29/10

Metals by EPA 200.8, To	otal		Batch	072310A				
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990296-001 Chromium		ug/L	07/23	/2010 12:04	1.00	0.0150	1.0	ND
Manganese		ug/L	07/23	/2010 12:04	1.00	0.0120	1.0	ND
Method Blank								
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID =	990296-001
Parameter	Unit	DF	Result	Expected	F	RPD	Accepta	ince Range
Chromium	ug/L	1.00	ND	o o		0	0 - 20	
Manganese	ug/L	1.00	ND	0		0	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ince Range
Chromium	ug/L	1.00	46.5	50.0		93.0	90 - 110	_
Manganese	ug/L	1.00	48.0	50.0		96.0	90 - 110)
Matrix Spike								990296-001
Parameter	Unit	DF	Result	Expected/Add	ed f	Recovery	Accepta	nce Range
Chromium	ug/L	1.00	45.0	50.0(50.0)		90.0	75 - 125	_
Manganese	ug/L	1.00	46.7	50.0(50.0)		93.4	75 - 125	
Matrix Spike Duplicat	:e							990296-001
Parameter	Unit	DF	Result	Expected/Add	ed f	Recovery	Accenta	ince Range
Chromium	ug/L	1.00	43.7	50.0(50.0)		87.4	75 - 125	_
Manganese	ug/L	1.00	46.2	50.0(50.0)		92.4	75 - 128	5
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ınce Range
Chromium	ug/L	1.00	47.0	50.0		94.0	90 - 110	-
Manganese	ug/L	1.00	48.3	50.0		96.6	90 - 110)
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ince Range
Chromium	ug/L	1.00	47.6	50.0		95.2	90 - 110	_
Manganese	ug/L	1.00	48.0	50.0		96.0	90 - 110)
Interference Check S	tandard A							
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ince Range
Chromium	ug/L	1.00	ND	o o		•		
Manganese	ug/L	1.00	ND	0				

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Total Dissolved Solids

Report Continued

Client: E2 Consulting Er	ıgineeers, l	nc.	Project Name: Project Number:	PG&E Topo 392895.AA.I	-	ot	Printed 7	Page 4 of 5 1/29/10
Interference Check S	standard A							
Parameter	Unit	DF	Result	Expected	R	lecovery	Accept	ance Range
Chromium	ug/L	1.00	ND	0		•		
Manganese	ug/L	1.00	ND	0				
Interference Check S	tandard AB							
Parameter	Unit	DF	Result	Expected	R	lecovery	Accepta	ance Range
Chromium	ug/L	1.00	46.8	50.0		93.6	80 - 12	•
Manganese	ug/L	1.00	48.0	50.0		96.0	80 - 12	0
Interference Check S	tandard AB							
Parameter	Unit	DF	Result	Expected	R	lecovery	Accepta	ance Range
Chromium	ug/L	1.00	45.8	50.0		91.6	80 - 12	•
Manganese	ug/Ļ	1.00	46.8	50.0		93.6	80 - 12	0
Total Dissolved Solids	by SM 254			07TDS10G			7/22/10	
Parameter		Unit	. Analy	zed	DF	MDL	RL	Result
990296-001 Total Dissolved	Solids	mg/L	. 07/22/2	2010	1.00	0.434	250.	4130
Method Blank					-		•	
Parameter	Unit	DF	Result					
Total Dissolved Solids	mg/L	1.00	ND					
Duplicate							Lab ID =	990296-001
Parameter	Unit	DF	Result	Expected	R	PD.	Accepta	ance Range
Total Dissolved Solids	mg/L	1.00	4040	4130	•	2.20	0 - 5	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accent	ance Range
Tatal Dissalus J Dall-					•	,	· ······	and the light

1.00

494.

500.

98.8

90 - 110

mg/L

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Client: E2 Consulting Engineeers, Inc.

Project Name: PG&E Topock Project

Page 5 of 5

Project Number: 392895,AA,DM

Printed 7/29/10

Turbidity by SM 2130 B			Batch	07TUC10P		7/22/10		
Parameter		Unit	Ana	ilyzed	DF	MDL	RL	Result
990296-001 Turbidity		NTU	07/22	2/2010	1.00	0.0140	0.100	ND .
Method Blank				-	•••			,
Parameter	Unit	DF	Result					
Turbidity Duplicate	NTU	1.00	ND				Lab ID =	990296-001
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	nce Range
Turbidity	NTU	1.00	ND	o o	0		0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Turbidity	NTU	1.00	7.95	8.00		99.4	90 - 110	-
Lab Control Sample D	uplicate							
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Turbidity	NTU	1.00	7.90	8.00		98.8	90 - 110	-

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services

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Total Dissolved Solids by SM 2540 C

Calculations

Batch: 07TDS10G Date Calculated: 7/23/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final Weight,g	Weight Difference,	Exceeds 0.5mg? Yes/No	Residue weight.g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
_BLANK	100	67.9618	67.9618	67.9618	0.0000	No	0.0000	0.0	25.0	ND	1
990242	50	69.5855	69.6646	69.6644	0.0002	No	0.0789	1578.0	50.0	1578.0	1
990246-2	200	115.2526	115.2720	115.2719	0.0001	No	0.0193	96.5	12.5	96.5	1
990246-3	200	105.3662	105.3980	105,398	0.0000	No	_ 0.0318	159.0	12.5	159.0	7
990296	10	72.4840	72.5255	72.5253	0.0002	No	0.0413	4130.0	250.0	4130.0	1
9902960	10	70.3290	70.3695	70.3694	0.0001	No	0.0404	4040.0	250.0	4040.0	_ 1
990311	50	76.5681	76.6301	76.63	0.0001	No	0.0619	1238.0	50.0	1238.0	1
	·	-									
		i		<u> </u>	r						
				·						\	
			-	-/			-				
			·			_					
			" "			·_					
						"-					
	<u>.</u>										
LCS	100	00.7500	**								
LUG	100	68,7532	68.8026	68.8026	0.0000	No	0.0494	494.0	25,0	494.0	. 1

Calculation as follows:

Filterable residue (TDS), mg/L = $\left(\frac{A-B}{C}\right) \times 10^6$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND ⇒ not detected (below the reporting limit)

Analyst Printed Name

Analyst Signature

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 07TDS10G

Date	Calculated:	7/23/10

Laboratory Number	E¢	TDS/EC Ratio: 0.559	Calculated TDS (EC*0,65)	Measured TOS / Call TDS < 1.3
990242	2270	0.70	1475.5	1.07
990246-2	167	0,58	108.55	0.89
990246-3	269	0.59	174.85	0.91
990296	7050	0.59	4582.5	0,90
990296D	7050	0.57	4582.5	0.88
990311	1935	0.64	1257.75	0.98
		-		
				· · ·
		77.06		
	· —————	T	<u> </u>	

ES 7/27/16

K

TOTAL NUMBER OF CONTAINERS COMMENTS 능 10 Oays PAGE 1 2007 NUMBER OF CONTAINERS FURNAROUND TIME DATE 07/21/10 COC Number °d 07/21/10 •990296 9*6*7°066 Rec'd CHAIN OF CUSTODY RECORD (DE TEMBS) YAHONDUT × [M3Plant-WDR-266] (DOFSZMS) SQL Specific Conductance (120.1) × Cr6 (218.8) Lab Fillered × DESCRIPTION FAX (530) 339-3303 Water TEAN 8.8 TRUESDAL LABORATORIES, INC. 14201 Frankin Avenue, Tustin, CA 92783-7008 (714)730-6239 FAX: (714) 730-6462 www.truesdail.com C. Krught 07/21/10 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 (530) 229-3303 392895.AA.DM PG&E Topock SAMPLERS (SIGNATURE SC-700B-WDR-266 PROJECT NAME P.O. NUMBER SAMPLEID COMPANY **ADDRESS** PHONE

For Sample Conditions See Form Attached	SAMPLE CONDITIONS	RECEIVED COOL WARM °F	CUSTODY SEALED YES NO	SPECIAL REQUIREMENTS:			
Level III OC	TURE RECORD	Company! O'M! CHZMHiLDate 1530	ナンソン	Agency Company T. C. Time 221-70	panyl TLE Date Allio 21120	ył	Company/ Date/ Agency Time
81.9°F 7.1 @ 8:11 7.19 .004 .004	CHAIN OF CUSTODY SIGNAT	Printed CHNIGHT	Rapy	My Defent Rola Agen	Compan Maine Machuming Agency	Printed Compan	Printed Compan Name Agency
TEMP. $81.9^{\circ}F$ $pH - 7.1 G$ $EC - 7.19$ $Cr(E)004$ $Cr(T)004$		Signature C. Kuulut	Signature (Acceived)	Relinquished)	Signature Cheffy	Signeture Refinquished)	Agnature Received)

Sample Integrity & Analysis Discrepancy Form

Client	. <u>E 2</u>	Lab#_	99	029
Date L	Delivered: <u>07/11</u> /10 Time: <u>21:30</u> By: ロMail 以Fie ld	Service		Client .
1.	Was a Chain of Custody received and signed?	Ko <u>l</u> Yes □	No	□N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □	No	I 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 □	I <i>N</i> o	I N/A
5 .	Were all requested analyses understood and acceptable?	Ø Yes □	INo	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? Y°C	"⊈lYes ⊏	1No	□N/A
7.	Were samples received intact (i.e. broken bottles, leaks all bubbles atch)	⊅ Yes ⊏	No	□N/A
8.	Were sample custody seals intact	□Yes □	1No	d N/A
9.	Does the number of samples received agree in CGC?	⊠Yes □	No	□N/A
10.	Did sample labels correspond with the client ID's?	δα i Yes □	ΙNο	□N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □ Truesdail □Client	□Yes □	ÌNo	Z IN/A
12.	Were samples pH checked? pH = $Sel C. O. C.$	☑Yes □	No I	□N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	ØYes □	INo	□N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH ☒ Std	∠DYes □	ΩNο	□N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Wa □Sludge □Soil □Wipe □Paint □Solid △Oth	11	, .	Water CR
16.	Comments:			
17.·	Sample Check-In completed by Truesdail Log-In/Receiving:	trab	ИИ	iua

Established 1931



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

August 9, 2010

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-267 PROJECT, GROUNDWATER MONITORING, TLI NO.: 990410

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-267 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 July 28, 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 sample date on the chain of custody is July 25, 2010 but the date on the sample containers was July 28, 2010. Mr. Shawn Duffy was notified and confirmed that the correct sample date was July 28, 2010.

Total Chromium and Total Manganese were 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. Fre

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.: 990410

Date: August 6, 2010 Collected: July 28, 2010

Received: July 28, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 2540C	Total Dissolved Solids	Ethel Suico
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	Linda Saetern
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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

Dakland, CA 94612

Attention: Shawn Ouffy

Esfabilished 1931

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com Laboratory No.: 990410

Date Received: July 28, 2010

Project Name: PG&E Topock Project

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

Analytical Results Summary

Lab Sample ID Field ID	OI PI	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	돲
990410-001 SC	SC-700B-WDR-267 E120.1	E120.1	NONE	7/28/10	8:00	EC	7010	umhos/cm	2.00
990410-001 SC	SC-700B-WDR-267 E200.8	E200.8	NONE	7728/10		Chromium	Q	na/L	1.0
990410-001 SC	SC-700B-WOR-267	E200.8	NONE	7728/10		Manganese	2	, A	1.0
990410-001 SC	SC-700B-WDR-267 E218.6	E218.6	LABFLT	7/28/10	8:00	Chromium, hexavalent	0.20	Lon.	0.20
990410-001 SC	SC-700B-WDR-267	SM2130B	NONE	7/28/10		Turbidity	S	ì	0.100
990410-001 SC	SC-700B-WDR-267	SM2540C	NONE	7/28/10		Total Dissolved Solids	4120	mg/L	250

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

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

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REPORT

Client: E2 Consulting Engineeers, Inc.

155 Grand Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 392895.AA.DM Project Number: 392895.AA.DM Laboratory No. 990410

Printed 8/6/10

Page 1 of 6

Samples Received on 7/28/10 9:30:00 PM

Field ID				Lab ID	Colle	ected	Matr	ix
SC-700B-WDR-267		***		990410-001	07/28/2	2010 08:00	Wat	er
Specific Conductivity - E	PA 120.1		Batch	07EC10J			7/30/10	
Parameter		Unit	Ana	llyzed	ΦF	MDL	RL	Result
990410-001 Specific Conduct	ivity	umhos/	cm 07/30	0/2010	1.00	0.0380	2.00	7010
Method Blank					-			
Perameter	Unit	DF	Result					
Specific Conductivity	umhos	1.00	ND					
Duplicate							Lab ID =	990410-001
Parameter	Unit	DF	Result	Expected	RF	PD	Accepta	ince Range
Specific Conductivity	umhos	1.00	7020	7010		0.143	0 - 10	oo range
Lab Control Sample								
Parameter	Unit	ΦF	Result	Expected	Re	covery	Accepta	nce Range
Specific Conductivity	umhos	1.00	708.	706.		100	90 - 110	_
Lab Control Sample D	uplicate							
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Specific Conductivity	umhos	1.00	709 .	706.		100	90 - 110	_
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Specific Conductivity	umhos	1.00	710.	706.		101	90 - 110	_
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Specific Conductivity	umhos	1.00	980.	1000		98.0	90 - 110	_

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Client: E2 Consulting Engineeers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895,AA.DM

Page 2 of 6

Printed 8/6/10

Chrome VI by EPA 218.6

Batch 08CrH10A

Parameter		Unit	Ana	lyzęd	DF	MDL	RL	5
				-7		IVILIAL	IN.L	Result
990410-001 Chromium, Hexa	valent	ug/L	08/05	/2010 09:08 1	.05	0.0210	0.20	0.20
Method Blank		•		-				
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result ND					
Duplicate							Lab ID =	990498-001
Parameter Chromium, Hexavalent Lab Control Sample	Unit ug/L	DF 1.05	Result 12.8	Expected 12.4		PD 3.17	Accepta 0 - 20	ance Range
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.00	Result 4.83	Expected 5.00		ecovery 96.6	90 - 110	ance Range) 990410-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.36	Expected/Adde 1.26(1.06)	ed R	ecovery 109	90 - 110	ance Range) 990512-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1,06	Result 8.95	Expected/Adde 8.80(5.30)	ed R	ecovery 103	90 - 11	ance Range) 990512-002
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 9.42	Expected/Adde 9.00(5.30)	ed R	ecovery 108	90 - 11	ance Range 0 990512-003
Parameter Chromium, Hexavatent MRCCS - Secondary	Unit ug/L	DF 1.06	Result 9.06	Expected/Adde 8.80(5.30)	ed R	ecovery 105	Accepta 90 - 11	ance Range 0
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 5.06	Expected 5.00	R	ecovery 101	Accepta 90 - 11	ance Range 0
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.78	Expected 10.0	R	ecovery 97.8	Accepta 95 - 10	ance Range 5
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 9.82	Expected 10.0	R	ecovery 98.2	Accept 95 - 10	ance Range 5

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Client: E2 Consulting En	onsulting Engineeers, Inc. Project Name: PG&E Topock Project Project Number: 392895,AA,DM		•	Page 3 of 6 Printed 8/6/10		
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.74	10.0	97.4	95 - 105
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.4	10.0	104.	95 - 105



Client: E2 Consulting Engineeers, Inc.

Project Name: PG&E Topock Project

Project Number: 392895.AA.DM

Page 4 of 6

Printed 8/6/10

Metals by EPA 200.8, Tot	tal		Batch	073010B			•	
Parameter		Unit	Ana	lyz e d	DF	MDL	RL	Result
990410-001 Chromium		ug/L	07/30	/2010 18:01	5.00	0.0960	1.0	ND
Manganese		ug/L	07/30	/2010 18:01	5.00	0.210	1.0	ND
Method Blank				,				
Parameter	Unit	ĎF	Result					
Chromium	ug/L	1.00	NĎ					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID =	990410-00
Parameter	Unit	DF	Result	Expected		RPD	Accepta	ance Range
Chromium	ug/L	5.00	ND	0		0	0 - 20	•
Manganese	ug/L	5.00	ND	0		0	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected		Recovery	Accepta	ance Range
Chromium	ug/L	1.00	46.0	50.0		92.0	90 - 11	0
Manganese	ug/L	1.00	48.9	50.0		97.8	90 - 11	0
Matrix Spike							Lab ID =	990410-00
Parameter	Unit	DF	Result	Expected/Ad	ded	Recovery	Accept	ance Range
Chromium	ug/L	5.00	225.	250.(250)		90.0	75 - 12	5
Manganese	ug/L	5.00	230.	250.(250)		92.0	75 - 12	5
Matrix Spike Duplicate	9						Lab ID =	990410-00
Parameter	Unit	DF	Result	Expected/Ad	ded	Recovery	Accept	ance Range
Chromium	ug/L	5.00	224.	250.(250)		89.6	75 - 12	5
Manganese	ug/L	5.00	229.	250.(250)		91.6	75 - 12	5
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected		Recovery	Accept	ance Rang
Chromium	ug/L	1.00	46.6	50.0		93.2	90 - 11	0
Manganese	ug/L	1.00	48.6	50.0		97.2	90 - 11	0
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected		Recovery	,	ance Rang
Chromium	ug/L	1.00	47.7	50.0		95.4	90 - 11	0
Manganese	ug/L	1.00	49.9	50 .0		99.8	90 - 11	0
Interference Check St	tandard A							

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Expected

Q

0

Recovery

Result

ND

ND

Unit

ug/L

ug/L

Parameter

Chromium

Manganese

DF

1.00

1.00

010

Acceptance Range



Client: E2 Consulting E	ngineeers, lı	nc.	Project Name; Project Number;	PG&E Topo 392895.AA.I	*	t	Printed 8	Page 5 of 6 4/6/10
Interference Check S	Standard A							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ance Range
Chromium	ug/L	1.00	ND	0				
Manganese	ug/L	1.00	ND	0				
Interference Check S	Standard AB							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ance Range
Chromium	ug/L	1.00	47.0	50.0	!	94.0	80 - 120	_
Manganese	ug/L	1.00	48.7	50.0	,	97.4	80 - 120	ס
Interference Check S	Standard AB							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ance Range
Chromium	ug/L	1.00	45.8	50.0		91.6 ´	80 - 120	_
Manganese	ug/L	1.00	47.4	50.0	9	94.8	80 - 120	ס
Total Dissolved Solids	hu SM 2644		Patch	08TDS10A			0/0/40	
Parameter	Dy SMI 254						8/2/10	
		Unit			DF	MDL	RL	Result
990410-001 Total Dissolved	Solids	mg/L	. 08/02/2	010	1.00	0.434	250.	4120
Method Blank								
Parameter	Unit	DF	Result					
Total Dissolved Solids	mg/L	1.00	ND					
Duplicate							Lab ID =	990410-001
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	ance Range
Total Dissolved Solids	mg/L	1.00	3990	4120	;	3.21	0 - 5	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accenta	ance Range
Total Dissolved Solids	mg/L	1.00	481.	500.		96.2	90 - 110	

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O 1 1



Client: E2 Consulting Engineeers, Inc.

Project Name:

PG&E Topock Project

Page 6 of 6

Project Number: 392895.AA.DM

Printed 8/6/10

Turbidity by SM 2130 B			Batch	07TUC10S.			7/29/10	
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990410-001 Turbidity		NTU	07/29	/2010	1.00	0.0140	0.100	ND ND
Method Blank	,			, , , , , , , , , , , , , , , , , , ,				
Parameter	Unit	ÐF	Result					
Turbidity	NTŲ	1.00	ND					
Duplicate							Lab ID =	990410-001
Parameter	Unit	ÐΕ	Result	Expected	R	PD	Accepta	nce Range
Turbidity	NTU	1.00	ND	0		0	0 - 20	·
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Turbidity	NTU	1.00	7.85	8.00		98.1	90 - 110	•
Lab Control Sample D	uplicate							
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Turbidity	NTU	1.00	7.65	8.00		95.6	90 - 110	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services

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Total Dissolved Solids by SM 2540 C

Calculations

Batch: 08TDS10A

Date Calculated: 8/3/10

aboratory Number	Sample volume, mi	initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterab ie residue, ppm	RL, ppm	Reported Value, ppm	DF
BLANK	100	75,4580	75.4579	75.4579	0.0000	No	-0.0001	-1.0	25.0	ND	1
990380-1	0.5	47.2075	47.2906	47.2906	0.0000	No	0.0831	166200.0	5000.0	166200.0	1
990380-2	1	73.6338	73.7789	73.7786	0.0003	No	0.1448	144800.0	2500.0	144800.0	1
990406	10	73.8411	73.8776	73.8776	0,0000	No	0.0365	3650.0	250.0	3650.0	1
990410	10	77.9601	78.0015	78.0013	0.0002	No	0.0412	4120.0	250.0	4120.0	1
990410D	10	73.6670	73.7070	73.7069	0.0001	No	0.0399	3990.0	250.0	3990.0	1
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	 	·	 		†	+	-		† • • • • • •	-	
				 		-			 		
							+	481.0	25.0	481.0	ł

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mi_ of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Analyst Printed Name

Anghat Signature

Reviewer Printed Name

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 08TOS10A Date Calculated: 8/3/10

Laboratory Number	EC	TD\$/EC Ratio: 0,559	Calculated TDS (EC*0,65)	Measured TDS / Cald TQS <1.3
990380-1				
990380-2			2700	
990406	5840	0.63	3796	0.96
990410	7020	0.59	4563	0.90
9904100	7020	0.57	4563	0.87
			.	
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TRUESDAIL LABORATORIES, INC. 14201 Franklin Avenue, Tustin, CA 92730-7008 (714)730-4239 FAX: (714) 730-4462 www.truesdail.com

IM3Plant-WDR-287] 990410 CHAIN OF CUSTODY RECORD

COC Number

TURNAROUND TIME

10 Days PAGE 1 DATE 07/25/10

								7	7		2	82.4	•	. 0	0		7.001	27	20000	0	١.	088	-	, E
TOTAL NUMBER OF CONTAINERS	a	-1						;	8,	8,	C.	TEMP	(-	7.	۵		76796	e.	0,0	!	5.5	ANALYSIS	i !	2101
P.H=7	65		\dashv	\dashv		\dashv			\dashv	×		×	×	×	×	_	Water	082		07/25/10	.0	7	¥-36	SC-700B-WDR-267
	7/	\dashv	\forall	\forall	\forall	\forall	\forall	\forall	7	$\sum_{\nu_{n_{j}}}$		SQ	eds	Q0/	90	Ÿ	DESCREPTION	3		DATE		1		BANPE ID.
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COMMENTS			•		-																		<u>a</u>	COMPANY

See Form And See

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	\	1	CHAIN OF	CHAIN OF CUSTODY SIGNATU	IGNATURE F	IRE RECORD	7.28-10	SAMPLE CONDITIONS
Signature (Relinquishe	ure	July	Printed Name	1 AIOU	Compeny! Agency	nt	Date 1530	RECEIVED COOL WARN *F
Signature (Received)	iden Web	tala!	Occupation (Robel	Company/ Agency	I.Y. 1	0)-82-7-8-7- Time /5:80	CUSTODY SEALED YES [] NO []
Signature (Relinquist	Signature (Relinquished)	1 July	betrained (Rollal	Company/ Agency —	ナイ	1 ime 27:8360	SPECIAL REQUIREMENTS:
Signature (Received)	Wed Ch	abumna	Printed 1.00 Nerne 2	adeum.	Companyl '	77 I	Date 4/28/10 4150	977
Signature Relingue	Signature Relinquished)		Printed Name		Company/ Agency		Date/ Time	
Signature (Received)	ure ived)		Printed Name		Company/ Agency		Date/ Time	

Sample Integrity & Analysis Discrepancy Form

Client	: <u>E 2</u>	9 	9 04 1
Date l	Dellvered:0 <u>ナ/28</u> /10 Time: <u>2/:30</u> By: ロMail 図Field	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	M N/A
3.	Are there any special requirements or notes on the COC?	□Yes □No	M N/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No	AN/A
5.	Were all requested analyses understood and acceptable?	⊠Yes □No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)?4-1°C	Ø Yes □No	□N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	Ø Yes □No	□N/A
8.	Were sample custody seals intact?	□Yes □No	M N/A
9.	Does the number of samples received agree with COC?	Ø Yes □No	D □N/A
10.	Did sample labels correspond with the clip of 12 2	⊉ Yes □No	D N/A
1 1 .	Did sample labels indicate property estruction? Preserved (if yes) by: □ Truesdail □ Clert	□Yes □No	,⊠ N/A
12.	Were samples pH checked? pH =	ØYes □No	o □N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	ØYes □No	o □N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH S LStd	#∆Yes □No	o □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Solid □Drinking Water □Solid ★□Ot	ater □Wa. her_Wa.l	ste Water CR
16.	Comments:	0/ -	
17	Sample Check-In completed by Truesdail Log-In/Receiving:	Habur	nha

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

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

September 24, 2010

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-264 PROJECT,

GROUNDWATER MONITORING,

TLI No.: 990497

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-268 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 August 4, 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 result for sample SC-700B-WDR-268 for Hexavalent Chromium analysis by EPA 218.6 was less than a second outside the retention time window. Because the matrix spike result was within the retention time window and the recovery was within acceptable limits, the data 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

Manager, Analytical Services

K. R.P. Sole

K.R.P. Iyer

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

Project No.: 408401.01.DM

Laboratory No.: 990497

Date: September 10, 2010

Collected: August 4, 2010 Received: August 4, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
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	Jenny Tankunakorn
EPA 200.7	Metals by ICP	Ethel Suico
EPA 200.8	Metals by ICP/MS	Linda Saetern
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008

Established 1931

(714) 730-6239 - FAX (714) 730-6462 · www.truesdail.com

Date Received: August 4, 2010 Laboratory No.: 990497

Revision 1; September 24, 2010

Attention: Shawn Duffy

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

Oakland, CA 94612

Project Name: PG&E Topock Project

Project No.: 408401.01.DM

P.O. No.: 408401.01.DM

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	R
990497-001	SC-700B-WDR-268	E120.1	NONE	8/4/2010		EC	7490	umhos/cm	2.00
990497-001	SC-700B-WDR-268	E200.7	NONE	8/4/2010	8:00	Iron	Q N	ug/L	20.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Aluminum	Q Q	ng/L	50.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Antimony	Q N	ng/L	10.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Arsenic	1.0	ng/L	1.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Barium	13.3	ng/L	10.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		BORON	952	ng/L	200
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Chromium	N O	ng/L	1.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Copper	Q Q	ug/L	5.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Lead	Q Q	ng/L	10.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Manganese	Q	ng/L	10.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Molybdenum	35.3	ng/L	10.0
990497-001	SC-700B-WDR-268	E200.8	NON	8/4/2010		Nickel	Q Q	ug/L	10.0
990497-001	SC-700B-WDR-268	E200.8	NONE	8/4/2010		Zinc	Q Q	ng/L	10.0
990497-001	SC-700B-WDR-268	E218.6	LABFLT	8/4/2010		Chromium, hexavalent	0.20	ng/L	0.20
990497-001	SC-700B-WDR-268	E300	NONE	8/4/2010		Fluoride	2.17	mg/L	0.500
990497-001	SC-700B-WDR-268	E300	NONE	8/4/2010		Nitrate as N	2.79	mg/L	1.00
990497-001	SC-700B-WDR-268	E300	NONE	8/4/2010		Sulfate	530	mg/L	50.0
990497-001	SC-700B-WDR-268	SM2130B	NONE	8/4/2010		Turbidity	Q Q) L	0.100
990497-001	SC-700B-WDR-268	SM2540C	NONE	8/4/2010		Total Dissolved Solids	4840	mg/L	250
990497-001	SC-700B-WDR-268	SM4500NH3D	NONE	8/4/2010		Ammonia-N	2	mg/L	0.500
990497-001	SC-700B-WDR-268	SM4500NO2B	NONE	8/4/2010		Nitrite as N	2	mg/L	0.0050

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	<u> </u>	Analysis	Extraction	Sample	Sample		;	;	i
Lab Sample ID	Field ID	Method	Method	Date	Time	Parameter	Result	Units	RL
990497-002	SC-100B-WDR-268	E120.1	NONE	8/4/2010		EC	7960	umhos/cm	2.00
990497-002	SC-100B-WDR-268	E200.7	NONE	8/4/2010	8:00	Iron	QN	ng/L	20.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Aluminum	Ð	ng/L	50.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Antimony	Q	ug/L	10.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010	8:00	Arsenic	3.6	ng/L	1.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Barium	26.1	ug/L	10.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		BORON	1290	ng/L	200
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Chromium	890	ug/L	1.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Copper	Q	ng/L	5.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Lead	Q	ng/L	10.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Manganese	10.0	ng/L	10.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Molybdenum	30.4	ng/L	10.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Nickel	Q	ng/L	10.0
990497-002	SC-100B-WDR-268	E200.8	NONE	8/4/2010		Zinc	P	ug/L	10.0
990497-002	SC-100B-WDR-268	E218.6	LABFLT	8/4/2010		Chromium, hexavalent	981	ug/L	21.0
990497-002	SC-100B-WDR-268	E300	NONE	8/4/2010		Fluoride	2.57	mg/L	0.500
990497-002	SC-100B-WDR-268	E300	NONE	8/4/2010		Nitrate as N	2.93	mg/L	1.00
990497-002	SC-100B-WDR-268	E300	NONE	8/4/2010		Sulfate	538	mg/L	25.0
990497-002	SC-100B-WDR-268	SM2130B	NONE	8/4/2010		Turbidity	0.112	N	0.100
990497-002	SC-100B-WDR-268	SM2540C	NONE	8/4/2010	8:00	Total Dissolved Solids	5040	mg/L	250
990497-002	SC-100B-WDR-268	SM4500NH3D	NONE	8/4/2010	8:00	Ammonia-N	Q	mg/L	0.500
990497-002	SC-100B-WDR-268	SM4500NO2B	NONE	8/4/2010	8:00	Nitrite as N	Q	mg/L	0.0050

ND: Non Detected (below reporting fimit) mg/L: Milligrams per liter,

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

TRUESDAIL LABORATORIES, INC.

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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 Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401.01.DM Project Number: 408401.01.DM Laboratory No. 990497

Page 1 of 27 Printed 9/10/2010

Samples Received on 8/4/2010 9:30:00 PM

Field ID				Lab ID	Colle	ected	Matrix	
SC-700B-WDR-268				990497-001	08/04/2	2010 08:00	Wate	er
SC-100B-WDR-268				990497-002	08/04/2	2010 08:00	Wate	er
Anions By I.C EPA 30	0.0		Batch	08AN10 D				
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990497-001 Fluoride		mg/L	08/05	/2010 10:57	5.00	0.0600	0.500	2.17
Nitrate as Nitro	gen	mg/L	08/05	/2010 10:57	5.00	0.0950	1.00	2.79
Sulfate		mg/L	08/05	/2010 11:43	100	4.00	50.0	530.
990497-002 Fluoride		mg/L	08/05	/2010 11:32	5.00	0.0600	0.500	2.57
Nitrate as Nitro	gen	mg/L	08/05	/2010 11:32	5.00	0.0950	1.00	2.93
Sulfate	-	mg/L	08/05	/2010 12:17	50.0	2.00	25.0	538.
Method Blank								
Parameter	Unit	DF	Result					
Chloride	mg/L	1.00	ND					
Fluoride	mg/L	1.00	ND					
Sulfate	mg/L	1.00	ND					
Nitrate as Nitrogen	mg/L	1.00	ND					
Duplicate							Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	nce Range
Fluoride	mg/L	5.00	2.17	2.17	1	0	0 - 20	
Sulfate	mg/L	100	516 <i>.</i>	530.	;	2.68	0 - 20	
Nitrate as Nitrogen	mg/L	5.00	2.77	2.79	1	0.719	0 - 20	
Duplicate							Lab ID =	990507-011
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	nce Range
Chloride	mg/L	25.0	85.2	88.2		3.46	0 - 20	

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800



Client: E2 Consulting Eng	jineers, Inc.		roject Name: roject Number:	PG&E Topock Pro 408401.01.DM	ject	Page 2 of 27 Printed 9/10/2010
Lab Control Sample						
Parameter Chloride Fluoride Sulfate Nitrate as Nitrogen Matrix Spike	Unit mg/L mg/L mg/L mg/L	DF 1.00 1.00 1.00 1.00	Result 3.95 4.04 20.4 4.01	Expected 4.00 4.00 20.0 4.00	Recovery 98.8 101. 102. 100	Acceptance Range 90 - 110 90 - 110 90 - 110 90 - 110 Lab ID = 990497-001
Parameter Fluoride Sulfate Nitrate as Nitrogen Matrix Spike	Unit mg/L mg/L mg/L	DF 5.00 100 5.00	Result 22.0 1570 23.6	Expected/Added 22.2(20.0) 1530(1000) 22.8(20.0)	Recovery 99.2 104. 104	Acceptance Range 85 - 115 85 - 115 85 - 115 Lab ID = 990507-011
Parameter Chloride MRCCS - Secondary	Unit mg/L	DF 25.0	Result 192.	Expected/Added 188(100.)	Recovery 104	Acceptance Range 85 - 115
Parameter Chloride Fluoride Sulfate Nitrate as Nitrogen MRCVS - Primary	Unit mg/L mg/L mg/L mg/L	DF 1.00 1.00 1.00 1.00	Result 3.94 4.02 20.4 4.00	Expected 4.00 4.00 20.0 4.00	Recovery 98.5 100 102. 100.	Acceptance Range 90 - 110 90 - 110 90 - 110 90 - 110
Parameter Chloride MRCVS - Primary	Unit mg/L	DF 1.00	Result 2.98	Expected 3.00	Recovery 99.3	Acceptance Range 90 - 110
Parameter Chloride MRCVS - Primary	Unit mg/L	DF 1.00	Result 2.96	Expected 3.00	Recovery 98.7	Acceptance Range 90 - 110
Parameter Fluoride Sulfate MRCVS - Primary	Unit mg/L mg/L	DF 1.00 1.00	Result 3.07 15.3	Expected 3.00 15.0	Recovery 102 102.	Acceptance Range 90 - 110 90 - 110
Parameter Sulfate MRCVS - Primary	Unit mg/L	DF 1.00	Result 15.4	Expected 15.0	Recovery 103	Acceptance Range 90 - 110
Parameter Nitrate as Nitrogen	Unit mg/L	DF 1.00	Result 3.00	Expected 3.00	Recovery 100.	Acceptance Range 90 - 110

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Client: E2 Consulting Eng	ineers, In		Project Name: Project Numbe	PG&E Topoder: 408401.01.D	•	Page 3 of 27 Printed 9/24/2010 Revision 1
MRCVS - Primary					•	11013011
Parameter Nitrate as Nitrogen MRCVS - Primary	Unit mg/L	DF 1.00	Result 3.00	Expected 3.00	Recovery 100.	Acceptance Range 90 - 110
Parameter Chloride Sulfate Nitrate as Nitrogen	Unit mg/L mg/L mg/L	DF 1.00 1.00 1.00	Result 2.94 15.4 3.01	Expected 3.00 15.0 3.00	Recovery 98.0 103 100	Acceptance Range 90 - 110 90 - 110 90 - 110
Nitrite SM 4500-NO2 B Parameter		Unit		08NO210C lyzed	DF MDL	RL Result
990497-001 Nitrite as Nitrogen 990497-002 Nitrite as Nitrogen Method Blank		mg/L mg/L	08/05	/2010 13:01 /2010 13:02	1.00 0.00020	
Parameter Nitrite as Nitrogen Duplicate	Unit mg/L	DF 1.00	Result ND			Lab ID = 990497-002
Parameter Nitrite as Nitrogen Lab Control Sample	Unit mg/L	DF 1.00	Result ND	Expected 0	RPD 0	Acceptance Range 0 - 20
Parameter Nitrite as Nitrogen Matrix Spike	Unit mg/L	DF 1.00	Result 0.0481	Expected 0.0450	Recovery 107	Acceptance Range 90 - 100 Lab ID = 990497-002
Parameter Nitrite as Nitrogen Matrix Spike Duplicate	Unit mg/L	DF 1.00	Result 0.0216	Expected/Ad 0.0200(0.02	•	Acceptance Range 75 - 125 Lab ID = 990497-002
Parameter Nitrite as Nitrogen MRCCS - Secondary	Unit mg/L	DF 1.00	Result 0.0214	Expected/Ad- 0.0200(0.02		Acceptance Range 75 - 125
Parameter Nitrite as Nitrogen MRCVS - Primary	Unit mg/L	DF 1.00	Result 0.0277	Expected 0.0270	Recovery 103	Acceptance Range 90 - 110
Parameter Nitrite as Nitrogen	Unit mg/L	DF 1.00	Result 0.0182	Expected 0.0200	Recovery 91.0	Acceptance Range 90 - 110

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010

Intention Blank



Client: E2 Consulting Engineers, Inc.

Specific Conductivity

umhos

1.00

995.

1000

99.5

90 - 110

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Printed 9/10/2010

Specific Conductivity - EPA 120.1 Batch 08EC10B 8/5/2010 Parameter Unit Analyzed DF MDL RL Result 990497-001 Specific Conductivity umhos/cm 08/05/2010 1.00 0.0380 2.00 7490 990497-002 Specific Conductivity 08/05/2010 umhos/cm 1.00 0.0380 2.00 7960 Method Blank Parameter Unit DF Result Specific Conductivity umhos 1.00 ND Duplicate Lab ID = 990498-001 Parameter Unit DF Result **RPD** Expected Acceptance Range Specific Conductivity umhos 1.00 5490 5490 0 0 - 10Lab Control Sample Parameter Unit DF Result Expected Recovery Acceptance Range Specific Conductivity umhos 1.00 712. 706. 101 90 - 110 Lab Control Sample Duplicate Parameter Unit DF Result Expected Recovery Acceptance Range Specific Conductivity umhos 1.00 706. 706. 100. 90 - 110 MRCCS - Secondary Parameter Unit DF Result Expected Recovery Acceptance Range Specific Conductivity umhos 1.00 711. 706. 101 90 - 110 MRCVS - Primary Parameter Unit DF Result Expected Recovery Acceptance Range



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 5 of 27 Printed 9/10/2010

Chrome VI by EPA 218.6 Parameter		Unit		i 08CrH10A ilyzed	DF	MDL	RL	Result
990497-001 Chromium, Hex	avalent	ug/L	08/05	5/2010 09:51	1.05	0.0210	0.20	0.20
990497-002 Chromium, Hexa	avalent	ug/L	08/05	5/2010 10:01	105	2.20	21.0	981.
Method Blank								
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result ND					
Duplicate							Lab ID =	990498-001
Parameter Chromium, Hexavalent Lab Control Sample	Unit ug/L	DF 1.05	Result 12.8	Expected 12.4	F	3.17	Accepta 0 - 20	ance Range
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.00	Result 4.83	Expected 5.00	F	Recovery 96.6	90 - 110	ance Range) 990410-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.36	Expected/Ac 1.26(1.06)	dded F	Recovery 109	90 - 110	ance Range) 990497-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.32	Expected/Ac 1.26(1.06)	dded F	Recovery 106	90 - 110	ince Range) 990497-002
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 105	Result 2120	Expected/Ac 2030(1050		Recovery 108	90 - 110	ence Range) 990498-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.09	Result 29.4	Expected/Ac 28.8(16.4)	lded R	decovery 104	90 - 110	nce Range) 990501-002
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.05	Result 16.7	Expected/Ac 15.8(10.6)	dded R	lecovery 108	90 - 110	nce Range) 990501-004
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 1.18	Expected/Ac 1,13(1,06)	ided R	lecovery 105	90 - 110	nce Range) 990504-009
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.06	Result 8.01	Expected/Ac 8.30(5.30)	ided R	lecovery 94.5	Accepta 90 - 110	ince Range

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Client: E2 Consulting Eng	jineers, Ind		roject Name: roject Numbe	PG&E Topock Pro r: 408401.01.DM	pject	Page 6 of 27 Printed 9/10/2010
Matrix Spike						Lab ID = 990506-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 7.87	Expected/Added 7.50(5.30)	Recovery 107	Acceptance Range 90 - 110 Lab ID = 990506-003
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 16.9	Expected/Added 15.9(10.6)	Recovery 109	Acceptance Range 90 - 110 Lab ID = 990512-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 8.95	Expected/Added 8.80(5.30)	Recovery 103	Acceptance Range 90 - 110 Lab ID = 990512-002
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 9.42	Expected/Added 9.00(5.30)	Recovery 108	Acceptance Range 90 - 110 Lab ID = 990512-003
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 1.06	Result 9.06	Expected/Added 8.80(5.30)	Recovery 105	Acceptance Range 90 - 110
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 5.06	Expected 5.00	Recovery 101	Acceptance Range 90 - 110
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.74	Expected 10.0	Recovery 97.4	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.4	Expected 10.0	Recovery 104.	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.78	Expected 10.0	Recovery 97.8	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 9.82	Expected 10.0	Recovery 98.2	Acceptance Range 95 - 105

TRUESDAIL LABORATORIES, INC.

Report Continued

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

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Project Number: 408401.01.DM

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Metals by EPA 200.7, To	tal	Unit		081110A-Th lyzed	DF	MDL	Negari ilija RL	Result
990497-001 Iron		ug/L	 		1.00	4.00	20.0	ND
990497-002 Iron		ug/L			1.00	4.00	20.0	ND
Method Blank		-9, -		12010 10.07	1.00	7.00	20.0	140
Parameter	Unit	DF	Result					
Iron	ug/L	1.00	ND					
Duplicate							Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected	R	PD	Accepta	ince Range
Iron	ug/L	1.00	ND	0		0	0 - 20	Ů
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ince Range
Iron	ug/L	1.00	5030	5000		101	90 - 110)
Matrix Spike				•			Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected/Add	ed R	ecovery	Accepta	ince Range
Iron	ug/L	1.00	1860	2000(2000)		93.0	75 - 125	j
Matrix Spike Duplicate	е						Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected/Add	ed R	ecovery	Accepta	ince Range
Iron	ug/L	1.00	1800	2000(2000)		90.2	75 - 125	5
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ince Range
Iron	ug/L	1.00	5130	5000		103	90 - 110)
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ince Range
łron	ug/L	1.00	4800	5000		96.1	90 - 110)
Interference Check St	tandard A							
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ınce Range
Iron	ug/L	1.00	2040	2000		102	80 - 120)
Interference Check S	tandard A							
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ince Range
Iron	ug/L	1.00	1790	2000		89.4	80 - 120)
Interference Check S	tandard AB							
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ince Range
Iron	ug/L	1.00	2010	2000		100	80 - 120)



Client: E2 Consulting Engineers, Inc.

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Interference Check Standard AB

Parameter

Iron

Unit ug/L

DF 1.00 Result 1840

Expected 2000

Recovery 92.0

Acceptance Range

80 - 120



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

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Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990497-001 Alumin	um	ug/L	08/11	/2010 12:12	5.00	6.02	50.0	ND
Arsenio		ug/L	08/11	/2010 12:12	5.00	0.259	1.0	1.0
Coppe	-	ug/L	08/11	/2010 12:12	5.00	0.307	5.0	ND
Lead		ug/L	08/11	/2010 12:12	5.00	0.0960	10.0	ND
Manga	nese	ug/L	08/11	/2010 12:12	5.00	0.210	10.0	ND
Nickel		ug/L	08/11	/2010 12:12	5.00	0.238	10.0	ND
Zinc		ug/L	08/11	/2010 12:12	5.00	1.32	10.0	ND
990497-002 Alumin	um	ug/L	08/11	/2010 12:19	5.00	6.02	50.0	ND
Arsenio		ug/L	08/11	/2010 12:19	5.00	0.259	1.0	3.6
Coppe	7	ug/L	08/11	/2010 12:19	5.00	0.307	5.0	ND
Lead		ug/L	08/11	/2010 12:19	5.00	0.0960	10.0	ND
Manga	nese	ug/L	08/11	/2010 12:19	5.00	0.210	10.0	10.0
Nickel		ug/L		/2010 12:19	5.00	0.238	10.0	ND
Zinc		ug/L		/2010 12:19	5.00	1.32	10.0	ND
Method Blan	k	······································		OF OTHER PROPERTY OF THE PROPE		*************************************	·····	
Parameter	Unit	DF	Result					
Aluminum	ug/L	1.00	ND					
Arsenic	ug/L	1.00	ND					
Chromium	ug/L	1.00	ND					
Nickel	ug/L	1.00	ND					
Zinc	ug/L	1.00	ND					
Copper	ug/L	1.00	ND					
Lead	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID =	990566-004
Parameter	Unit	DF	Result	Expected	RP	D	Accepta	nce Range
Aluminum	ug/L	1.00	9.08	8.99	0	.986	0 - 20	
Arsenic	ug/L	1.00	2.69	2.62	2	.60	0 - 20	
Chromium	ug/L	1.00	ND	0	0		0 - 20	
Nickel	ug/L	1.00	ND	0	0		0 - 20	
Zinc	ug/L	1.00	1.12	1.16	4	,21	0 - 20	
Copper	ug/L	1.00	1.62	1.68	3	.39	0 - 20	
Lead	ug/L	1.00	ND	0	0		0 - 20	
Manganese	ug/L	1.00	9.05	9.37	3	.42	0 - 20	



Client: E2 Consulting Engineers, Inc.	Project Name:	PG&E Topock Project	Page 10 of 27
	Project Number:	408401.01.DM	Printed 9/10/2010

Lab Control Sample						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	48.6	50.0	97.1	90 - 110
Arsenic	ug/L	1.00	51.2	50.0	102	90 - 110
Chromium	ug/L	1.00	49.5	50.0	99.0	90 - 110
Nickel	ug/L	1.00	50.9	50.0	102	90 - 110
Zinc	ug/L	1.00	51.2	50.0	102	90 - 110
Copper	ug/L	1.00	51.5	50.0	103	90 - 110
Lead	ug/L	1.00	49.2	50.0	98.5	90 - 110
Manganese	ug/L	1.00	49.2	50.0	98.5	90 - 110
Matrix Spike						Lab ID = 990566-004
Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Aluminum	ug/L	1.00	57.9	59.0(50.0)	97.9	75 - 125
Arsenic	ug/L	1.00	56.4	52.6(50.0)	108	75 - 125
Chromium	ug/L	1.00	49.1	50.0(50.0)	98.2	75 - 125
Nickel	ug/L	1.00	49.3	50.0(50.0)	98.6	75 - 125
Zinc	ug/L	1.00	54.1	51.2(50.0)	106	75 - 125
Copper	ug/L	1.00	50.6	51.7(50.0)	97.9	75 - 125
Lead	ug/L	1.00	46.6	50.0(50.0)	93.1	75 - 125
Manganese	ug/L	1.00	58.1	59.4(50.0)	97.4	75 - 125
Matrix Spike Duplicate						Lab ID = 990566-004
Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Aluminum	ug/L	1,00	57.2	59.0(50.0)	96.5	75 - 125
Arsenic	ug/L	1.00	54.2	52.6(50.0)	103	75 - 125
Chromium	ug/L	1.00	47.3	50.0(50.0)	94.7	75 - 125
Nickel	ug/L	1.00	47.3	50.0(50.0)	94.5	75 - 125
Zinc	ug/L	1.00	53.4	51.2(50.0)	105	75 - 125
Copper	ug/L	1.00	48.9	51.7(50.0)	94.4	75 - 125
Lead	ug/L	1.00	45.8	50.0(50.0)	91.5	75 - 125
Manganese	ug/L	1.00	57.0	59.4(50.0)	95.2	75 - 125



Client:E2 Consulting Engineers, Inc.Project Name:PG&E Topock ProjectPage 11 of 27Project Number:408401.01.DMPrinted 9/10/2010

			oject (valide	1. 400401,01.01.01		Fillited 9/10/2010
MRCCS - Secondary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	49.0	50.0	98.0	90 - 110
Arsenic	ug/L	1.00	50.8	50.0	102	90 - 110
Chromium	ug/L	1.00	49.6	50.0	99.3	90 - 110
Nickel	ug/L	1.00	51.1	50.0	102	90 - 110
Zinc	ug/L	1.00	52.5	50.0	105	90 - 110
Copper	ug/L	1.00	52.0	50.0	104	90 - 110
Lead	ug/L	1.00	49.7	50.0	99.4	90 - 110
Manganese	ug/L	1.00	50.0	50.0	100.	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	48.6	50.0	97.3	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	51.2	50.0	102	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	52.3	50.0	105	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	53.4	50.0	107	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	51.8	50.0	104	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	51.1	50.0	102	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	50.2	50.0	100	90 - 110
MRCVS - Primary				•		
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	53.3	50.0	107	90 - 110



Client: E2 Consulting En	gineers, Inc.		roject Name: roject Number	PG&E Topock F : 408401.01.DM	Project	Page 12 of 27 Printed 9/10/2010
MRCVS - Primary						
Parameter Arsenic MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.7	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Arsenic MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.7	Expected 50.0	Recovery 103	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.9	Expected 50.0	Recovery 97.9	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.3	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.5	Expected 50.0	Recovery 99.0	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.4	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.8	Expected 50.0	Recovery 95.6	Acceptance Range 90 - 110
Parameter Nickel MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.0	Expected 50.0	Recovery 100.	Acceptance Range 90 - 110
Parameter Nickel MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.6	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Nickel MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.2	Expected 50.0	Recovery 98.3	Acceptance Range 90 - 110
Parameter Nickel MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.0	Expected 50.0	Recovery 100.	Acceptance Range 90 - 110
Parameter Nickel	Unit ug/L	DF 1.00	Result 51.5	Expected 50.0	Recovery 103	Acceptance Range 90 - 110

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Client: E2 Consulting E	ngineers, Inc.		oject Name: oject Number	PG&E Topock : 408401.01.DM	Project	Page 13 of 27 Printed 9/10/2010	
MRCVS - Primary							
Parameter Zinc MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.3	Expected 50.0	Recovery 105	Acceptance Range 90 - 110	
Parameter Zinc MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.2	Expected 50.0	Recovery 100	Acceptance Range 90 - 110	
Parameter Zinc MRCVS - Primary	Unit ug/L	DF 1.00	Result 53.3	Expected 50.0	Recovery 107	Acceptance Range 90 - 110	
Parameter Zinc MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.3	Expected 50.0	Recovery 105	Acceptance Range 90 - 110	
Parameter Zinc MRCVS - Primary	Unit ug/L	DF 1,00	Result 51.8	Expected 50.0	Recovery 104	Acceptance Range 90 - 110	
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.6	Expected 50.0	Recovery 99.2	Acceptance Range 90 - 110	
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.5	Expected 50.0	Recovery 101.	Acceptance Range 90 - 110	
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.9	Expected 50.0	Recovery 102	Acceptance Range 90 - 110	
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.1	Expected 50.0	Recovery 104	Acceptance Range 90 - 110	
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.6	Expected 50.0	Recovery 101	Acceptance Range 90 - 110	
Parameter Lead MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.9	Expected 50.0	Recovery 99.7	Acceptance Range 90 - 110	
Parameter Lead	Unit ug/L	DF 1.00	Result 46.7	Expected 50.0	Recovery 93.4	Acceptance Range 90 - 110	

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Client: E2 Consulting Er	ngineers, Inc.		oject Name: oject Numbe	PG&E Topock r: 408401.01.DM	•	Page 14 of 27 Printed 9/10/2010
MRCVS - Primary						
Parameter Lead MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.6	Expected 50.0	Recovery 103	Acceptance Range 90 - 110
Parameter Lead MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.0	Expected 50.0	Recovery 100	Acceptance Range 90 - 110
Parameter Lead MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.2	Expected 50.0	Recovery 100	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.5	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.7	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.9	Expected 50.0	Recovery 95.7	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.9	Expected 50.0	Recovery 102	Acceptance Range 90 - 110
Parameter Manganese Interference Check S	Unit ug/L tandard A	DF 1.00	Result 50.2	Expected 50.0	Recovery 100	Acceptance Range 90 - 110
Parameter Aluminum Interference Check S	Unit ug/L tandard A	DF 1.00	Result 53.3	Expected 50.0	Recovery 107	Acceptance Range 0 - 120
Parameter Aluminum Interference Check S	Unit ug/L tandard A	DF 1.00	Result 57.8	Expected 50.0	Recovery 116	Acceptance Range 0 - 120
Parameter Arsenic	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range

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Client: E2 Consulting E	Engineers, Inc		roject Name: roject Numbe	PG&E Topock r: 408401.01.DM		Page 15 of 27 Printed 9/10/2010
Interference Check	Standard A					
Parameter Arsenic Chromium	Unit ug/L ug/L	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Interference Check	Standard A					
Parameter Chromium Nickel Interference Check	Unit ug/L ug/L Standard A	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Nickel Interference Check	Unit ug/L Standard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Zinc Interference Check	Unit ug/L Standard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Zinc Interference Check	Unit ug/L Standard ∆	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Copper Interference Check	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Copper Interference Check	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Lead Interference Check	Unit ug/L Standard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Lead Manganese Interference Check	Unit ug/L ug/L Standard A	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Manganese Interference Check	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Aluminum	Unit ug/L	DF 1.00	Result 53.3	Expected 50.0	Recovery 107	Acceptance Range 80 - 120

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Client: E2 Consulting Er	gineers, Inc.		oject Name: oject Numbe	PG&E Topock r: 408401.01.DM	Project	Page 16 of 27 Printed 9/10/2010
Interference Check S	tandard AB					
Parameter Aluminum Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 58.0	Expected 50.0	Recovery 116	Acceptance Range 80 - 120
Parameter Arsenic Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 52.7	Expected 50.0	Recovery 105	Acceptance Range 80 - 120
Parameter Arsenic Chromium Interference Check S	Unit ug/L ug/L tandard AB	DF 1.00 1.00	Result 55.9 53.8	Expected 50.0 50.0	Recovery 112 108	Acceptance Range 80 - 120 80 - 120
Parameter Chromium Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 51.0	Expected 50.0	Recovery 102	Acceptance Range 80 - 120
Parameter Nickel Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 54.9	Expected 50.0	Recovery 110	Acceptance Range 80 - 120
Parameter Nickel Zinc Interference Check S	Unit ug/L ug/L tandard AB	DF 1.00 1.00	Result 52.9 57.2	Expected 50.0 50.0	Recovery 106 114	Acceptance Range 80 - 120 80 - 120
Parameter Zinc Interference Check S	Unit ug/L	DF 1.00	Result 58.3	Expected 50.0	Recovery 117	Acceptance Range 80 - 120
Parameter Copper Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 54.0	Expected 50.0	Recovery 108	Acceptance Range 80 - 120
Parameter Copper Lead Interference Check S	Unit ug/L ug/L tandard AB	DF 1.00 1.00	Result 56.0 ND	Expected 50.0 0	Recovery 112	Acceptance Range 80 - 120
Parameter Lead Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese	Unit ug/L	DF 1.00	Result 54.4	Expected 50.0	Recovery 109	Acceptance Range 80 - 120

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project Page 17 of 27

Project Number: 408401.01.DM

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Interference Check Standard AB

Parameter Unit DF Result Expected Recovery Acceptance Range Manganese ug/L 1.00 51.3 50.0 103 80 - 120

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TRUESDAIL LABORATORIES, INC.

Report Continued

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

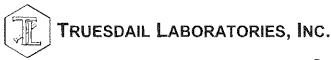
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Parameter		Unit	Ana	lyzed	DF MDL		RL	Result
990497-001 Chromium		ug/L	08/16	8/2010 11:13	5.00	0.0950	1.0	ND
990497-002 Chromium		ug/L	08/16	5/2010 10:59	5.00	0.0950	1.0	890
Method Blank								
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Duplicate							Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected	RF	PD	Accepta	ince Range
Chromium	ug/L	5.00	ND	0	()	0 - 20	Ū
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	covery	Acceptance Range	
Chromium	ug/L	1.00	50.4	50.0	1	101	90 - 110	
Matrix Spike								990497-001
Parameter	Unit	DF	Result	Expected/Add	ed Re	covery	Accepta	nce Range
Chromium	ug/L	5.00	218	250.(250.)	3	37.3	75 - 125	_
Matrix Spike Duplicate							Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected/Add	ed Re	covery	Accepta	nce Range
Chromium	ug/L	5.00	222	250.(250.)	8	38.7	75 - 125	_
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Chromium	ug/L	1.00	51.0	50.0	1	102	90 - 110	_
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Chromium	ug/L	1.00	47.3	50.0	9	94.6	90 - 110	_
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Chromium	ug/L	1.00	48.6	50.0		7.3	90 - 110	_
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Chromium	ug/L	1.00	49.0	50.0		8.0	90 - 110	
Interference Check Sta	ndard A							
Parameter	Unit	DF	Result	Expected	Re	covery	Accenta	nce Range
Chromium	ug/L	1.00	ND	0		- · - · ,		go



Client: E2 Consulting E	ngineers, Ind		roject Name: roject Numbe	Page 19 of 27 Printed 9/10/2010		
Interference Check S	Standard A					
Parameter Chromium Interference Check S	Unit ug/L Standard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check S	Unit ug/L Standard AB	DF 1.00	Result 49.7	Expected 50.0	Recovery 99.4	Acceptance Range 80 - 120
Parameter Chromium Serial Dilution	Unit ug/L	DF 1.00	Result 52.9	Expected 50.0	Recovery 106	Acceptance Range 80 - 120 Lab ID = 990497-002
Parameter Chromium	Unit ug/L	DF 25.0	Result 921	Expected 890	RPD 3.39	Acceptance Range 0 - 10



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990497-001 Antimony		ug/L	08/18	/2010 15:22	5.00	0.192	10.0	ND
Barium		ug/L	08/18	/2010 15:22	5.00	0.187	10.0	13.3
Molybdenum		ug/L	08/18	/2010 15:22	5.00	0.660	10.0	35.3
990497-002 Antimony		ug/L	08/18	/2010 15:29	5.00	0.192	10.0	ND
Barium		ug/L	08/18/2010 15:29		5.00	0.187	10.0	26.1
Boron		ug/L	08/18	/2010 15:29	5.00	4.70	200.	1290
Molybdenum		ug/L			5.00	0.660	10.0	30.4
Method Blank								
Parameter	Unit	DF	Result					
Barium	ug/L	1.00	ND					
Antimony	ug/L	1.00	ND					
Boron	ug/L	1.00	ND					
Molybdenum	ug/L	1.00	ND					
Duplicate				•			Lab ID =	990598-007
Parameter	Unit	DF	Result	Expected	F	RPD	Accepta	ance Range
Barium	ug/L	1.00	100	104.		3.42	0 - 20	J
Antimony	ug/L	1.00	ND	0		0	0 - 20	
Boron	ug/L	1.00	146	152		4.50	0 - 20	
Molybdenum	ug/L	1.00	ND	0		0	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ance Range
Barium	ug/L	1.00	50.0	50.0		100	90 - 110	ם י
Antimony	ug/L	1.00	48.8	50.0		97.6	90 - 110	כ
Boron	ug/L	1.00	49.1	50.0		98.1	90 - 110	כ
Molybdenum	ug/L	1.00	50.5	50.0		101	90 - 110	כ
Matrix Spike							Lab ID =	990598-007
Parameter	Unit	DF	Result	Expected/Ac	lded F	Recovery	Accepta	ance Range
Barium	ug/L	1.00	155	154.(50.0)		102	75 - 12	5
Antimony	ug/L	1.00	55.9	50.0(50.0)		112	75 - 12	5
Boron	ug/L	1.00	212	202(50.0)		119	75 - 12	5
Molybdenum	ug/L	1.00	60.6	50.0(50.0)		121	75 - 12	5



Client: E2 Consulting E	ngineers, Inc		roject Name: roject Number:	PG&E Topock Pro 408401.01.DM	pject	Page 21 of 27 Printed 9/10/2010
Matrix Spike Duplica	te					Lab ID = 990598-007
Parameter Barium Antimony	Unit ug/L ug/L	DF 1.00 1.00	Result 142. 50.4	Expected/Added 154.(50.0) 50.0(50.0)	Recovery 76.0 101	Acceptance Range 75 - 125 75 - 125
Boron	ug/L	1.00	191	202(50.0)	77.2	75 - 125
Molybdenum MRCCS - Secondary	ug/L /	1.00	54.9	50.0(50.0)	110	75 - 125
Parameter Barium Antimony Boron Molybdenum	Unit ug/L ug/L ug/L ug/L	DF 1.00 1.00 1.00 1.00	Result 50.5 50.1 50.7 52.2	Expected 50.0 50.0 50.0 50.0	Recovery 101 100 101 104	Acceptance Range 90 - 110 90 - 110 90 - 110 90 - 110
MRCVS - Primary Parameter Barium MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.6	Expected 50.0	Recovery 95.1	Acceptance Range 90 - 110
Parameter Barium MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.9	Expected 50.0	Recovery 97.8	Acceptance Range 90 - 110
Parameter Antimony MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.7	Expected 50.0	Recovery 95.3	Acceptance Range 90 - 110
Parameter Antimony Boron MRCVS - Primary	Unit ug/L ug/L	DF 1.00 1.00	Result 49.8 51.2	Expected 50.0 50.0	Recovery 99.6 102	Acceptance Range 90 - 110 90 - 110
Parameter Boron MRCVS - Primary	Unit ug/L	DF 1.00	Result 54.0	Expected 50.0	Recovery 108	Acceptance Range 90 - 110
Parameter Boron MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.7	Expected 50.0	Recovery 105	Acceptance Range 90 - 110
Parameter Molybdenum	Unit ug/L	DF 1.00	Result 54.0	Expected 50.0	Recovery 108	Acceptance Range 90 - 110



Client: E2 Consulting En	gineers, Inc.		roject Name: roject Number	PG&E Topock P : 408401.01.DM	roject	Page 22 of 27 Printed 9/10/2010
MRCVS - Primary						
Parameter Molybdenum MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.5	Expected 50.0	Recovery 98.9	Acceptance Range 90 - 110
Parameter Molybdenum Interference Check Si	Unit ug/L andard A	DF 1.00	Result 53.6	Expected 50.0	Recovery 107	Acceptance Range 90 - 110
Parameter Barium Interference Check Si	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Barium Antimony Interference Check S	Unit ug/L ug/L andard A	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Antimony Interference Check S	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Boron Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Boron Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Molybdenum Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Molybdenum Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Barium Interference Check S	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Barium	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range



Client: E2 Consulting En	gineers, Inc.		roject Name: roject Number:	PG&E Topock 408401.01.DM	•	Page 23 of 27 Printed 9/10/2010
Interference Check St	tandard AB					
Parameter Antimony Interference Check St	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Antimony Interference Check St	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Boron Interference Check St	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Boron Interference Check St	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Molybdenum Interference Check Si	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Molybdenum Serial Dilution	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range Lab ID = 990497-002
Parameter Barium Boron	Unit ug/L ug/L	DF 25.0 25.0	Result 26.6 1220	Expected 26.1 1290	RPD 1.90 5.41	Acceptance Range 0 - 10 0 - 10

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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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project Page 24 of 27

Project Number: 408401.01.DM Printed 9/10/2010

Metals by EPA 200.8, Total Parameter		Unit		081310A lyzed	DF	MDL	RL	Result
						,		
990497-001 Boron		ug/L	08/13	/2010 11:59	5.00	4.70	200.	952.
Method Blank								
Parameter	Unit	DF	Result					
Boron	ug/L	1.00	ND					
Duplicate							Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected		RPD	,	ance Range
Boron	ug/L	25.0	955	952.		0.283	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	1	Recovery		ance Range
Boron	ug/L	1.00	48.4	50.0		96.8	90 - 11	0
Matrix Spike							Lab ID = 990497-00	
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	Accepta	ance Range
Boron	ug/L	25.0	2220	2200(1250)		102	75 - 12	5
Matrix Spike Duplicate							Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	Accept	ance Range
Boron	ug/L	25.0	2170	2200(1250)		97.6	75 - 12	5
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected		Recovery	Accept	ance Range
Boron	ug/L	1.00	48.3	50.0		96.6	90 - 11	_
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected		Recovery	Accept	ance Range
Boron	ug/L	1.00	45.7	50.0		91.4	90 - 11	_
MRCVS - Primary	_							
Parameter	Unit	DF	Result	Expected		Recovery	Accept	ance Range
Boron	ug/L	1.00	47.2	50.0		94.4	90 - 11	_
Interference Check Sta	_							
Parameter	Unit	DF	Result	Expected		Recovery	Accent	ance Range
Boron	ug/L	1.00	ND	0		, 1000 voi y	7.00cpt	ando range
Interference Check Sta	-			-				
		DF	Donult	Evanatad		Dogovori	A	ongo Panca
Parameter	Unit	DF 1.00	Result ND	Expected 0		Recovery	Accept	ance Range
Boron	ug/L	1. ∪ ∪	ND	U				



Client: E2 Consulting En	gineers, Ind		oject Name: oject Numbe	PG&E Topodr: 408401.01.D	-		Printed 9	age 25 of 27 /10/2010
Interference Check S	tandard AB							
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	ance Range
Boron	ug/L	1.00	ND	0				
Interference Check S	tandard AB							
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	ance Range
Boron	ug/L	1.00	ND	0		•	·	J
Serial Dilution							Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected	RP	D	Accepta	ance Range
Boron	ug/L	25.0	933	952.	2.04		0 - 10	
Total Dissolved Solids became ter		Unit	Ana	08TDS10C	DF	MDL	8/9/2010 RL	Result
990497-001 Total Dissolved	Solids	mg/L	08/09	/2010	1.00	0.434	250.	4840
990497-002 Total Dissolved	Solids	mg/L	08/09)/2010	1.00	0.434	250.	5040
Method Blank								
Parameter	Unit	DF	Result					
Total Dissolved Solids	mg/L	1.00	ND					
Duplicate							Lab ID =	990499-008
Parameter	Unit	DF	Result	Expected	RP	D	Accepta	ance Range
Total Dissolved Solids	mg/L	1.00	1010	998.	1	.20	0 - 5	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	ance Range
Total Dissolved Solids	mg/L	1.00	495.	500.	9	9.0	90 - 110)
Lab Control Sample D	Ouplicate							
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	ance Range
Total Dissolved Solids	mg/L	1.00	498.	500.	9	9.6	90 - 110	כ



Client: E2 Consulting Engineers, Inc.

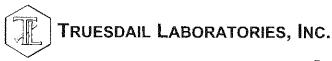
Project Name: PG&E Topock Project

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Project Number: 408401.01.DM

Printed 9/10/2010

Ammonia Nitrogen by SM	4500-NH	l3D	Batch	08NH3-E10A	9 1 5 3 1 5	, A (8/6/2010	
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990497-001 Ammonia as N		mg/L	08/06	/2010 1	1.00 0.00200		0.500	ND
990497-002 Ammonia as N		mg/L	08/06	3/2010 1	.00	0.00200	0.500	ND
Method Blank								
Parameter	Unit	DF	Result					
Ammonia as N	mg/L	1.00	ND					
Duplicate							Lab ID = !	990497-001
Parameter	Unit	DF	Result	Expected	RP	D	Accepta	nce Range
Ammonia as N	mg/L	1.00	ND	0	0		0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Ammonia as N	mg/L	1.00	10.5	10.0	1	05.	90 - 110	
Matrix Spike							Lab ID = 9	990497-001
Parameter	Unit	DF	Result	Expected/Adde	ed Re	covery	Accepta	nce Range
Ammonia as N	mg/L	1.00	5,80	6.00(6.00)	9	6.7	75 - 125	
Matrix Spike Duplicate							Lab ID =	990497-001
Parameter	Unit	DF	Result	Expected/Adde	ed Re	covery	Accepta	nce Range
Ammonia as N	mg/L	1.00	5.86	6.00(6.00)	9	7.7	75 - 125	
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Ammonia as N	mg/L	1.00	5.88	6.00	9	8.0	90 - 110	
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Ammonia as N	mg/L	1.00	5.91	6.00	9	8.5	90 - 110	



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Turbidity by SM 2130 B Batch 08TUC10E

Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990497-001 Turbidity		NTU	08/05/2010		1.00	0.0140	0.100	ND
990497-002 Turbidity		NTU	08/05	5/2010	1.00	0.0140	0.100	0.112
Method Blank							,	
Parameter	Unit	DF	Result					
Turbidity	NTU	1.00	ND					
Duplicate							Lab ID =	990497-002
Parameter	Unit	DF	Result	Expected	RPD		Acceptance Range	
Turbidity	NTU	1.00	0.114	0.112	1.77		0 - 20	
Lab Control Sample	e							
Parameter	Unit	DF	Result	Expected	Recovery		Acceptance Range	
Turbidity	NTU	1.00	7.96	8.00	99.5		90 - 110	_
Lab Control Sample	e Duplicate							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Turbidity	NTŲ	1.00	7.83	8.00	(97.9	90 - 110	•

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services



Total Dissolved Solids by SM 2540 C

Calculations

Batch: 08TDS10C Date Calculated: 8/11/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5ing? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	ÐF
BLANK	100	111.1485	111.1484	111.1484	0.0000	No	-0.0001	-1.0	25.0	ND	1
990466	50	68.7792	68.8161	68.8161	0.0000	No	0.0369	738.0	50.0	738.0	1
990489-1	100	105.3634	105.4209	105.4209	0.0000	No	0,0575	575.0	25.0	575.0	1
990489-2	100	105.6342	105.6934	105.6931	0.0003	No	0.0589	589.0	25.0	589.0	1
990497-1	10	49.3572	49.4056	49.4056	0.0000	No	0.0484	4840.0	250.0	4840.0	1
990497-2	10	50.5773	50.6277	50.6277	0.0000	No	0.0504	5040.0	250.0	5040.0	1
990498-1	20	72,8350	72.8985	72.8985	0.0000	Na	0.0635	3175.0	125.0	3175.0	1
990498-2	10	72.5438	72.5971	72.5971	0.0000	No	0.0533	5330.0	250.0	5330.0	1
990499-6	50	69.3236	69.3950	69.3948	0.0002	No	0.0712	1424.0	50.0	1424.0	1
990499-7	50	69.2465	69.2972	69.2972	0.0000	No	0.0507	1014.0	50.0	1014.0	1
990499-8	50	68.2342	68.2841	68.2841	0,0000	No	0.0499	998.0	50.0	998.0	1
990499-8D	50	72.9865	73.0371	73.0371	0.0000	No	0.0506	1012,0	50.0	1012.0	1
LCS	100	112.1740	112.2235	112.2235	0.0000	No	0.0495	495.0	25.0	495.0	1
LCSD	100	92.1062	92.156C	92.156	0.0000	No	0.0498	498.0	25.0	498.0	1
LCS1	100	115.2493	115.3008	115.3008	0.0000	No	0.0515	515.0	25.0	515.0	1
990505-1	50	76.5591	76.6045	76.6045	0.0000	No	0.0454	908.0	50.0	908.0	1
990507-1	20	47.9741	48.0540	48.054	0.0000	No	0.0799	3995.0	125.0	3995.0	1
990507-2	20	48.1873	48.2762	48.2762	0.0000	No	0.0889	4445.0	125.0	4445.0	1
990507-4	100	110.7179	110.750:2	110.7502	0.0000	No	0.0323	323.0	25.0	323.0	1
990507-8	100	114.3506	114.3833	114.3833	0.0000	No	0.0327	327.0	25.0	327.0	1
990507-11	100	102.7368	102,7925	102.7925	0.0000	No	0.0557	557.0	25.0	557.0	1
990566-3	100	66.0735	66.1235	66,1235	0.0000	No	0.0500	500.0	25.0	500.0	1
990566-3D	100	74.7522	74.8022	74.8022	0.0000	No	0.0500	500.0	25.0	500.0	1
LCS2	100	108.6960	108.7430	108.743	0.0000	No	0.0470	470.0	25.0	470.0	1

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right)x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 08TDS10C Date Calculated: 8/11/10

TDS / Calc	Calculated TDS (EC*0.65)	TDS/EC Ratio: 0.559	EC	Laboratory Number
		- Charles California - Californ		
0.87	845	0,57	1300	990466
0.95	604.5	0.62	930	990489-1
0,95	617.5	0.62	950	990489-2
5 0.99	4868.5	0.65	7490	990497-1
0.97	5174	D.63	7960	990497-2
5 0.89	3568.5	0.58	5490	990498-1
0.96	5544.5	0.62	8530	990498-2
1.10	1300	0.71	2000	990499-6
5 1.00	1012.05	0.65	1557	990499-7
0.97	1027	0.63	1580	990499-8
0.99	1027	0.64	1580	990499-8D
				LCS
				LCSD
				LCS1
1.00	908.05	0.65	1397	990505-1
1.16	3445	0.75	5300	990507-1
1.17	3783	0.76	5820	990507-2
0.93	347.1	0.60	534	990507-4
0.89	367.25	0.58	565	990507-8
0.92	602.55	0.60	927	990507-11
0.92	540.8	0.60	832	990566-3
0.92	540.8	0.60	832	990566-3D
	540.8	0.60	832	990566-3D



سيصخ

CHAIN OF CUSTODY RECORD

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

10 Days PAGE TURNAROUND TIME DATE 08/04/10 COC Number

6 [IM3Plant-WDR-268]

0 TOTAL NUMBER OF CONTAINERS ۴ COMMENTS 3 The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, Al, CMo, Ni, Fe, Zn 8 WARM | SAMPLE CONDITIONS NUMBER OF CONTAINERS YES 2 COOL SPECIAL REQUIREMENTS: CUSTODY SEALED Total Metals (200.7) Ct RECEIVED (300.0) F, NO3, NO2, SO4 10c (5310 C) ₹(0.00£) snoinA × Total Metals (200.7) See List Below (EHN-0024) einominA Date/ 0-4-/8 110 Datel 8-4-10 Time × × Date/ 60 Time 82.5 Turb (2130) \times 18.0 Date/ Time Date/ Time Date/ Time Charles Charles 10S (2540 c) Title 22 Metals List (200.7, 200.8, 245.1) × × × × 200 Cr(VI) (218.6) Lab Fillered × CHAIN OF CUSTODY SIGNATURE RECORD 1.015 300 タゲ × \times Company/ 《Agency c Company/ Agency Company/ Agency Company/ Agency Company/ DESCRIPTION 1.64 8.12 FAX 530-339-3303 の 088 88 7. TWE 08/04/10 08/04/10 Printed Name A 4WALSES 0813 Printed 155 Grand Ave Ste 1000 Printed Name Printed Name Printed Name/ DATE Oakland, CA 94612 PG&E Topock IM3 530-229-3303 CH2M HILL /E2 408401.01.DM SC-100B-WDR-268 SC-700B-WDR-268 TEMP 0800 8 SAMPLERS (SIGNATURE \mathcal{O} PROJECT NAME Signature (Relinquished) (Relinquished) P.O. NUMBER SAMPLE 1.D. (Received)∆ Signature ((Received) Signature Signature Sc. 200 B Signature COMPANY ADDRESS SC-100 B PHONE

087

(Relinquished)

Signature (Received)

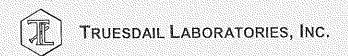
Company/ Agency

Printed Name

Agency

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
07/29/10	990410		5 .00	9.5	7:30	SB
07/30/10	990426	7.0 ·	` 2'00	9,5	15:00	BZ
08/05/10	990497-1	7.0	5,00	9.5	7:30	2.B
4	1 -2	1	4	₽.	7	7
08/05/10	990498-1	7.0	2.00	9,5	7:45	SB
08/05/10	J _	9,5	NA	NA	N/A	2B
	1 -2		<u> </u>		Ì	1
	-3					
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080510	990499-1	9.5	H/A	r\/A	N/A	SB
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Ą	₩ -i3	Ą	. 4	A	4	V
08/05/10	990500-1	9.5	4/4	ALA	4/4	<u>SB</u>
	1 -2	(1	
	-3					
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	-5					
	-6					
·	-7				\	
	-8	*	*	*	*	
4	4-9	7.0	5,∞	9,5	12:30	4





Sample Integrity & Analysis Discrepancy Form

Client:	: CH2M HILL	Lab # 990497
Date D	Delivered: <u>8/ 4</u> /10 Time: <u>衤1%3</u> ○ By: □Mail □4	eield Service □Client
1.	Was a Chain of Custody received and signed?	de de la la la la la la la la la la la la la
2.	Does Customer require an acknowledgement of the COC?	□Yes □No ÛNVA
3.	Are there any special requirements or notes on the COC?	□Yes □No □KVA
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No □M/A
5.	Were all requested analyses understood and acceptable?	☑Yes □No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? 4°C	La 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 □N/A
10.	Did sample labels correspond with the client ID's?	ÖYes □No □N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □ Truesdail □Client	□Yes □No 12M/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): ロ RUSH	dYes □No □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground □Sludge □Soil □Wipe □Paint □Solid	nd Water
16.	Comments:	
17.	Sample Check-In completed by Truesdail Log-In/Receiving	:-Kafarl Davi

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

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

August 30, 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-269 PROJECT, GROUNDWATER MONITORING, TLI NO.: 990634

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-269 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 August 11, 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 and Total Manganese were 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

TRUESDAIL LABORATORIES, INC.

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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.: 408401.01.DM

Laboratory No.: 990634

Date: August 30, 2010 Collected: August 11, 2010

Received: August 11, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavre v
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	Linda Saetern
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.: 408401.01.DM P.O. No.: 408401,01.DM

Established 1931



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

Date Received: August 11, 2010 Laboratory No.: 990634

Analytical Results Summary

Lab Sample ID Field ID	Field ID	Analysis Method	Extraction Method	extraction Method Sample Date	Sample Time	Parameter	Result	Units	RL
990634-001	SC-700B-WDR-269 E120.1	E120.1	NONE	8/11/2010	8:00	EC	7200	umhos/cm	2.00
990634-001	SC-700B-WDR-269	E200.8	NON	8/11/2010	8:00	Chromium	Q	ng/L	1.0
990634-001	SC-700B-WDR-269	E200.8	NONE	8/11/2010	8:00	Manganese	2.2	ng/L	1.0
990634-001	SC-700B-WDR-269	E218.6	LABFLT	8/11/2010	8:00	Chromium, hexavalent	Q	ug/L	0.20
990634-001	SC-700B-WDR-269	SM2130B	NONE	8/11/2010	8:00	Turbidity	Q	NTC	0.100
990634-001	SC-700B-WDR-269 SM2540C	SM2540C	NONE	8/11/2010	8:00	Total Dissolved Solids	2680	mg/L	250

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Note: The following "Significant Figures" rule has been applied to all results:

Results below 0.01ppm will have two (2) significant figures. Result above or equal to 0.01ppm 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 Avenue, Suite 800

Oakland, CA 94612

Attention:

Shawn Duffy

Project Name: PG&E Topock pROJECT

P.O. Number: 408401.01.DM

Project Number: 408401.01.DM

Laboratory No. 990634

Page 1 of 6

Printed 8/30/2010

Samples Received on 8/11/2010 8:45:00 PM

Field ID				Lab ID	Colle	ected	Matr	ix
SC-700B-WDR-269				990634-001	08/11/2	2010 08:00	Wat	er
Specific Conductivity - E	PA 120.1		Batch	08EC10D			8/13/2010)
Parameter		Unit	Ana	ilyzed	DF	MDL	RL	Result
990634-001 Specific Conduct	ivity	umhos/	/cm 08/13	3/2010	1.00	0.0380	2.00	7200
Method Blank								
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result ND					
Duplicate							Lab ID =	990634-001
Parameter Specific Conductivity Lab Control Sample	Unit umhos	DF 1.00	Result 7190	Expected 7200	RF (PD).139	Accepta 0 - 10	nce Range
Parameter Specific Conductivity Lab Control Sample Du	Unit umhos uplicate	DF 1.00	Result 702.	Expected 706.		ecovery 99.4	Accepta 90 - 110	nce Range
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 700.	Expected 706.		covery 9.2	Accepta 90 - 110	nce Range
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 705.	Expected 706.		covery 9.9	Acceptar 90 - 110	nce Range
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 995.	Expected 1000		covery 9.5	Acceptar 90 - 110	nce Range



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock pROJECT

Project Number: 408401.01.DM

Page 2 of 6 Printed 8/30/2010

Chrome VI by EPA 218.6

Batch 08CrH10E

Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990634-001 Chromium, Hexa	valent	ug/L	08/12	2/2010 08:47	1.05	0.0210	0.20	ND
Method Blank								
Parameter Chromium, Hexavalent Duplicate	Unit ug/L	DF 1.00	Result ND				lah ID =	990503-007
Parameter	Unit	DF	Result	Expected		RPD		
Chromium, Hexavalent Lab Control Sample	ug/L	1.05	2.56	2.40		6.45	0 - 20	ince Range
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.00	Result 4.59	Expected 5.00		Recovery 91.8	90 - 110	nce Range 990634-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 5.25	Result 5.41	Expected/Ad 5.61(5.25)	ded	Recovery 96.2	90 - 110	nce Range 990634-001
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 1.06	Result 1.16	Expected/Ad 1.14(1.06)	ded	Recovery 102	Accepta 90 - 110	nce Range
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 4.69	Expected 5.00		Recovery 93.8	Accepta 90 - 110	nce Range
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.73	Expected 10.0		Recovery 97.3	Accepta 95 - 105	nce Range
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.3	Expected 10.0		Recovery 103.	Accepta 95 - 105	nce Range
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 10.2	Expected 10.0		Recovery 102.	Accepta 95 - 105	nce Range



Client: E2 Consulting Engineers, Inc.

PG&E Topock pROJECT Project Name:

Project Number: 408401.01.DM

Page 3 of 6 Printed 8/30/2010

Metals by EPA 200.8, Tota	ı		Batch	082210A				
Parameter		Unit	Anal	yzed D	F	MDL	RL	Result
990634-001 Chromium		ug/L	08/22	/2010 13:24 1.0	00	0.0190	1.0	ND
Manganese		ug/L	08/22	/2010 13:24 1.	00	0.0420	1.0	2.2
Method Blank								
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID =	990736-001
Parameter	Unit	DF	Result	Expected	RPI	D	•	ance Range
Chromium	ug/L	5.00	ND	0	0		0 - 20	
Manganese	ug/L	5.00	1.16	1.17	0.	.602	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected		covery	•	ance Range
Chromium	ug/L	1.00	48.4	50.0		6.8	90 - 11	
Manganese	ug/L	1.00	49.0	50.0	9	8.0	90 - 11	
Matrix Spike							Lab ID =	990736-001
Parameter	Unit	DF	Result	Expected/Added	d Red	covery	•	ance Range
Chromium	ug/L	5.00	244	250.(250.)	9	7.7	75 - 12	
Manganese	ug/L	5.00	245	251(250.)	9	7.4	75 - 12	
Matrix Spike Duplicate							Lab ID =	990736-001
Parameter	Unit	DF	Result	Expected/Adde	d Re	covery		ance Range
Chromium	ug/L	5.00	248	250.(250.)	9	9.4	75 - 12	
Manganese	ug/L	5.00	251	251(250.)	1	00.	75 - 12	5
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	Re	covery		ance Range
Chromium	ug/L	1.00	47.1	50.0	9	4.2	90 - 11	
Manganese	ug/L	1.00	50.9	50.0	1	02	90 - 11	0
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected		covery	•	ance Range
Chromium	ug/L	1.00	52.0	50.0	1	04	90 - 11	0
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Re	covery	•	ance Range
Chromium	ug/L	1.00	51.3	50.0	1	03	90 - 11	0

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.

800



Client: E2 Consulting E	ngineers, In		Project Name: Project Numbe	PG&E Topock er: 408401.01.DN		Page 4 of 6 Printed 8/30/2010
MRCVS - Primary						
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.1	Expected 50.0	Recovery 100	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.1	Expected 50.0	Recovery 94.1	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.0	Expected 50.0	Recovery 102	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.9	Expected 50.0	Recovery 104	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.2	Expected 50.0	Recovery 92.4	Acceptance Range 90 - 110
Parameter Manganese Interference Check S	Unit ug/L tandard A	DF 1.00	Result 50.7	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Chromium Interference Check St	Unit ug/L tandard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese Interference Check St	Unit ug/L andard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check St.	Unit ug/L andard AB	DF 1.00	Result 47.8	Expected 50.0	Recovery 95.7	Acceptance Range 80 - 120
Parameter Chromium	Unit ug/L	DF 1.00	Result 50.5	Expected 50.0	Recovery 101	Acceptance Range 80 - 120



Client: E2 Consulting E	ngineers, In		Project Name: Project Numbe	PG&E Topo er: 408401.01.[ECT	P Printed 8	age 5 of 6 /30/2010
Interference Check S	Standard AB							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ince Range
Manganese	ug/L	1.00	48.4	50.0	!	96.9	80 - 120)
Interference Check S	Standard AB							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ince Range
Manganese	ug/L	1.00	51.7	50.0	,	103	80 - 120)
Total Dissolved Solids	by SM 2540) C	Batch	08TDS10F			8/16/2010)
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990634-001 Total Dissolved	Solids	mg/L	08/16	3/2010	1.00	0.434	250.	5680
Method Blank								
Parameter	Unit	DF	Result					
Total Dissolved Solids	mg/L	1.00	ND					
Duplicate							Lab ID ≃	990593-010
Parameter	Unit	DF	Result	Expected	RF	PD	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	848.	824	2	2.87	0 - 5	ŭ
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	500.	500.	-	100.	90 - 110	-
Lab Control Sample I	Duplicate							
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	501.	500.	1	100	90 - 110	•



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock pROJECT

Project Number: 408401.01.DM

Printed 8/30/2010

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Turbidity by SM 2130 B			Batch	08TUC10K			8/13/2010)
Parameter		Unit	Ana	ılyzed	DF	MDL	RL	Result
990634-001 Turbidity		NTU	08/13	3/2010	1.00	0.0140	0.100	ND
Method Blank								
Parameter Turbidity	Unit NTU	DF 1.00	Result ND					
Duplicate							Lab ID =	990634-001
Parameter Turbidity Lab Control Sample	Unit NTU	DF 1.00	Result ND	Expected 0	RF (Accepta 0 - 20	nce Range
Parameter Turbidity Lab Control Sample D	Unit NTU uplicate	DF 1.00	Result 7.88	Expected 8.00		ecovery 98.5	Accepta 90 - 110	nce Range
Parameter Turbidity	Unit NTU	DF 1.00	Result 7.80	Expected 8.00		covery 97.5	Accepta 90 - 110	nce Range

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

& ∕ Mona Nassimi

Manager, Analytical Services

Intention Blank



Total Dissolved Solids by SM 2540 C

Calculations

Batch: 08TDS10F Date Calculated: 8/18/10

Laboratory Number	Sample volume, ml	initial weight,g	1st Final welght,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
BLANK	100	108.6550	108.6552	108.6551	0.0001	No	0.0001	1.0	25.0	ND	1
990593-1	50	49.3629	49.4228	49.4224	0.0004	No	0.0595	1190.0	50.0	1190.0	1
990593-2	100	68.8048	68.8585	68.8583	0.0002	No	0.0535	535.0	25.0	535.0	1
990593-3	50	51,1362	51.1727	51.1726	0.0001	No	0.0364	728,0	50.0	728.0	1
990593-4	100	76.5723	76.6277	76.6273	0.0004	No	0.0550	550.0	25.0	550.0	1
990593-5	50	51.2681	51.3017	51.3013	0.0004	No	0.0332	664.0	50.0	664.0	1
990593-6	100	77.9590	78.0085	78.0085	0.0000	No	0.0495	495.0	25.0	495.0	1
990593-7	50	47.1988	47.2448	47.2444	0.0004	No	0.0456	912.0	50.0	912.0	11
990593-8	50	66.8215	66.8645	66.8645	0.0000	No	0.0430	860.0	50.0	860.0	1
990593-9	50	49,4683	49.5043	49.504	0.0003	No	0.0357	714.0	50.0	714.0	1
990593-10	50	66.0003	66.0415	66.0415	0.0000	No	0.0412	824.0	50.0	824.0	1
990593-10D	50	68.5580	68.6008	68.6004	0.0004	No	0.0424	848.0	50.0	848.0	1
LCS	100	74.7685	74.8188	74.8185	0.0003	No	0.0500	500.0	25.0	500.0	1
990599	450	109.2206	109.2240	109.2239	0.0001	No	0.0033	7,3	5.6	7.3	1
990634	10	47.6396	47.6968	47.6964	0.0004	No	0.0568	5680.0	250.0	5680.0	1
990662-1	100	68.2478	68.2793	68.2791	0.0002	No	0.0313	313.0	25,0	313.0	1
990662-2	100	69.5160	69.5476	69.5472	0.0004	No	0.0312	312.0	25.0	312.0	1
990682-1	50	68.2452	68,2934	68.293	0.0004	No	0.0478	956.0	50.0	956.0	1
990682-2	100	65.6397	65.6911	65.691	0.0001	No	0.0513	513.0	25.0	513.0	1
990682-3	50	68.1975	68.2366	68.2364	0.0002	No	0.0389	778.0	50.0	778.0	1
										,	
LCSD	100	75.4574	75.5077	75.5075	0.0002	No	0.0501	501.0	25.0	501.0	11

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 08TDS10F Date Calculated: 8/18/10

Laboratory Number	EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Cate TDS <1,3
990593-1	1644	0.72	1068.6	1.11
990593-2	890	0.60	578.5	0.92
990593-3	1142	0.64	742.3	0.98
990593-4	921	0.60	598.65	0.92
990593-5	1103	0.60	716.95	0.93
990593-6	900	0.55	585	0.85
990593-7	1447	0.63	940.55	0.97
990593-8	1570	0.55	1020.5	0.84
990593-9	1144	0.62	743.6	0.96
990593-10	1295	0,64	841.75	0.98
990593-10D	1295	0.65	841.75	1.01
LCS				
990599	14.2	0.52	9.23	0.79
990634	7200	0.79	4680	1.21
990662-1	477	0.66	310.05	1.01
990662-2	477	0.65	310.05	1.01
990682-1	1499	0.64	974.35	0.98
990682-2	813	0.63	528.45	0.97
990682-3	1238	0.63	804.7	0.97



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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-269]

10 Days PAGE 1 TURNAROUND TIME DATE 08/11/10 COC Number

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>												*				-	R		٢
COMPANY	E2	***************************************				•	_	_	<u></u>	_	_	_			_	_		COMMENTS	
PROJECT NAME	PG&E Topock						_			_									
PHONE	(530) 229-3303		× (530);	FAX (530) 339-3303					_							Si			
ADDRESS	155 Grand Ave Ste 1000 Oakland CA 94612	Ste 1000					NA SO	\(\frac{1}{2}\)	<u></u>	\		\		<u></u>		ABNIAT			
	Canialia, Co.	1	•			POJE	(1) (-)	_	_	_	_	_	<u></u>	_	_	NO			• • • • • • • • • • • • • • • • • • • •
P.O. NUMBER	408401.01.DM		TEAM	-	_	1 00c	Cuelor		(0818	<u></u>		_		_		DS AC			·····
SAMPLERS (SIGNATURE	VATURE	Section of the sectio			.98	Puos: S) s e a 37 (9:8	NS240 Coud		Ws) A		_			<u></u>	3EP	-עכ			
	A				(S) 9.	WIR	S) SO		יועפונו	_	<u></u>	_	<u> </u>	_	NUN				
SAMPLE I.D.	/ ;	DATE	TIME	DESCRIPTION	9	24	7/2	7		1	+	\int	\dagger	$\frac{1}{1}$	1				Т
SC-700B-WDR-269	JR-269	08/11/10	080	Water	×	×	×		×						က		Z	4	
	1, 2, 2	Antabeis		27 Ha		Cre	70,	70TAC	2/_	Trans					abla	TOTA	L NUMBE	TOTAL NUMBER OF CONTAINERS	
	0080	2080	7		. `•	\ _{\$}	700	500-	Ωn	6 .4									

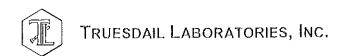
The first of the second of the	Bay	The second secon	
The state of the s		<i>y</i>	r

HS CH	CHAIN OF CUSTODY SIGNAT	GNATURE RECORD	01/1/10	SAMPLE CONDITIONS
Signature (Relinquished)	Printed /// Dir	Company l Agency $\mathcal{OM}\mathcal{I}$	Date/	RECEIVED COOL WARM F
Signature / Printed Signature / Printed (Received) Bonsforio Dayas Name 18. OHYAC	Printed Name /多・のが外の	Company/ Agency アムノ	Datel garies	CUSTODY SEALED YES 🔲 NO 📋
Signature Signature (Relinquished) / S. D. C. (1997)	Printed Name <i>B・DA対伝</i>	Company/ Tell	Date 6-7-6 SPECIAL REQUIREMENTS:	SPECIAL REQUIREMENTS:
Signature Sully Write	Printed Luda Name Luda	Company/ 77	Date 2/11/10 20195	
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number		Buffer Added (mL)	Final pH	Time Buffered	Initials
08/4/10	990616 - 6	9.5	A/A	N/A	N/A	SB
	-7 -8 -9	-		1	1	1
	-8	·	-			
	-9					
	-/0					
	-11					
9	4 -12	4	4		4	4
08/12/10	990634	7.0 9.5	5,00	9.5	7:30	SB
08/12/10	990635-1	9.5	4/4	a/La	4/4	AZ.
	-3		1-1-1		İ	
	-3			·		
	-4					
	-5		,			
	-6 -7 -8 -9		·			
	-7					
	-8					
	-9					. .
4	b -10	4	4	طد		E B
08/12/10	990636-1	. 9.5	NA	N/A	7/4	77
	(-2					
	-3					
	-4					
	-5					
	-6					
	-7					
	-8					
	-9			-, \} -		
- 4	V −10	y	<u> </u>		4	<u> </u>
03/2/10	990637-1	9,5	NA	N/A	N/A	SB
	-2					
ا ا	√ -3	4	4	4	₩	<u> </u>

 \mathcal{N}





Sample Integrity & Analysis Discrepancy Form

Client	: CH2M HILL	Lab#	90034
Date I	Delivered: 8/∐/10 Time: 20:45By: □Mail 中Field	Service C	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	ON/A
3.	Are there any special requirements or notes on the COC?	□Yes □No	ON/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No	MNA
5.	Were all requested analyses understood and acceptable?	□Wes □No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>ှ</u> ぐ <u>C</u>	©Yes □No	o □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	pryes □No	o □N/A
8.	Were sample custody seals intact?	□Yes □No	D □N/A
9.	Does the number of samples received agree with COC?	ØYes □No	o □N/A
10.	Did sample labels correspond with the client ID's?	QXes □No	O N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □ Truesdail □Client	□Yes □No	DINIA
12.	Were samples pH checked? pH =	□Yes □No	DANIA
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	DYes □No	DN/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): RUSH Std	DYes □No	o □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Solid □Wipe □Paint □Solid □Oth		ste Water TER
16.	Comments:		
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Kajar	M) avila

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

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

August 30, 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-270 PROJECT, GROUNDWATER

MONITORING, TLI NO.: 990736

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-270 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 August 17, 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 hefore disposal.

Total Chromium and Total Manganese were 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

OK.R.P. Iyer

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: One (1) Groundwater Sample

Project Name: PG&E Topock Project

Project No.: 408401.01.DM

Laboratory No.: 990736

Date: August 30, 2010 Collected: August 17, 2010

Received: August 17, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Sta v rev
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	Linda Saetern
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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.: 408401.01.DM P.O. No.: 408401.01.DM



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

Laboratory No.: 990736

Date Received: August 17, 2010

Analytical Results Summary

		Analysis	Extraction		Sample			,	
Lab Sample ID Field ID	Field ID	Method	Method	Sample Date	Time	Parameter	Result	Units	RL
990736-001	SC-700B-WDR-270 E120.1	E120.1	NONE	8/17/2010	8:00	EC	7400	umhos/cm	2.00
990736-001	SC-700B-WDR-270	E200.8	NONE	8/17/2010	8:00	Chromium	2	ug/L	1.0
990736-001	SC-700B-WDR-270	E200.8	NONE	8/17/2010	8:00	Manganese	1.2	ug/L	1.0
990736-001	SC-700B-WDR-270	E218.6	LABFLT	8/17/2010	8:00	Chromium, hexavalent	Ω	ug/L	0.20
990736-001	SC-700B-WDR-270	SM2130B	NONE	8/17/2010	8:00	Turbidity	S	NTU	0.100
990736-001	SC-700B-WDR-270 SM2540C	SM2540C	NONE	8/17/2010	8:00	Total Dissolved Solids	4100	mg/L	250

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Note: The following "Significant Figures" rule has been applied to all results:

Results below 0.01ppm will have two (2) significant figures. Result above or equal to 0.01ppm 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 Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401.01.DM

Project Number: 408401.01.DM

Laboratory No. 990736

Page 1 of 6

Printed 8/30/2010

Samples Received on 8/17/2010 9:30:00 PM

Field ID				Lab ID	Colle	ected	Matr	ix
SC-700B-WDR-270				990736-001	08/17/2	2010 08:00	Wat	er
Specific Conductivity - El	PA 120.1		Batch	08ALK10E			8/20/2010)
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990736-001 Specific Conducti	vity	umhos/	cm 08/20	/2010	1.00	0.0380	2.00	7400
Method Blank								
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result ND				Lab ID =	990736-001
Duplicate Parameter Specific Conductivity Lab Control Sample	Unit umhos	DF 1.00	Result 7390	Expected 7400		PD 0.135	Accepta 0 - 10	ance Range
Parameter Specific Conductivity Lab Control Sample Du	Unit umhos uplicate	DF 1.00	Result 698.	Expected 706.		ecovery 98.9	Accepta 90 - 110	ance Range)
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 701.	Expected 706.		ecovery 99.3	Accepta 90 - 110	ance Range)
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 705.	Expected 706.		ecovery 99.9	Accepta 90 - 110	ance Range)
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 995.	Expected 1000		ecovery 99.5	Accepta 90 - 110	ance Range)



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 2 of 6 Printed 8/30/2010

Chrome VI by EPA 218.6

Batch 08CrH10J

Chrome VI by EPA 210.0			- • • • • • • • • • • • • • • • • • • •				
Parameter		Unit	Anal	yzed	DF MDL	RL	Result
990736-001 Chromium, Hexa	valent	ug/L	08/18	/2010 08:24 1	1.05 0.0210	0.20	ND
Method Blank							
Parameter Chromium, Hexavalent Duplicate	Unit ug/L	DF 1.00	Result ND			Lab ID =	990504-006
Parameter Chromium, Hexavalent Lab Control Sample	Unit ug/L	DF 1.05	Result 4.63	Expected 4.60	RPD 0.650	0 - 20	ance Range
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.00	Result 5.23	Expected 5.00	Recovery 105	90 - 1 1	ance Range 0 : 990736-001
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 1.06	Result 1.25	Expected/Add 1.20(1.06)	ed Recovery 105.	Accept 90 - 11	ance Range 0
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 5.28	Expected 5.00	Recovery 106	90 - 11	
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.2	Expected 10.0	Recovery 102.	95 - 10	
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.5	Expected 10.0	Recovery 105.	95 - 10	
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 9,67	Expected 10.0	Recovery 96.7	Accept 95 - 10	ance Range 5



Client: E2 Consulting Engineers, Inc.

Project Name:

PG&E Topock Project

Project Number: 408401.01.DM

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Metals by EPA 200.8, Total

Batch 082210A

Metals by EPA 200.8, Total			Daton	00221071		MDI	Di	Result
Parameter		Unit	Analy		DF	MDL.	RL	
990736-001 Chromium		ug/L	08/22/	2010 1=	00.	0.0950	1.0	ND
Manganese		ug/L	08/22/	2010 17:23 5	5.00	0.210	1.0	1.2
Method Blank								
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND				Lab ID =	990736-001
Duplicate						_		
Parameter	Unit	DF	Result	Expected	F	RPD	Accept 0 - 20	ance Range
Chromium	ug/L	5.00	ND	0		0	0 - 20	
Manganese	ug/L	5.00	1.16	1.17		0.602	0 - 20	
Lab Control Sample								Laura Dango
Parameter	Unit	DF	Result	Expected	F	Recovery	Accept 90 - 11	tance Range
Chromium	ug/L	1.00	48.4	50.0		96.8	90 - 11	
Manganese	ug/L	1.00	49.0	50.0		98.0		= 990736-001
Matrix Spike								
Parameter	Unit	DF	Result	Expected/Add	led l	Recovery	Accep 75 - 12	tance Range
Chromium	ug/L	5.00	244	250.(250.)		97.7	75 - 12 75 - 12	
Manganese	ug/L	5.00	245	251(250.)		97.4		25 = 990736-001
Matrix Spike Duplicate								
Parameter	Unit	DF	Result	Expected/Add	ded	Recovery	•	tance Range
Chromium	ug/L	5.00	248	250.(250.)		99.4	75 - 11	
Manganese	ug/L	5.00	251	251(250.)		100.	75 - 1	20
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected		Recovery		tance Range
Chromium	ug/L	1.00	47.1	50.0		94.2	90 - 1	
Manganese	ug/L	1.00	50.9	50.0		102	90 - 1	10
MRCVS - Primary								_
Parameter	Unit	DF	Result	Expected		Recovery	•	otance Rang
Chromium	ug/L	1.00	52.0	50.0		104	90 - 1	10
MRCVS - Primary	-							
•	Unit	DF	Result	Expected		Recovery		ptance Rang
Parameter Chromium	ug/L	1.00	51.3	50.0		103	90 - 1	10
Offormuni	5,							



Client: E2 Consulting En	gineers, Inc.		roject Name: roject Number:	PG&E Topock Pr 408401.01.DM	oject	Page 4 of 6 Printed 8/30/2010
MRCVS - Primary						
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.1	Expected 50.0	Recovery 100	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.1	Expected 50.0	Recovery 94.1	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.0	Expected 50.0	Recovery 102	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.9	Expected 50.0	Recovery 104	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.2	Expected 50.0	Recovery 92.4	Acceptance Range 90 - 110
Parameter Manganese Interference Check St	Unit ug/L andard A	DF 1.00	Result 50.7	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese Interference Check Si	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese Interference Check Si	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check Si	Unit ug/L	DF 1.00	Result 47.8	Expected 50.0	Recovery 95.7	Acceptance Range 80 - 120
Parameter Chromium	Unit ug/L	DF 1.00	Result 50.5	Expected 50.0	Recovery 101	Acceptance Range 80 - 120



Client: E2 Consulting Er	ngineers, Inc		roject Name: roject Numbe	PG&E Topod r: 408401.01.D	•		Printed 8/	age 5 of 6 30/2010
Interference Check S	Standard AB							
Parameter	Unit	DF	Result	Expected		ecovery	•	nce Range
Manganese	ug/L	1.00	48.4	50.0	(96.9	80 - 120	
Interference Check S	Standard AB							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Manganese	ug/L	1.00	51.7	50.0	•	103	80 - 120	
Total Dissolved Solids	by SM 2540) C	Batch	08TDS10G			8/23/2010	
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990736-001 Total Dissolved	Solids	mg/L	08/23	/2010	1.00	0.434	250.	4100
Method Blank								
Parameter	Unit	DF	Result					
Total Dissolved Solids	mg/L	1.00	ND					
Duplicate							Lab ID =	990794-002
Parameter	Unit	DF	Result	Expected	RF	PD	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	628.	626.	(0.319	0 - 5	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	494.	500.	(98.8	90 - 110	
Lab Control Sample	Duplicate							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	476.	500.		95.2	90 - 110	



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Printed 8/30/2010

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Turbidity by SM 2130 B			Batch	08TUC10M			8/18/2010)
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990736-001 Turbidity		NTU	08/18	3/2010	1.00	0.0140	0,100	ND
Method Blank								
Parameter	Unit	DF	Result					
Turbidity	ŊTU	1.00	ND					
Duplicate							Lab ID =	990736-001
Parameter	Unit	DF	Result	Expected	RF	PD	Accepta	nce Range
Turbidity	NTU	1.00	ND	0	(0	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Turbidity	NTU	1.00	7.86	8.00	Ç	98.2	90 - 110	
Lab Control Sample D	uplicate							
Parameter	Unit	ÐΕ	Result	Expected	Re	ecovery	Accepta	nce Range
Turbidity	NTU	1.00	7.80	8.00	Ç	97.5	90 - 110	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

√ Mona Nassimi

Manager, Analytical Services



Total Dissolved Solids by SM 2540 C

Calculations

Batch: 08TDS10G

Date Calculated: 8/26/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final welght,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL,	Reported Value, ppm	D F
BLANK	100	109.4448	109.4449	109.4448	0.0001	No	0.0000	0.0	25.0	ND	1
990750	1	51.1599	51.3730	51.373	0.0000	No	0.2131	213100.0	2500.0	213100.0	1
990736	10	49.3576	49.3990	49.3986	0.0004	No	0.0410	4100. 0	250.0	4100.0	1
990774-1	50	69.5857	69.6286	69.6286	0.0000	No	0.0429	858.0	50.0	858.0	1
990774-2	50	70,3267	70.3833	70.3833	0.0000	No	0.0566	1132.0	50.0	1132.0	1
990774-3	50	67.8281	67.9115	67.9115	0.0000	No	0.0834	1668.0	50.0	1668.0	1
990774-4	50	74.7231	74.8037	74.8034	0.0003	No	0.0803	1606.0	50.0	1606.0	1
990774-5	50	65.8370	65.9941	65.9941	0.0000	No	0.1571	3142.0	50.0	3142.0	11
990774-6	50	68.7781	68.8316	68.8316	0.0000	No	0.0535	1070.0	50.0	1070.0	1
990774-7	- 50	67.9280	67.9875	67.9871	0.0004	No	0. 0 591	1182.0	50.0	1182.0	1
990774-8	50	73.0342	73.094	73.094	0,0000	No	0.0598	1196.0	50.0	1196.0	11
990750D	1	50.2581	50.4807	50.4807	0.0000	No	0.2226	222600.0	2500.0	222600.0	1
LCS	100	112.9019	112،9517	112.9513	0.0004	No	0.0494	494.0	25.0	494.0	1
990774-9	50	72.5445	72.6038	72.6038	0.0000	No	0.0593	1186.0	50.0	1186.0	1
990774-10	50	75.5482	75.6046	75.6044	0.0002	No	0.0562	1124.0	50.0	1124.0	1
990774-11	50	68.7062	68.8159	68.8159	0.0000	No	0.1097	2194.0	50.0	2194.0	11
990774-12	50	67.8890	68.0249	68.0249	0,0000	No	0.1359	2718.0	50.0	2718.0	11
990774-13	50	76.2255	76.2612	76.2609	0.0003	No	0.0354	708.0	50.0	708.0	1
990776-1	50	67.8151	67.8693	67.8693	0.0000	No	0.0542	1084.0	50.0	1084.0	1
990776-2	50	72.4808	72.5336	72.5336	0.0000	No	0.0528	1056.0	50.0	1056.0	1
990776-3	50	68,4773	68.5302	68.5297	0.0005	No	0.0524	1048.0	50,0	1048.0	1
990794-1	50	70.9054	70.9579	70.9577	0.0002	No	0.0523	1046.0	50.0	1046.0	1
990794-2	50	78.3927	78.4244	78.424	0.0004	No	0.0313	626.0	50.0	626.0	1
990794-2D	50	72.8361	72.8680	72.8675	0.0005	No	0.0314	628.0	50.0	628.0	1 _
LCSD	100	112.3641	112.4120	112.4117	0.0003	No	0.0476	476.0	25.0	476.0	11

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit) .

Aralyst Printed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 08TDS10G Date Calculated: 8/26/10

Laboratory Number	EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
990750	N/A	#VALUE!	#VALUE!	#VALUE!
990736	7400	0.55	4810	0.85
990774-1	1212	0.71	787.8	1.09
990774-2	1659	0.68	1078.35	1.05
990774-3	2450	0.68	1592.5	1.05
990774-4	2330	0.69	1514.5	1.06
990774-5	4400	0.71	2860	1.10
990774-6	1662	0.64	1080.3	0.99
990774-7	1773	0.67	1152,45	1.03
990774-8	1780	0.67	1157	1.03
990750D	N/A	#VALUE!	#VALUE!	#VALUE!
LCS				
990774-9	1770	0.67	1150.5	1.03
990774-10	1700	0.66	1105	1.02
990774-11	3160	0.69	2054	1.07
990774-12	3760	0.72	2444	1,11
990774-13	1130	0.63	734.5	0.96
990776-1	1620	0.67	1053	1.03
990776-2	1630	0.65	1059.5	1.00
990776-3	1570	0.67	1020.5	1.03
990794-1	1565	0.67	1017.25	1.03
990794-2	1004	0.62	652.6	0.96
990794-2D	1004	0.63	652.6	0.96





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-270]

COC Number

10 Days

PAGE 1

TURNAROUND TIME

VMACMO	6							_	_	_	_	_	_	_	_	_	_			
							_	_	_	_	_	_	_	_	_	_	_		COMMENTS	
ROJECT NAME		PG&E Topock			· · · ·			_		<u></u>	\			•	,					****
HONE	(230)	(530) 229-3303		FAX (530) 339-3303	339-3303				<u></u>			Rec		01/11/80	01/	\ \ \ \	\	S		
DDRESS	155 GI	155 Grand Ave Ste 1000	Ste 1000				_	U _i	4	_		1		。 (2) (3) (4)	ッ り、		_	NEK		
	Oaklar	Oakland, CA 94612	1612				De	W 50	1021	<u> </u>		_		_	_	<u> </u>		NTA,		
O. NUMBER	ı	408401.01.DM	***************************************	TEAM	-	- 10	100 V	Elance (/:2		(UE)	/2					\)FCO	OOJO		
MPLERS	SAMPLERS (SIGNATURE				Annual Control	γ (9 ·θ	s _{leja}	Condi	NSENO	ZWS) K				<u></u>	_		SER			
u ida	l c		DATE	Ţ	DESCRIPTION	CIG (SI)	N IBOT Specifi A	8) 201 (8) 201	18) SQT	JibidiuT				\	/		WNN			
SC-700E	SC-700B-WDR-270		08/17/10	10	Water	×	×	×		×							6		7=40	
- \		, , ,		70	20		2	,	1812C	1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Just	7			<u>600</u>	(Ba	TOTAL IN	FOTAL NUMBER OF CONTAINERS	
	2611	をとれると		42	ļ	ζ	, (,	,		-				j				

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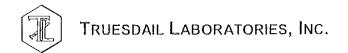
83.9

0800

SAMPLE CONDITIONS	RECEIVED COOL & WARM O Y CF	CUSTODY SEALED YES NO	SPECIAL REQUIREMENTS:		<u>o</u> 1	
8-17-10	Date/ Time /	Datel & -17-10 Time	Date(8 - 17 - 10	Date/ TimeA11C 1 7 2010	Date 13:30	Date/ Time
SIGNATURE RECORD	Company/ Agency	Companyl The Agency	Agency - K - F	Company/ 7 L T	Company/ Agency	Company/ Agency
CHAIN OF CUSTODY SIGNATURE RECORD	Printed MDE	Divised Rahad	A. V. Winted A. C. L.	Printed Kunfu	Printed Name	Printed Name
	Signature (Relinquished)	Signature X conce	Signature (Relinquished)	Signature Shullen wing	Signature (Relinguished)	Signature (Received)

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered.	Initials
	990661-1	9.5	N-A-	MA	MA-	ALI
0117/16			(7
	-2					
	-3					
	1 -4	-				
	1 - 7					
	-0					
	1 -/					
	990662-1	· ·	·			
<u> </u>	-2	- ,			/	\mathcal{V}
08/16/10	990680-1	9.5	4)/A	N/A	4/21	2P
	1-2		(1	
	-3					
		·				
	-5	,	-			
	-6					
1	4 -8	1		· J	4	4
08/16/10	996681-1	9.5	N/A	NA	N/A	SB
ſ	1 -2	.				•
	-3					
	-4				·	
	-5					
1	V -6	4	P	4	F.	1
		9.5	A/A	NA	WA	SB
08/16/10	990683-1	9.5	NA	15/A	N/A	SB
(1 -2	,				
	-3					
	-4			,	,	
4	-5		1		6	طد
	990736	7.0	5.00	9.5	7:30	SB
						8
						<i>/</i> :





Sample Integrity & Analysis Discrepancy Form

Client	t: CH2M HILL	Lab #	99	0736
Date I	Delivered: 8/17/10 Time: 21:30By: DMail DField	Servic	е 🗆 (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	DANIA
3.	Are there any special requirements or notes on the COC?	□Yes	□No	ONIA,
4.	If a letter was sent with the COC, does it match the COC?	□Yes	□No	CINIA
5.	Were all requested analyses understood and acceptable?	ØYes_	□No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? 4°C	QYes	□No	□ <i>N/A</i>
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	₩es	□No	□N/A
8.	Were sample custody seals intact?	□Yes	□No	□N/A
9.	Does the number of samples received agree with COC?	□Xes	□No	□ <i>N</i> /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	OMA
12.	Were samples pH checked? pH =	□Yes	[.] □No	dNIA
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	Ź Yes	□No	□N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Solid □Other	er [er_ <i>U/</i>		Water ER
16.	Comments:	$\overline{\mathcal{O}}$		An .
17.	Sample Check-In completed by Truesdai l Log-In/Receiving:	Sag	ail	1)0016

Established 1931



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

September 13, 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-271A PROJECT, GROUNDWATER MONITORING, TLI NO.: 990809

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-271A project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 August 23, 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 and Total Manganese were 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. Syl

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.: 408401.01.DM

Laboratory No.: 990809

Date: September 13, 2010 Collected: August 23, 2010 Received: August 23, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	Linda Saetern
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

EXCELLENCE IN INDEPENDENT TESTING

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(714) 730-6239 · FAX (714) 730-6462 · www.truesdail.com

Date Received: August 23, 2010 Laboratory No.: 990809

155 Grand Ave. Suite 1000 Oakland, CA 94612 Attention: Shawn Duffy

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project Project No.: 408401.01.DM

P.O. No.: 408401.01.DM

Analytical Results Summary

Lab Sample ID Field ID		Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
990809-001	SC-700B-WDR-271A E120.1	E120.1	NONE	8/23/2010	13:20	EC	7720	nmhos/cm	2.00
990809-001	SC-700B-WDR-271A E200.8	E200.8	NONE	8/23/2010	13:20	Chromium	QN	ng/L	1.0
990809-001	SC-700B-WDR-271A E200.8	=200.8	NONE	8/23/2010	13:20	Manganese	3.2	ng/L	0.7
990809-001	SC-700B-WDR-271A E218.6	≡218.6	LABFLT	8/23/2010	13:20	Chromium, hexavalent	Q	ng/L	0.20
990809-001	SC-700B-WDR-271A SM2130B	SM2130B	NON	8/23/2010	13:20	Turbidity	Q	OLN N	0.100
990809-001	SC-700B-WDR-271A SM2540C	SM2540C	NONE	8/23/2010	13:20	Total Dissolved Solids	5070	mg/L	250

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Result above or equal to 0.01ppm 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: Results below 0.01ppm will have two (2) significant figures.

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401.01.DM Project Number: 408401.01.DM

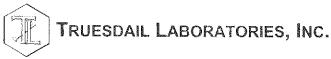
Laboratory No. 990809

Page 1 of 6

Printed 9/13/2010

Samples Received on 8/23/2010 9:30:00 PM

Field ID				Lab ID	Coll	ected	Matr	ix
SC-700B-WDR-271A				990809-001	08/23/	2010 13:20	Wat	er
Specific Conductivity - E Parameter	PA 120.1	Unit		n 08ALK10F alyzed	DF	MDL	8/25/2010 RL) Result
990809-001 Specific Conducti	ivity	umhos/c	m 08/2	5/2010	1.00	0.0380	2.00	7720
Method Blank								
Parameter Specific Conductivity Duplicate	Unit umhos	DF 1.00	Result ND				I k 10	000000 004
Parameter	Unit	DF	Desuit	Turn a stand	_	DD	•	990809-001
Specific Conductivity	umhos	1.00	Result 7730	Expected 7720		PD 0.129	0 - 10	nce Range
Lab Control Sample								
Parameter Specific Conductivity Lab Control Sample Do	Unit umhos uplicate	DF 1.00	Result 698.	Expected 706.		ecovery 98.9	Accepta 90 - 110	nce Range
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 700.	Expected 706.		ecovery 99.2	Accepta 90 - 110	ince Range
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 717.	Expected 706.	R	ecovery 102	Accepta 90 - 110	nce Range
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 1000	Expected 1000	Ŕ	ecovery 100.	Accepta 90 - 110	nce Range



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 2 of 6 Printed 9/13/2010

Chrome VI by EPA 218.6			Batch	08CrH10U				
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990809-001 Chromium, Hexa	valent	ug/L	08/24	/2010 09:20	1.05	0.0210	0.20	ND
Method Blank								
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result ND					
Duplicate							Lab ID =	990658-004
Parameter Chromium, Hexavalent Lab Control Sample	Unit ug/L	DF 1.05	Result 8.62	Expected 8.45	R	PD 1.96	Accepta 0 - 20	ance Range
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.00	Result 5.36	Expected 5.00	R	ecovery 107	90 - 110	ance Range) 990809-001
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 1.06	Result 1.00	Expected/Adde 1.06(1.06)		ecovery 94.5	Accepta 90 - 110	ance Range)
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 5.27	Expected 5.00	R	ecovery 105	Accepta 90 - 110	ance Range)
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.64	Expected 10.0		ecovery 96.4	Accepta 95 - 108	ance Range
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.5	Expected 10.0	R	ecovery 105	Accepta 95 - 108	ance Range
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 9.60	Expected 10.0		ecovery 96.0	Accepta 95 - 10	ance Range



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990809-001 Chromium		ug/L	09/03	/2010 12:31 1	.00	0.0190	1.0	ND
Manganese		ug/L	09/03	/2010 12:31 1	.00	0.0420	1.0	3.2
Method Blank								
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID =	990953-001
Parameter	Unit	DF	Result	Expected	F	RPD	Accepta	ance Range
Chromium	ug/L	1.00	ND	0		0	0 - 20	_
Manganese	ug/L	1.00	11.6	11.8		1.45	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ance Range
Chromium	ug/L	1.00	49.0	50.0		98.0	90 - 11	_
Manganese	ug/L	1.00	48.9	50.0		97.7	90 - 11	0
Matrix Spike							Lab ID =	990953-001
Parameter	Unit	DF	Result	Expected/Adde	ed F	Recovery	Accepta	ance Range
Chromium	ug/L	1,00	45.0	50.0(50.0)		89.9	75 - 12	_
Manganese	ug/L	1.00	46.2	61.8(50.0)		68.9	75 - 12	5
Matrix Spike Duplicate							Lab ID =	990953-001
Parameter	Unit	DF	Result	Expected/Adde	ed F	Recovery	Accepta	ance Range
Chromium	ug/L	1.00	45.1	50.0(50.0)		90.3	75 - 12	5
Manganese	ug/L	1.00	47.8	61.8(50.0)		72.1	75 - 12	5
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ance Range
Chromium	ug/L	1.00	48.2	50.0		96.4	90 - 11	0
Manganese	ug/L	1.00	51.7	50.0		103	90 - 11	0
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ance Range
Chromium	ug/L	1.00	46.0	50.0		92.0	90 - 11	_
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ance Range
Chromium	ug/L	1.00	46.9	50.0		93.8	90 - 11	_

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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Client: E2 Consulting En	gineers, Inc.		oject Name: oject Number	PG&E Topock F : 408401.01.DM	Project	Page 4 of 6 Printed 9/13/2010
MRCVS - Primary						
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 45.8	Expected 50.0	Recovery 91.6	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.7	Expected 50.0	Recovery 95.5	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.7	Expected 50.0	Recovery 97.4	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.8	Expected 50.0	Recovery 95.6	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.4	Expected 50.0	Recovery 98.9	Acceptance Range 90 - 110
Parameter Manganese Interference Check St	Unit ug/L andard A	DF 1.00	Result 46.5	Expected 50.0	Recovery 93.0	Acceptance Range 90 - 110
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese Interference Check St	Unit ug/L andard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check St	Unit ug/L andard AB	DF 1.00	Result 47.4	Expected 50.0	Recovery 94.8	Acceptance Range 80 - 120
Parameter Chromium	Unit ug/L	DF 1.00	Result 45.4	Expected 50.0	Recovery 90.8	Acceptance Range 80 - 120

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.

010



Client: E2 Consulting E	ngineers, Ind		roject Name: roject Numbe	PG&E Topoder: 408401.01.D	•	Page 5 of 6 Printed 9/13/2010
Interference Check S	Standard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	52.4	50.0	105	80 - 120
Interference Check S	Standard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	46.4	50.0	92.9	80 - 120
Total Dissolved Solids Parameter	by SM 2540	O C Unit		08TDS10I lyzed	DF MDL	8/26/2010 RL Result
990809-001 Total Dissolved	Solids	mg/L	08/26	/2010	1.00 0.434	250. 5070
Method Blank						
Parameter	Unit	DF	Result			
Total Dissolved Solids	mg/L	1.00	ND			
Duplicate						Lab ID = 990855-001
Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	2480	2470	0.202	0 - 5
Lab Control Sample						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	489.	500.	97.8	90 - 110
Lab Control Sample	Duplicate					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	503.	500.	101	90 - 110



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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012

Turbidity by SM 2130 B Batch 08TUC100 8/24/2010 Parameter Unit DF MDL Analyzed RL Result NTU 990809-001 Turbidity 08/24/2010 1.00 0.0140 0.100 ND Method Blank Parameter DF Unit Result **Turbidity** NTU ND 1.00 Duplicate Lab ID = 990809-001 Parameter Unit DF Result Expected **RPD** Acceptance Range Turbidity NTU 1.00 ND 0 0 0 - 20Lab Control Sample Parameter Unit DF Result Expected Recovery Acceptance Range **Turbidity** NTU 1,00 7.59 8.00 94.9 90 - 110 Lab Control Sample Duplicate Parameter Unit DF Expected Result Recovery Acceptance Range Turbidity NTU 1.00 7.88 8.00 98.5 90 - 110

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services





Total Dissolved Solids by SM 2540 C

Calculations

Batch: 08TDS101 Date Calculated: 8/30/10

Laboratory Number	Sample volume, mi	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
BLANK	100	102.8557	102.8560	102.8557	0.0003	No	0.0000	0.0	25.0	ND	1
990799-2	200	104.2486	104.2645	104.2643	0.0002	No	0.0157	78.5	12.5	78.5	1
990799-3	100	104.8983	104.9127	104.9125	0.0002	No	0.0142	142.0	25.0	142.0	1
990809	10	51.1361	51.1868	51,1868	0.0000	Nο	0.0507	5070.0	250.0	5070.0	1
990852-1	50	76.5708	76,6294	76.6290	0.0004	No	0.0582	1164.0	50.0	1164,0	1
990852-2	50	68.1964	68.2469	68.2466	0.0003	No	0.0502	1004.0	50.0	1004.0	1
990852-3	50	68.2418	68.3069	68,3066	0.0003	No	0.0648	1296.0	50.0	1296.0	1
990852-4	50	73.8401	73.8797	73.8795	0.0002	No	0.0394	788.0	50.0	788.0	1
990853-5	50	65.6388	65,6777	65.6777	0.0000	No	0.0389	778.0	50.0	778.0	1
990854	50	68.2938	68.3628	68.3624	0.0004	No	0.0686	1372.0	50.0	1372.0	1
990855-1	20	50.6251	50.6749	50.6745	0.0004	No	0.0494	2470.0	125.0	2470.0	1
990855-1D	20	51.5115	51.5610	51.561	0.0000	No	0.0495	2475.0	125.0	2475.0	1
LCS	100	108.6957	108.7449	108.7446	0.0003	No	0.0489	489.0	25.0	489.0	1
990855-2	50	74.7673	74.7997	74,7994	0.0003	No	0.0321	642.0	50.0	642.0	1
990856-3	50	68.2484	68.2981	68,2981	0.0000 .	No	0.0497	994.0	50.0	994.0	1
990856-4	50	66.0715	66.1232	66.123	0.0002	No	0.0515	1030,0	50.0	1030.0	1
990856-7	50	74.7481	74.8044	74.804	0.0004	No	0.0559	1118.0	50.0	1118.0	1
990856-9	100	110.6355	110.6709	110,6707	0.0002	No	0.0352	352.0	25,0	352.0	1
				,							
LCSD	100	111.1920	111.2427	111.2423	0.0004	No	0.0503	503.0	25.0	503.0	1

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 08TDS10I Date Calculated: 8/30/10

Laboratory Number	EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Caic TDS <1.3
990799-2	153	0.51	99.45	0.79
990799-3	265	0.54	172.25	0.82
990809	7720	0.66	5018	1.01
990852-1	1730	0.67	1124.5	1.04
990852-2	1490	0.67	968.5	1.04
990852-3	1890	0.69	1228.5	1.05
990852-4	1180	0.67	767	1.03
990853-5	1214	0.64	789.1	0.99
990854	1980	0.69	1287	1.07
990855-1	3440	0.72	2236	1.10
990855-1D	3440	0.72	2236	1,11
LCS				
990855-2	1061	0.61	689.65	0.93
990856-3	1515	0.66	984.75	1.01
990856-4	1525	0.68	991.25	1.04
990856-7	1680	0.67	1092	1.02
990856-9	516	0.68	335.4	1.05



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

[IM3Plant-WDR-271A] 990 800 CHAIN OF CUSTODY RECORD

PAGE 1 TURNAROUND TIME DATE 08/23/10 COC Number

10 Days

ö

COMMENTS 1.007 ナーガロ NUMBER OF CONTAINERS Turbidity (SM2130) (2015SMS) SQI DESCRIPTION Water FAX (530) 339-3303 TEAM TIME 08/23/10 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 (530) 229-3303 408401.01.DM PG&E Topock SAMPLERS (SIGNATURE SC-700B-WDR-271A E PROJECT NAME P.O. NUMBER SAMPLE I.D. COMPANY ADDRESS PHONE

13-30 13:33

For Sample Condition See Form Attached

TOTAL NUMBER OF CONTAINERS

 ω

C	CHAIN OF CUSTODY SIGNAT	SNATURE RECORD		SAMPLE CONDITIONS
Signature (Relinquished)	Name The State of	Company/ Oper/	Date! 8-23-10 Time 1600	RECEIVED COOL IN WARM 4,6°C°F
Signature (Received)	Printed Afect	Company/ X . X . I		CUSTODY SEALED YES \ NO \
(Relinquished)	Marge Kolan	Agency T. h. T	Time 2	S
Signature (Milly Mile)	Printed Collins	Company / T.L. I.	Date! 1/25/10 2/:30	a
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final, pH	Time Buffered	Initials
08/23/10	990792-1	9.5	N/A	N/A	N/A	SB
	12	l	ì	1	1	ŀ
	-3				-	
1	₩ -8	y.	4	i.br	ab ab	¥
062310	990793-1	9,5	N/A	W/A	N/A	SB
	-2					V-90-00-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-
	-3				·	
	<u> </u>					
	-5				· .	
	-6					
	-7					
	4 -8	<u>ه</u>	4	<u> </u>	- - - -	
OR CANON	990794-1	g.5	N/A	N/A-	N/A	<u>B</u>
	1 3	-\				
		<u> </u>	<u> </u>		dy	→ →
0 8 23 (0	990795-1	9,5	N/A	N/A	N/A	SB
	1 2				1	
	<u> </u>		<u> </u>			
					. ~	
	-6				·	
	-7					- .
	-8					1
W	-8 -9			ib-		4
98/24/10	990809	7.0	5.00	9.5	8:00	SB
02/24/10	990810-2	9.5	N/A	NA	N/A	SZB
(1 -3	i	1		\	1
	4		· ·			
	-5					
A	<i>→</i> -7	\$	•		V	1

ah

Sample Integrity & Analysis Discrepancy Form

Client	t: <u>E2</u>	Lab #	108 o 8
Date	Delivered: <u>8 / 23/10 Time: 2/:3</u> 0 By: □Mail □Field	Service C]Client
1.	Was a Chain of Custody received and signed?	XYes □No	□N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No	Ø 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 □No	Z N/A
5.	Were all requested analyses understood and acceptable?	Yes □No	□N/A
6.	Were samples received in a chilled condition?	⊠Yes □No	□N/A
7.	Temperature (if yes)? 4.6 ° C Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc.)?	☑Yes □ <i>No</i>	□N/A
8.	Were sample custody seals intact?	□Yes □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?	MYes □No	□ <i>N/A</i>
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □ Truesdail □Client	□Yes □No	⊠N/A
12.	Were samples pH checked? pH = \underline{Sel} C , \mathcal{O} , \mathcal{C} .	□Yes □No	□ <i>N/A</i>
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	dYes □No	□ <i>N/A</i>
15.	Sample Matrix: □Liquid □Drinking Water □Ground Water □Solid □Solid □Oth	111	te Water
16.	Comments:		
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	haleun	ine_

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

September 14, 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-271B PROJECT, GROUNDWATER

MONITORING, TLI No.: 990909

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-271B project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 August 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.

Total Chromium and Total Manganese were 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 the late arrival and early sampling time, the sample for Turbidity by SM 2130B 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. gye

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.: 408401.01.DM

Laboratory No.: 990909

Date: September 14, 2010

Collected: August 27, 2010 Received: August 27, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	Linda Saetern
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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Established 1931

Laboratory No.: 990909 Date Received: August 27, 2010

Project Name: PG&E Topock Project

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

Oakland, CA 94612

Attention: Shawn Duffy

Project No.: 408401.01.DM

P.O. No.: 408401.01.DM

Analytical Results Summary

Lab Sample ID Field ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
990909-001	SC-700B-WDR-271B E120.1	E120.1	NONE	8/27/2010	8:00	EC	7260	umhos/cm	2.00
990909-001	SC-700B-WDR-271B E200.8	E200.8	NONE	8/27/2010	8:00	Chromium	Q	ug/L	1.0
990909-001	SC-700B-WDR-271B E200.8	E200.8	NON	8/27/2010	8:00	Manganese	14.6	ng/L	1.0
990909-001	SC-700B-WDR-271B	E218.6	LABFLT	8/27/2010	8:00	Chromium, hexavalent	Q	ng/L	0.20
990909-001	SC-700B-WDR-271B SM2130B	SM2130B	NONE	8/27/2010	8:00	Turbidity	0.170 J	OTN	0.100
990909-001	SC-700B-WDR-271B SM2540C	SM2540C	NONE	8/27/2010	8:00	Total Dissolved Solids	4490	mg/L	250

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Note: The following "Significant Figures" rule has been applied to all results:

Results below 0.01ppm will have two (2) significant figures.

Result above or equal to 0.01ppm will have three (3) significant figures.

Quality Control data will always have three (3) significant figures.

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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 Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401.01.DM Project Number: 408401.01.DM Laboratory No. 990909

Printed 9/14/2010

Page 1 of 7

Samples Received on 8/27/2010 9:30:00 PM

Field ID				Lab ID	Col	lected	Matr	ix
SC-700B-WDR-271B				990909-001	08/27/	/2010 08:00	Wat	er
Specific Conductivity - E Parameter	PA 120.1	Unit		n 08EC10G alyzed	DF	MDL	8/30/2010 RL) Result
990909-001 Specific Conduct	vity	umhos/	cm 08/30	0/2010	1.00	0.0380	2.00	7260
Method Blank								
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result ND					
Duplicate							Lab ID =	990906-008
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 6300	Expected 6350	R	RPD 0.791	Accepta 0 - 10	nce Range
Lab Control Sample								
Parameter Specific Conductivity Lab Control Sample Di	Unit umhos uplicate	DF 1.00	Result 695.	Expected 706.	R	decovery 98.4	Accepta 90 - 110	ince Range
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 699.	Expected 706.	R	lecovery 99.0	Accepta 90 - 110	nce Range
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 703.	Expected 706.	R	ecovery 99.6	Accepta 90 - 110	nce Range
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 997.	Expected 1000	R	ecovery 99.7	Accepta 90 - 110	nce Range

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 2 of 7 Printed 9/14/2010

Chrome VI by EPA 218.6				09CrH10B				
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990909-001 Chromium, Hexa	valent	ug/L	09/02	2/2010 09:40	1.05	0.0210	0.20	ND
Method Blank								
Parameter	Unit	DF	Result					
Chromium, Hexavalent	ug/L	1.00	ND					
Duplicate							Lab ID =	990810-009
Parameter	Unit	DF	Result	Expected		RPD	Accepta	ance Range
Chromium, Hexavalent	ug/L	1.05	28.9	28.1		2.95	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected		Recovery	•	ance Range
Chromium, Hexavalent	ug/L	1.00	4.99	5.00		99.9	90 - 110)
Matrix Spike							Lab ID =	990908-001
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	•	ance Range
Chromium, Hexavalent	ug/L	5.25	5.40	5.25(5.25)		103	90 - 110	
Matrix Spike							Lab ID =	990908-001
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	•	ance Range
Chromium, Hexavalent	ug/L	1.06	0.939	1.06(1.06)		88.6	90 - 110	
Matrix Spike							Lab ID = 990908-002	
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	•	ance Range
Chromium, Hexavalent	ug/L	1.06	ND	1.06(1.06)			90 - 110	
Matrix Spike							Lab ID =	990908-002
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	-	ance Range
Chromium, Hexavalent	ug/L	5.25	5.43	5.25(5.25)		103	90 - 110	
Matrix Spike							Lab ID =	990908-003
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	-	ance Range
Chromium, Hexavalent	ug/L	1.06	ND	1.06(1.06)			90 - 110	
Matrix Spike							Lab ID =	990908-003
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery		ance Range
Chromium, Hexavalent	ug/L	5.25	5,30	5.25(5.25)		101	90 - 110	
Matrix Spike							Lab ID =	990909-001
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	•	ance Range
Chromium, Hexavalent	ug/L	1.06	1.09	1.06(1.06)		103	90 - 110)

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Client: E2 Consulting En	gineers, Ind		roject Name: roject Number	PG&E Topock : 408401.01.DM	-	Page 3 of 7 Printed 9/14/2010
MRCCS - Secondary						
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 4.98	Expected 5.00	Recovery 99.7	Acceptance Range 90 - 110
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.4	Expected 10.0	Recovery 104	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.2	Expected 10.0	Recovery 102	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.68	Expected 10.0	Recovery 96.8	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 10.3	Expected 10.0	Recovery 103	Acceptance Range 95 - 105



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Parameter		Unit	Ana	lyzed [OF .	MDL	ŔL	Result
990909-001 Chromium		ug/L	09/03	3/2010 12:38 1	.00	0.0190	1.0	ND
Manganese		ug/L	09/03	3/2010 12:38 1	.00	0.0420	1.0	14.6
Method Blank								
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID =	990953-001
Parameter	Unit	DF	Result	Expected	RP	D O	Accepta	ince Range
Chromium	ug/L	1.00	ND	0	0	1	0 - 20	
Manganese	ug/L	1.00	11.6	11.8	1	.45	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	ince Range
Chromium	ug/L	1.00	49.0	50.0		8.0	90 - 110	_
Manganese	ug/L	1.00	48.9	50.0	9	7.7	90 - 110)
Matrix Spike							Lab ID =	990953-001
Parameter	Unit	DF	Result	Expected/Adde	d Re	covery	Accepta	nce Range
Chromium	ug/L	1.00	45.0	50.0(50.0)		9.9	75 - 125	
Manganese	ug/L	1.00	46.2	61.8(50.0)	6	8.9	75 - 125	j
Matrix Spike Duplicate							Lab ID =	990953-001
Parameter	Unit	DF	Result	Expected/Added	d Re	covery	Accepta	nce Range
Chromium	ug/L	1.00	45.1	50.0(50.0)		0.3	75 - 125	_
Manganese	ug/L	1.00	47.8	61.8(50.0)	7	2.1	75 - 125	i
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	Red	covery	Accepta	nce Range
Chromium	ug/L	1.00	48.2	50.0		6.4	90 - 110	_
Manganese	ug/L	1.00	51.7	50.0	1	03	90 - 110	ı
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Red	covery	Accenta	nce Range
Chromium	ug/L	1.00	46.0	50.0		2.0	90 - 110	_
MRCVS - Primary							. , •	
Parameter	Unit	DF	Result	Expected	Red	covery	Accente	nce Range
Chromium	ug/L	1.00	46.9	50.0		3.8	90 - 110	_

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Client: E2 Consulting En	gineers, Inc		roject Name: roject Numbe	PG&E Topock rr: 408401.01.DM	=	Page 5 of 7 Printed 9/14/2010
MRCVS - Primary						
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 45.8	Expected 50.0	Recovery 91.6	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.7	Expected 50.0	Recovery 95.5	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.7	Expected 50.0	Recovery 97.4	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.8	Expected 50.0	Recovery 95.6	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.4	Expected 50.0	Recovery 98.9	Acceptance Range 90 - 110
Parameter Manganese Interference Check St	Unit ug/L andard A	DF 1.00	Result 46.5	Expected 50.0	Recovery 93.0	Acceptance Range 90 - 110
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Manganese Interference Check St	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check St	Unit ug/L	DF 1.00	Result 47.4	Expected 50.0	Recovery 94.8	Acceptance Range 80 - 120
Parameter Chromium	Unit ug/L	DF 1.00	Result 45.4	Expected 50.0	Recovery 90.8	Acceptance Range 80 - 120

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Client: E2 Consulting En	gineers, In		roject Name: roject Numbe	PG&E Topo er: 408401.01.0	-	t		Page 6 of 7 0/14/2010
Interference Check St	tandard AB							
Parameter Manganese	Unit ug/L	DF 1.00	Result 52.4	Expected 50.0	R	ecovery 105	Accepta 80 - 120	ance Range)
Interference Check St								
Parameter Manganese	Unit ug/L	DF 1.00	Result 46.4	Expected 50.0		ecovery 92.9	Accepta 80 - 120	ance Range)
Total Dissolved Solids b	y SM 254		sama Namunini	08TDS10K			8/30/2010	0
		Unit	····	lyzed	DF	MDL	RL	Result
990909-001 Total Dissolved 5	Solids	mg/L	08/30	/2010	1.00	0.434	250.	4490
Method Blank								
Parameter	Unit	DF	Result					
Total Dissolved Solids	mg/L	1.00	ND					
Duplicate							Lab ID =	990906-004
Parameter	Unit	DF	Result	Expected	R	PD	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	3360	3250		3.33	0 - 5	
Duplicate							Lab ID =	990909-001
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	ince Range
Total Dissolved Solids	mg/L	1.00	4640	4490		3.29	0 - 5	Ü
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	ince Range
Total Dissolved Solids	mg/L	1.00	492.	500.	!	98.4	90 - 110	_
Lab Control Sample D	uplicate							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Total Dissolved Solids	mg/L	1.00	497.	500.		99.4	90 - 110	



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Turbidity by SM 2130 E			Batch	08TUC10R			8/30/2010		
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result	
990909-001 Turbidity		NTU	08/30)/2010	1.00	0.0140	0.100	0.170	J
Method Blank									•
Parameter	Unit	DF	Result						
Turbidity	NTU	1.00	ND						
Duplicate							Lab ID =	990909-001	
Parameter	Unit	DF	Result	Expected	Rf	PD	Accepta	nce Range	
Turbidity	NTU	1.00	0.171	0.170	(0.587	0 - 20		
Lab Control Sample									
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range	
Turbidity	NTU	1.00	7.40	8.00	Ç	92.5	90 - 110	=	
Lab Control Sample	Duplicate								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range	
Turbidity	NTU	1.00	7.50	8.00		93.8	90 - 110	Ŭ	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

for Mona Nassimi

Manager, Analytical Services

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Total Dissolved Solids by SM 2540 C

Calculations

Batch: 08TDS10K Date Calculated: 9/2/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final Weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL,	Reported Value, ppm	DF
BLANK	100	105.2911	105.2911	105.2911	0.0000	No	0.0000	0.0	25.0	ND	1
990891-1	20	66.8211	66.9220	66.922	0.0000	No	0.1009	5045.0	125.0	5045.0	1
990891-2	50	68.2330	68.2797	68.2797	0.0000	No	0.0467	934.0	50.0	934.0	1
990891-3	20	77.9583	78.0435	78.0435	0.0000	No	0.0852	4260.0	125.0	4260.0	1
990891-4	20	68.9897	69.0365	69.0365	0.0000	No	0.0468	2340.0	125.0	2340.0	1
990892-1	20	47.6392	47.7198	47.7198	0.0000	No	0.0806	4030.0	125.0	4030.0	1
990892-2	100	110.6613	110.7057	110.7053	0.0004	No	0.0440	440.0	25.0	440.0	1
990892-3	50	67.7401	67.8113	67.8113	0.0000	No	0.0712	1424.0	50.0	1424.0	1
990906-2	20	67.8033	67.8497	67.8496	0.0001	No	0.0463	2315.0	125.0	2315.0	1
990906-3	20	68.9164	68.9781	68.9778	0.0003	No	0.0614	3070.0	125.0	3070.0	1
990905-4	20	68.5545	68.6195	68.6195	0.0000	No	0.0650	3250.0	125.0	3250.0	1
990906-4D	20	69.2451	69.3123	69.3123	0.0000	No	0.0672	3360.0	125.0	3360.0	1
LCS	100	109.2175	109.2667	109.2667	0.0000	Nο	0.0492	492.0	25.0	492.0	1
990906-5	20	68.8011	68.8542	68.8542	0.0000	No	0.0531	2655.0	125.0	2655.0	1
990906-6	20	69.5131	69.5681	69.5681	0.0000	No	0.0550	2750.0	125.0	2750.0	1
990906-7	20	68.1195	68.1943	68.1943	0.0000	No	0.0748	3740.0	125.0	3740.0	1
990906-8	20	69.5847	69.6851	69.6851	0.0000	No	0.1004	5020.0	125.0	5020.0	1
990907-1	27	75.4557	75.5081	75.5081	0.0000	No	0.0524	1940.7	92.6	1940.7	1
990907-2	10	47.1917	47.2937	47.2937	0.0000	No	0.1020	10200.0	250.0	10200.0	1
990907-3	20	74.5699	74.6366	74.6366	0.0000	No	0.0667	3335.0	125.0	3335.0	1
990907-4	20	67.2811	67.3589	67.3588	0.0001	No	0.0777	3885.0	125.0	3885.0	1
990907-5	20	70.9038	70.9691	70.9691	0.0000	No	0.0653	3265.0	125.0	3265.0	1
990909	10	49.4672	49.5121	49.5121	0.0000	No	0.0449	4490.0	250.0	4490.0	1
990909D	10	49.5078	49.5543	49.5542	0.0001	No	0.0464	4640.0	250.0	4640.0	1
LCSD	100	110.3636	110.4133	110.4133	0.0000	No	0.0497	497.0	25.0	497.0	1

Calculation as follows:

Filterable residue (TDS), mg/L = $\left(\frac{A-B}{C}\right) x \cdot 1^{-6}$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 08TDS10K Date Calculated: 9/2/10

Laboratory Number	EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
990891-1	5870	0.86	3815.5	1.32
990891-2	1520	0.61	988	0.95
990891-3	5820	0.73	3783	1.13
990891-4	3420	0.68	2223	1.05
990892-1	4990	0.81	3243.5	1.24
990892-2	749	0.59	486.85	0.90
990892-3	2010	0.71	1306.5	1.09
990906-2	3140	0.74	2041	1.13
990906-3	4050	0.76	2632.5	1.17
990906-4	4210	0.77	2736.5	1.19
990906-4D	4210	0.80	2736.5	1.23
LCS				
990906-5	3640	0.73	2366	1.12
990906-6	3680	0.75	2392	1.15
990906-7	4250	0.88	2762.5	1.35
990906-8	6300	0.80	4095	1.23
990907-1	2830	0.69	1839.5	1.06
990907-2	11480	0.89	7462	1.37
990907-3	4620	0.72	3003	1.11
990907-4	4700	0.83	3055	1.27
990907-5	3870	0.84	2515.5	1.30
990909	7260	0.62	4719	0.95
990909D	7260	0.64	4719	0.98



AX

606060

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-271B]

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

TURNAROUND TIME COC Number

10 Days

뇽 PAGE 1 DATE 08/27/10

COMMENTS NUMBER OF CONTAINERS W. n Turbidity (SM2130) TEMF 100 pg (SMS) SQ1 TOTAC Tobs Metals (2007) Cr8 (278.6) Lab Fillered × × P09090P DESCRIPTION Water FAX (530) 339-3303 TEAM 2800 TIME 08/27/10 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 (530) 229-3303 408401.01.DM PG&E Topock SC-700B-WDR-271B SAMPLERS (SIGNATURE E2 PROJECT NAME P.O. NUMBER SAMPLE 1.D. COMPANY ADDRESS PHONE

See Form Attached For Sample Condition

,006

6.00 000 000

10 m 10 m 10 m

AMMIUSIS

Male

0806

080



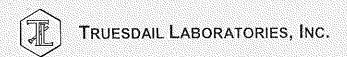
TOTAL NUMBER OF CONTAINERS

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OFFICINS	WARM	П 9						
SAMPLE CONDITIONS		YES 🗆						
SAMF	□ 1005		LS:	i :				
		Y SEALE	CUREMEN					
	RECEIVED	CUSTODY SEALED	SPECIAL REQUIREMENTS:					
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	CER	10x	C		*			
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	Sig (Re	S. S.	Sig. (Re	Signature	Signature	Re	Sign	<u>چ</u>

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

Date Lab Number Initial pH Buffer Added (mL) Final pH Time Buffered Initials (8 27 10 990893-5 9.5 N)/A N/A N/A SB		1	I	1			
08/27/10 930902 7.0 5.00 9.5 11:00 5B 08/27/10 930908-1 7.0 5.00 9.5 19:00 SB 1 -2	Date			Buffer Added (mL)	Final pH	Time Buffered	Initials
08/27/10 930902 7.0 5.00 9.5 11:00 5B 08/28/10 930908-1 7.0 5.00 9.5 19:00 SB 1 -2	()8 dt 10		9.5	N/A	N/A	N/A	SB
08/27/10 990902 7.0 5.00 9.5 11:00 5B 08/28/10 990908-1 7.0 5.00 9.5 19:00 SB 08/28/10 990909 7.0 5.00 9.5 19:00 SB 08/28/10 990909 7.0 5.00 9.5 8:15 8:B 09/02/10 990966-1 7.0 5.00 9.5 8:00 SB		-6			Ì		1
08/27/10 990908 -1 7.0 5.00 9.5 11:00 5B 08/28/10 990908 -1 7.0 5.00 9.5 19:00 SB 08/27/10 990909 7.0 5.00 9.5 19:00 SB 09/02/10 990906 -1 7.0 5.00 9.5 8:15 SB 09/02/10 990367 -1 7.0 5.00 9.5 8:00 SB			J	4	1	4	
08/27/10 990908-1 7.0 5.00 9.5 19:00 SB 08/27/10 990909 7.0 5.00 9.5 19:00 SB 09/02/10 990966-1 7.0 5.00 9.5 8:15 SB 09/02/10 990967-1 7.0 5.00 9.5 8:00 SB			7.0	5,00	9.5	11:00	
1 -3 1 1 1 1 1 1 1 1 1	08/28/10	990908-1	7.0	2,00			
08 27 10 990909 7.0 5.00 9.5 19:00 SB 09/02/10 990966-1 7.0 5.00 9.5 8:15 SB 09/02/10 990967-1 7.0 5.00 9.5 8:00 SB		1 -2			1	ŀ	1
08 27 10 990909 7.0 5.00 9.5 19:00 SB 09 02 10 990966-1 7.0 5.00 9.5 8:15 SB 09 02 10 990967-1 7.0 5.00 9.5 8:00 SB 1 -2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	4		J	J			
09/02/10 990966-1 7.0 5.00 9.5 8:15 SB 09/02/10 990967-1 7.0 5.00 9.5 8:00 SB	08 27/10	990909	7.0	200		19:00	
09/02/10 990967-1 7.0 5.60 9.5 8:00 SB	09/02/10	990966-1	7.0				
	09/02/10	990967-1	7.0				
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Sample Integrity & Analysis Discrepancy Form

Clier	nt: <u>E2</u>	Lab# 9909 09
Date	Delivered: 8/27/10 Time: 1:30 By: Mail diffie	eld Service
1.	Was a Chain of Custody received and signed?	GYes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No 124N/A
3.	Are there any special requirements or notes on the COC?	□Yes □No ŒN/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>I C</u>	ØVes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	dryes ONO ON/A
8.	Were sample custody seals intact?	□Yes □No □N/A
9.	Does the number of samples received agree with COC?	¹ªYes □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: Latruesdail Client	☑Yes □No □N/A
12.	Were samples pH checked? pH = <u>5ee</u> c - 0 · c	QYes ONO ON/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	ØYes □No □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground \ □Sludge □Soil □Wipe □Paint □Solid □	Water □Waste Water Other <u>U A TER</u>
16.	Comments:	
17.	Sample Check-In completed by Truesdail Log-In/Receiving: _	Rafael Daville



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

October 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-WDR-272 PROJECT, GROUNDWATER

MONITORING,

TLI NO.: 990967

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-272 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 September 1, 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.

Due to analyst error, the samples for Nitrite as N by SM4500-NO2 B were analyzed past the method specified holding time.

The sample result and associated matrix spike for sample SC-700B-WDR-272 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 result from the 5x dilution agrees with that of the straight run, the data from the straight run is reported.

Total Chromium, for sample SC-100B-WDR-272, was re-analyzed due to the discrepancy between the Total Chromium and Hexavalent Chromium results. The result from the re-analysis 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

Manager, Analytical Services

K-R.P. Syc

K.R.P. Iyer

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.: 408401.01.DM

Laboratory No.: 990967

Date: October 1, 2010
Collected: September 1, 2010
Received: September 1, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Iordan Stavrev / Gautam Savani
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
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	Jenny Tankunakorn
EPA 200.7	Metals by ICP	Ethel Suico
EPA 200.8	Metals by ICP/MS	Linda Saetern / Daniel Kang / Hope Trinidad
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

EXCELLENCE IN INDEPENDENT TESTING



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Established 1931

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Date Received: September 1, 2010

Laboratory No.: 990967

Client: E2 Consulting Engineers, Inc. 155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project Project No.: 408401 01.DM

P.O. No.: 408401.01.DM

Analytical Results Summary

Lab Sample (D		Analysis	Extraction	Sample	Sample				
		Merriod	Method	Date	Time	Parameter	Resuft	Units	RL
990967-001	SC-700B-WDR-272	E120.1	NONE	9/1/2010		EC	7360	umpos/cm	2.00
990967-001	SC-700B-WDR-272	E200.7	NONE	9/1/2010		fron		110/1	20.5
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Aluminum	Ž) 	20.04
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Antimony	2) 	7 0
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Arsenic	Š	֓֞֞֝֟֝֟֝֟֝֟֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	5.0
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Barium) Z] []	, C
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		BORON	1100	1 //01	5.5.6
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Chromium		J	} <
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Copper	2	ַ נַפֶּלְי	- r.
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Lead	2)))	
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Mandanese	2 2	J / 61	5. 5
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010		Molyhdenim	1 at	7/6	5 6
990967-001	SC-700B-WDR-272	E200.8	NON	9/1/2010		Nickel	2.5	ָרָטָ קיי	5.0
990967-001	SC-700B-WDR-272	E200.8	NONE	9/1/2010	8:00	Zinc	2 2	1 /60 1 //	0.0
990967-001	SC-700B-WDR-272	E218.6	LABFLT	9/1/2010		Chromium havavalant	2 2	1.g/-	0.0
990967-001	SC-700B-WDR-272	E300	NON	9/1/2010		Finorida	0,40	ug/∟	0.20
990967-001	SC-700B-WDR-272	E300	NONE	9/1/2010		Nitrate as N	2.03	mg/r	0.300
990967-001	SC-700B-WDR-272	E300	NON	9/1/2010		Sulfate	50.5	11g/L	00.0
990967-001	SC-700B-WDR-272	SM2130B	HNON	9/1/2010		Linhidit,	0 447	- E	23.0
990967-001	SC-700B-WDR-272	SM2540C	I II CN	9/1/2010		Total Discontinual Contact	· · ·) : Z	0.100
990967-001	2C 200M 3002-08	ON 4 ECONE 120		0,175010		Total Dissolved Solids	4550	mg/L	250
000007	2/2-VDV-400/-00	UNIADOUNTSD	NON	9/1/2010		Ammonia-N	<u>Q</u>	mg/L	0.500
100-706066	SC-700B-WDR-272	SM4500NO2B	NONE	9/1/2010		Nitrite as N	ND	mg/L	0.0100

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.



Revision 1; October 5, 2010

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Resuit	Units	RL
990967-002	SC-100B-WDR-272	E120.1	NONE	9/1/2010	8:00	EC	7930	umhos/cm	2.00
990967-002	SC-100B-WDR-272	E200.7	NONE	9/1/2010	8:00	Chromium	995	ng/L	10.0
990967-002	SC-100B-WDR-272	E200.7	NONE	9/1/2010	8:00	Iron	Q	ng/L	20.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Aluminum	QV	ug/L	50.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Antimony	Q	ng/L	10.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Arsenic	2	ng/L	10.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Barium	26.0	ng/L	10.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	BORON	1140	ng/L	200
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Copper	Q	ug/L	5.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Lead	Q	ng/L	10.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Manganese	10.3	ng/L	1.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Molybdenum	22.4	ug/L	10.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Nickel	QN	ng/L	10.0
990967-002	SC-100B-WDR-272	E200.8	NONE	9/1/2010	8:00	Zinc	Q	ng/L	10.0
990967-002	SC-100B-WDR-272	E218.6	LABFLT	9/1/2010	8:00	Chromíum, hexavalent	1200	ug/L	21.0
990967-002	SC-100B-WDR-272	E300	NONE	9/1/2010	8:00	Fluoride	2.58	mg/L	0.500
990967-002	SC-100B-WDR-272	E300	NONE	9/1/2010	8:00	Nitrate as N	3.18	mg/L	1.00
990967-002	SC-100B-WDR-272	E300	NONE	9/1/2010	8:00	Sulfate	553	mg/L	12.5
990967-002	SC-100B-WDR-272	SM2130B	NONE	9/1/2010	8:00	Turbidity	0.109	N	0.100
990967-002	SC-100B-WDR-272	SM2540C	NONE	9/1/2010	8:00	Total Dissolved Solids	5550	mg/L	250
990967-002	SC-100B-WDR-272	SM4500NH3D	NONE	9/1/2010	8:00	Ammonia-N	2	mg/L	0.500
990967-002	SC-100B-WDR-272	SM4500NO2B	NONE	9/1/2010	8:00	Nitrite as N	2	mg/L	0.0100



Revision 1; October 4, 2010

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	- Inite	ã
990967-003	SC-701-WDR-272	E120.1	HNCN	9/1/2010	13.20			3	
990967-003	SC-701-WDR-272	F200 8		0.000	0.00	: • •	1210	nmhos/cm	2.00
990967-003	SC-701-WDR-272	0.000E		9/1/2010	13:30	Antimony	2	ng/L	10.0
990967-003	272 101 101 00	L200.0	NON	9/1/2010	13:30	Arsenic	2	na/L	10.0
000 (30000	20-701-WDR-272	E200.8	NONE	9/1/2010	13:30	Barium	S] 	2.0
00001-000	SC-701-WDK-272	E200.8	NONE	9/1/2010	13:30	Beryllium	2	, (g)	5.6
990967-003	SC-701-WDR-272	E200.8	NONE	9/1/2010	13:30	Cadmina	2 2	ug/r	0.1
990967-003	SC-701-WDR-272	E200.8	HNCN	0/1/2010			2	ng/L	3.0
990967-003	SC-701-WDR-272	E200 8		0,777,0	13.30	Criromium	2.0	ng/L	1.0
990967-003	SC-701-WDR-272	0.000.0	U L	9/1/2010	13:30	Cobalt	2	ng/L	5.0
990967_003	2/2/10/10/00	EZUU.0	NONE	9/1/2010	13:30	Copper	Q]/[[יני
000000	30-101-WDR-2/2	E200.8	NON	9/1/2010	13:30	Lead	2) j	5 6
990967-003	SC-701-WDR-272	E200.8	HON	9/1/2010	13.30	Mon	2 4	ug/L 	10.0
990967-003	SC-701-WDR-272	E200 8	HNON	0/1/2010	2 5	Melouly	2.	ng/L	1.0
990967-003	SC-701-WDR-272	E200 B		9/1/2010	13:30	Molybdenum	Q	ng/L	10.0
990967-003	272 704 107 72	1200.0		9/1/2010	13:30	Nickel	S	1/00	10.0
000067	30-701-VVUR-2/2	E200.8	NONE	9/1/2010	13:30	Selenium	S	1/01	0 0
99090/-003	SC-/01-WDR-272	E200.8	NONE	9/1/2010	13:30	Silver	2 5	ָ מַלַּ	2.6
880867-003	SC-701-WDR-272	E200.8	HNCN	9/1/2010	12.20	The	₽!	ng/L	5.0
990967-003	SC-701-WDR-272	Food 8		0,7,70	13.30	- riailium	Q	ng/L	1.0
990967-003	SC-701-WDR-272	E200.0		9/1/2010	13:30	Vanadium	2	ng/L	5.0
990967-003	SC-701 W/DB 222	E200.0	NON:	9/1/2010	13:30	Zinc	2	ng/L	10.0
990-5555	20-10-101-212 50-704 W/W	5218.0	LABFLI	9/1/2010	13:30	Chromium, hexavalent	Q		000
990967-003	50-701-WDR-2/2	E300	NONE	9/1/2010	13:30	Fluoride	Q	1 /ou	0.500
2000	2/2-NUN-10/-00	SMZ540C	NONE	9/1/2010	13:30	Total Dissolved Solids	804	ma/L	50.0
)

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

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

EXCELLENCE IN INDEPENDENT TESTING



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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401.01.DM Project Number: 408401.01.DM Laboratory No. 990967

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Samples Received on 9/1/2010 9:30:00 PM

Field ID				Lab ID	0 "			
				Lab ID		ected	Matr	
SC-700B-WDR-272				990967-001		2010 08:00	Wate	ег
SC-100B-WDR-272				990967-002		2010 08:00	Wate	
SC-701-WDR-272				990967-003	09/01/2	2010 13:30	Wate	er
Anions By I.C EPA 300	.0		Batch	09AN10B				
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990967-001 Fluoride		mg/L	09/02	2/2010 10:16	5.00	0.0600	0.500	2.03
Nitrate as Nitroge	en	mg/L	09/02	2/2010 10:16	5.00	0.0950	1.00	2.92
Sulfate		mg/L	09/02	2/2010 11:18	50.0	2.00	25.0	522
990967-002 Fluoride		mg/L	09/02	2/2010 10:54	5.00	0.0600	0.500	2.58
Nitrate as Nitroge	en	mg/L	09/02	2/2010 10:54	5.00	0.0950	1.00	3.18
Sulfate		mg/L	09/02	2/2010 12:20	25.0	1.00	12.5	553
990967-003 Fluoride		mg/L	09/02	2/2010 11:06	5.00	0.0600	0.500	ND
Method Blank								
Parameter	Unit	DF	Result					
Fluoride	mg/L	1.00	ND					
Sulfate	mg/L	1.00	ND					
Nitrate as Nitrogen	mg/L	1.00	ND					
Duplicate							Lab ID = 9	990967-001
Parameter	Unit	DF	Result	Expected	RF	סי	Accepta	nce Range
Fluoride	mg/L	5.00	2.01	2.03	(0.793	0 - 15	
Sulfate	mg/L	50.0	521	522	C).117	0 - 15	
Nitrate as Nitrogen	mg/L	5.00	2.88	2.92	1	1.31	0 - 15	

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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Client: E2 Consulting Engineers, Inc.			Project Name: Project Numbe	Page 2 of 34 Printed 10/4/2010		
Lab Control Sample						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	4.12	4.00	103	90 - 110
Sulfate	mg/L	1.00	20.3	20.0	101	90 - 110
Nitrate as Nitrogen Matrix Spike	mg/L	1.00	4.01	4.00	100	90 - 110 Lab ID = 990967-001
Parameter Fluoride	Unit mg/L	DF 5.00	Result 22.3	Expected/Added 22.0(20.0)	Recovery 102	Acceptance Range 85 - 115
Sulfate	mg/L	50.0	1040	1020(500.)	102	85 - 115
Nitrate as Nitrogen	mg/L	5.00	23.4	22.9(20.0)	103	85 - 115
MRCCS - Secondary	J			0(_0.0)	100	65 - 115
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	4.14	4.00	103	90 - 110
Sulfate	mg/L	1.00	20.3	20.0	101	90 - 110
Nitrate as Nitrogen MRCVS - Primary	mg/L	1.00	4.01	4.00	100	90 - 110
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	3.14	3.00	105	90 - 110
Sulfate MRCVS - Primary	mg/L	1.00	15.0	15.0	99.9	90 - 110
Parameter Sulfate MRCVS - Primary	Unit mg/L	DF 1.00	Result 15.1	Expected 15.0	Recovery 101	Acceptance Range 90 - 110
Parameter	Unit	DF	Result	Expected	Dooyee	Annantassa
Nitrate as Nitrogen MRCVS - Primary	mg/L	1.00	2.94	3.00	Recovery 98.1	Acceptance Range 90 - 110
Parameter	Unit	DF	Result	Expected	Recovery	Accortance Dense
Nitrate as Nitrogen MRCVS - Primary	mg/L	1.00	2.94	3.00	98.2	Acceptance Range 90 - 110
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	1.00	2.94	3.00	98.1	90 - 110



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

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Revision 1

Nitrite SM 4500-NO2 B			Batch	09NO210D					
Parameter		Unit	Analyzed		DF	MDL	RL	Result	
990967-001 Nitrite as Nitrogen		mg/L	09/07	/2010 14:17 1	.00	0.000200	0.0050	ND	-
990967-002 Nitrite as Nitrogen		mg/L	09/07	09/07/2010 14:18 1.00		0.000200	0.0050	ND	
Method Blank									-
Parameter	Unit	DF	Result						
Nitrite as Nitrogen	mg/L	1.00	ND						
Duplicate							Lab ID = 9	90967-003	
Parameter	Unit	DF	Result	Expected	RF	PD	Acceptar	nce Range	
Nitrite as Nitrogen	mg/L	1.00	ND	o o	C		0 - 20	ioo i taligo	
Lab Control Sample									
Parameter	Unit	DF	Result	Expected	Re	covery	Acceptar	ice Range	
Nitrite as Nitrogen	mg/L	1.00	0.0478	0.0450		06	90 - 110	ioo rango	
Matrix Spike							Lab ID = 9	90967-003	
Parameter	Unit	DF	Result	Expected/Adde	d Re	covery	Acceptar	ice Range	
Nitrite as Nitrogen	mg/L	1.00	0.0190	0.0200(0.020		5.0	75 - 125	ioo rango	
MRCCS - Secondary									
Parameter	Unit	DF	Result	Expected	Re	covery	Acceptan	ice Range	
Nitrite as Nitrogen	mg/L	1.00	0.0277	0.0270		•	90 - 110	ioo range	
MRCVS - Primary									
Parameter	Unit	DF	Result	Expected	Re	covery	Acceptan	ice Range	
Nitrite as Nitrogen	mg/L	1.00	0.0201	0.0200		•	90 - 110	.co rango	



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

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Specific Conductivity - E		Batch	n 09EC10A		9/2/2010			
Parameter		Unit	Unit Analyzed		DF	MDL	RL	Result
990967-001 Specific Conduct	ivity	umhos/cm 09/02		2/2010	1.00	0.0380	2.00	7360
990967-002 Specific Conduct	ivity	umhos	/cm 09/02	2/2010	1.00	0.0380	2.00	7930
990967-003 Specific Conduct	ivity			1.00	0.0380	2.00	1210	
Method Blank							, , , , , , , , , , , , , , , , , , , ,	
Parameter Specific Conductivity Duplicate	Unit umhos	DF 1.00	Result ND				Lab ID =	990967-003
Parameter Specific Conductivity Lab Control Sample	Unit umhos	DF 1.00	Result 1210	Expected 1210	RF (Accepta 0 - 10	ince Range
Parameter Specific Conductivity Lab Control Sample Do	Unit umhos uplicate	DF 1.00	Result 702.	Expected 706.		covery 99.4	Accepta 90 - 110	ince Range
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 708.	Expected 706.	Recovery 100		Acceptance Range 90 - 110	
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 737.	Expected 706.		covery 04	Accepta 90 - 110	nce Range
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 992.	Expected 1000		covery 9.2	Accepta 90 - 110	nce Range

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Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project

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Project Number: 408401.01.DM

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Chrome VI by EPA 218.6 Parameter		Batch 09CrH10C Unit Analyzed		DF	МО		Doub	
990967-001 Chromium, Hexay	/alent	ug/L			·····	MDL	RL	Result
990967-002 Chromium, Hexay		ug/L ug/L			1.05 105	0.0210	0.21	0.48
990967-003 Chromium, Hexay		ug/L ug/L			1.05	2.20 0.0210	21.0	1200
Method Blank	vaicht	ug/L	09/00	72010 09.12	1.05	0.0210	0.20	ND
Parameter	Unit	DF	Result					
Chromium, Hexavalent	ug/L	1.00	ND					
Duplicate	ug, L	1.00	NB				Lab ID =	990967-002
Parameter	Unit	DF	Result	Expected	R	PD	Accepta	nce Range
Chromium, Hexavalent	ug/L	105	1210	1200		0.675	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	1.00	5.05	5.00		101	90 - 110	
Matrix Spike							Lab ID =	990966-001
Parameter	Unit	DF	Result	Expected/Add	ed R	ecovery	Acceptance Range	
Chromium, Hexavalent	ug/L	1.09	32.2	31.3(16.4)	105		90 - 110	
Matrix Spike							Lab ID = 990967-001	
Parameter	Unit	DF	Result	Expected/Add	ed R	ecovery	Acceptance Range	
Chromium, Hexavalent	ug/L	5.25	5.71	5.91(5.25)		96.2	90 - 110	_
Matrix Spike							Lab ID =	990967-001
Parameter	Unit	DF	Result	Expected/Add	ed R	ecovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	1.06	1.63	1.54(1.06)		109	90 - 110	_
Matrix Spike							Lab ID =	990967-002
Parameter	Unit	DF	Result	Expected/Add	ed R	ecovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	105	2820	2780(1580)		102	90 - 110	
Matrix Spike							Lab ID =	990967-003
Parameter	Unit	DF	Result	Expected/Add	ed R	ecovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	1.06	1.18	1.15(1.06)		103	90 - 110	Ū
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	1.00	5.16	5.00		103	90 - 110	_
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	1.00	10.3	10.0		103	95 - 105	_



Client: E2 Consulting Engineers, Inc.			Project Name: PG&E Topock Project Project Number: 408401.01.DM			Page 6 of 34 Printed 10/4/2010		
MRCVS - Primary								
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.82	Expected 10.0	Recovery 98.2	Acceptance Range 95 - 105		
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 10.1	Expected 10.0	Recovery 101	Acceptance Range 95 - 105		



Client: E2 Consulting Engineers, Inc. Project Name: P

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

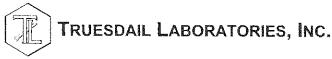
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Metals by EPA 200.7, Total		Batch 090310B-Th					
Parameter		Unit	Analyzed		F MDL	RL Result	
990967-001 Iron	H-1	ug/L	09/03	3/2010 14:13 1.	00 3.00	20.0 ND	
990967-002 Iron		ug/L			00 3.00	20.0 ND	
Method Blank							
Parameter	Unit	DF	Result				
Iron	ug/L	1.00	ND				
Duplicate						Lab ID = 990775-002	
Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range	
Iron	ug/L	1.00	ND	0	0	0 - 20	
Lab Control Sample							
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range	
Iron	ug/L	1.00	4780	5000	95.5	90 - 110	
Matrix Spike						Lab ID = 990775-002	
Parameter	Unit	DF	Result	Expected/Added	d Recovery	Acceptance Range	
iron	ug/L	1.00	1750	2000(2000)	87.7	75 - 125	
MRCCS - Secondary	1						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range	
Iron	ug/L	1.00	4840	5000	96.9	95 - 105	
MRCVS - Primary							
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range	
Iron	ug/L	1.00	4510	5000	90.1	90 - 110	
MRCVS - Primary							
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range	
Iron	ug/L	1.00	4760	5000	95.2	90 - 110	
MRCVS - Primary							
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range	
Iron	ug/L	1.00	4670	5000	93.4	90 - 110	
Interference Check S	Standard A						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range	
Iron	ug/L	1.00	1960	2000	97.8	80 - 120	
Interference Check S	Standard A						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range	
Iron	ug/L	1.00	1760	2000	0.88	80 - 120	



Client: E2 Consulting En	gineers, Inc	: .	Project Name: Project Number:	PG&E Topock Project er: 408401.01.DM		Page 8 of 34 Printed 10/4/2010	
Interference Check Sta	andard AB						
Parameter Iron	Unit ug/L	DF 1.00	Result 1930	Expected 2000	Recovery 96.3	Acceptance Range 80 - 120	
Interference Check Sta	andard AB						
Parameter Iron	Unit ug/L	DF 1.00	Result 1740	Expected 2000	Recovery 86.9	Acceptance Range 80 - 120	

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

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Project Number: 408401.01.DM

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Metals by EPA 200.7, Total			Batch	092910A-Th			
Parameter		Unit	Analyzed		F MDL	RL	Result
990967-002 Chromium		ug/L	09/29)/2010 13:17 1.	00 3.00	10.0	995
Method Blank	7			· · · · · · · · · · · · · · · · · · ·	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
Parameter Chromium	Unit ug/L	DF 1.00	Result ND				
Duplicate						Lab ID =	991295-001
Parameter Chromium Lab Control Sample	Unit ug/L	DF 1.00	Result ND	Expected 0	RPD 0	Accepta 0 - 20	ince Range
Parameter Chromium Matrix Spike	Unit ug/L	DF 1.00	Result 4950	Expected 5000	Recovery 99.0	Acceptance Rang 90 - 110 Lab ID = 991295-00	
Parameter Chromium MRCCS - Secondary	Unit ug/L	DF 1.00	Result 1880	Expected/Added 2000(2000)	d Recovery 94.2	Accepta 75 - 125	ince Range
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 5030	Expected 5000	Recovery 101	Accepta 90 - 110	ince Range)
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 5350	Expected 5000	Recovery 107	Accepta 90 - 110	ince Range)
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result 4800	Expected 5000	Recovery 96.0	Accepta 90 - 110	ince Range)
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Rang	
Parameter Chromium Interference Check St	Unit ug/L andard AB	DF 1.00	Result ND	Expected 0	Recovery	Accepta	ince Range
Parameter Chromium	Unit ug/L	DF 1.00	Result 1990	Expected 2000	Recovery 99.7	Accepta 80 - 120	ince Range



Client: E2 Consulting Engineers, Inc.

Project Name:

PG&E Topock Project

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Project Number: 408401.01.DM

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Interference Check Standard AB

Parameter Chromium Unit ug/L DF 1.00

Result 2180 Expected 2000

Recovery 109 Acceptance Range

80 - 120



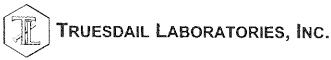
Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project

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Project Number: 408401.01.DM

Metals by EPA 200.8, Total Batch 090310A Parameter Unit Analyzed DF MDL RL Result 990967-001 Aluminum ug/L 09/03/2010 10:43 1.00 0.472 50.0 ND Antimony ug/L 09/03/2010 10:43 1.00 0.0990 10.0 ND Arsenic ug/L 09/03/2010 10:43 1.00 0.0520 10.0 ND Boron ug/L 09/03/2010 12:05 5.00 4.20 200. 1100 Chromium ug/L 09/03/2010 10:43 1.00 0.0190 1.0 ND Copper ug/L 09/03/2010 10:43 1.00 0.104 5.0 ND Lead ug/L 09/03/2010 10:43 1.00 0.0150 10.0 ND Nickel ug/L 09/03/2010 10:43 1.00 0.0410 10,0 ND Zinc ug/L 09/03/2010 10:43 1.00 0.263 10.0 ND 990967-002 Aluminum ug/L 09/03/2010 10:50 1.00 0.472 50,0 ND Antimony ug/L 09/03/2010 10:50 1.00 0.0990 10.0 ND Arsenic ug/L 09/03/2010 10:50 1.00 0.0520 10.0 ND Boron ug/L 09/03/2010 12:18 5.00 4.20 200. 1140 Copper ug/L 09/03/2010 10:50 1.00 0.104 5.0 ND Lead ug/L 09/03/2010 10:50 1.00 0.0150 10.0 ND Nickel ug/L 09/03/2010 10:50 1.00 0.0410 10.0 ND Zinc ug/L 09/03/2010 10:50 1.00 0.263 10.0 ND 990967-003 Antimony ug/L 09/03/2010 10:56 1.00 0.0990 10.0 ND Arsenic ug/L 09/03/2010 10:56 1.00 0.0520 10.0 ND Beryllium ug/L 09/03/2010 10:56 1.00 0.0300 1.0 ND Cadmium ug/L 0.0120 09/03/2010 10:56 1.00 3.0 ND Chromium ug/L 09/03/2010 10:56 1.00 0.0190 1.0 2.0 Copper ug/L 09/03/2010 10:56 1.00 0.104 5.0 ND Lead ug/L 09/03/2010 10:56 1.00 0.0150 10.0 ND Nickel ug/L 09/03/2010 10:56 1.00 0.0410 10.0 ND Selenium ug/L 09/03/2010 10:56 1.00 0.148 10.0 ND Thallium ug/L 09/03/2010 10:56 1.00 0.0170 1.0 ND Vanadium ug/L 09/03/2010 10:56 1.00 0.0120 5.0 ND Zinc ug/L 09/03/2010 10:56 1.00 0.263 10.0 ND



Client:E2 Consulting Engineers, Inc.Project Name:PG&E Topock ProjectPage 12 of 34Project Number:408401.01.DMPrinted 10/4/2010

Parameter Unit DF Result Aluminum ug/L 1.00 ND Arsenic ug/L 1.00 ND Barium ug/L 1.00 ND Beryllium ug/L 1.00 ND Cadmium ug/L 1.00 ND Chromium ug/L 1.00 ND Nickel ug/L 1.00 ND Selenium ug/L 1.00 ND Zinc ug/L 1.00 ND Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum	Method Blank						
Arsenic ug/L 1.00 ND Barium ug/L 1.00 ND Beryllium ug/L 1.00 ND Cadmium ug/L 1.00 ND Chromium ug/L 1.00 ND Nickel ug/L 1.00 ND Selenium ug/L 1.00 ND Zinc ug/L 1.00 ND Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum	Parameter	Unit	DF	Result			
Barium ug/L 1.00 ND Beryllium ug/L 1.00 ND Cadmium ug/L 1.00 ND Chromium ug/L 1.00 ND Nickel ug/L 1.00 ND Selenium ug/L 1.00 ND Zinc ug/L 1.00 ND Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Lead ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 30.2 30.7 1.81	Aluminum	ug/L	1.00	ND			
Beryllium	Arsenic	ug/L	1.00	ND			
Cadmium ug/L 1.00 ND Chromium ug/L 1.00 ND Nickel ug/L 1.00 ND Selenium ug/L 1.00 ND Zinc ug/L 1.00 ND Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Vanadium ug/L 1.00 ND Vanadium ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0<	Barium	ug/L	1.00	ND			
Chromium ug/L 1.00 ND Nickel ug/L 1.00 ND Selenium ug/L 1.00 ND Zinc ug/L 1.00 ND Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 </td <td>Beryllium</td> <td>ug/L</td> <td>1.00</td> <td>ND</td> <td></td> <td></td> <td></td>	Beryllium	ug/L	1.00	ND			
Nickel ug/L 1.00 ND Selenium ug/L 1.00 ND Zinc ug/L 1.00 ND Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 13.7 14.0 1.73 0 - 20 Arsenic ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Cadmium	ug/L	1.00	ND			
Selenium ug/L 1.00 ND Zinc ug/L 1.00 ND Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 13.7 14.0 1.73 0 - 20 Arsenic ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Chromium	ug/L	1.00	ND			
Zinc ug/L 1.00 ND Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20		ug/L	1.00	ND			
Antimony ug/L 1.00 ND Copper ug/L 1.00 ND Lead ug/L 1.00 ND Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Eab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 13.7 14.0 1.73 0 - 20 Arsenic ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 0 - 20		ug/L	1.00	ND			
Copper ug/L 1.00 ND Lead ug/L 1.00 ND Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 ND 0 0 0 - 20		ug/L	1.00	ND			
Lead ug/L 1.00 ND Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Antimony	ug/L	1.00	ND			
Thallium ug/L 1.00 ND Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Copper	ug/L	1.00	ND			
Vanadium ug/L 1.00 ND Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Lead	ug/L	1.00	ND			
Boron ug/L 1.00 ND Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 0 - 20	Thallium	ug/L	1.00	ND			
Manganese ug/L 1.00 ND Molybdenum ug/L 1.00 ND Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Vanadium	ug/L	1.00	ND			
Molybdenum ug/L 1.00 ND Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Boron	ug/L	1.00	ND			
Duplicate Lab ID = 990953-001 Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Manganese	ug/L	1.00	ND			
Parameter Unit DF Result Expected RPD Acceptance Range Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Molybdenum	ug/L	1.00	ND			
Aluminum ug/L 1.00 2.94 2.82 4.41 0 - 20 Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20	Duplicate						Lab ID = 990953-001
Arsenic ug/L 1.00 13.7 14.0 1.73 0 - 20 Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20		Unit	DF	Result	Expected	RPD	Acceptance Range
Barium ug/L 1.00 30.2 30.7 1.81 0 - 20 Beryllium ug/L 1.00 ND 0 0 0 - 20		ug/L	1.00	2.94	2.82	4.41	0 - 20
Beryllium ug/L 1.00 ND 0 0 0 - 20		ug/L	1.00	13.7	14.0	1.73	0 - 20
·		ug/L	1.00	30.2	30.7	1.81	0 - 20
Cadmium ug/L 1,00 ND 0 0 0 0 20	Beryllium	ug/L	1.00	ND	0	0	0 - 20
-9 115 5 0 0-20	Cadmium	ug/L	1.00	ND	0	0	0 - 20
Chromium ug/L 1.00 ND 0 0 0 - 20	Chromium	ug/L	1.00	ND	0	0	0 - 20
Nickel ug/L 1.00 ND 0 0 0 - 20	Nickel	ug/L	1.00	ND	0	0	0 - 20
Selenium ug/L 1.00 ND 0 0 0 - 20	Selenium	ug/L	1.00	ND	0	0	0 - 20
Zinc ug/L 1.00 2.17 2.26 3.75 0 - 20	Zinc	ug/L	1.00	2.17	2.26	3.75	0 - 20
Antimony ug/L 1.00 ND 0 0 0 - 20	Antimony	ug/L	1.00	ND	0	0	0 - 20
Copper ug/L 1.00 ND 0 0 0 - 20	Copper	ug/L	1.00	ND	0	0	0 - 20
Lead ug/L 1.00 ND 0 0 0 - 20	Lead	ug/L	1.00	ND	0	0	0 - 20
Thallium ug/L 1.00 ND 0 0 0 - 20	Thallium	ug/L	1.00	ND	0	0	0 - 20
Vanadium ug/L 1.00 ND 0 0 0 - 20	Vanadium	ug/L	1.00	ND	0	0	0 - 20
Boron ug/L 1.00 44.8 51.3 13.6 0 - 20	Boron	ug/L	1.00	44.8	51.3	13.6	0 - 20
Manganese ug/L 1.00 11.6 11.8 1.45 0 - 20	Manganese	ug/L	1.00	11.6	11.8	1.45	0 - 20
Molybdenum ug/L 1.00 3.38 3.73 9.99 0 - 20	Molybdenum	ug/L	1.00	3.38	3.73	9.99	0 - 20

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.



Client: E2 Consulting Engineers, Inc.	Project Name:	PG&E Topock Project	Page 13 of 34
	Project Number	: 408401,01,DM	Printed 10/4/2010

Lab Control Sample						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	50.9	50.0	102	90 - 110
Arsenic	ug/L	1.00	49.7	50.0	99.3	90 - 110
Barium	ug/L	1.00	48.2	50.0	96.5	90 - 110
Beryllium	ug/L	1.00	51.0	50.0	102.	90 - 110
Cadmium	ug/L	1.00	47.8	50.0	95.6	90 - 110
Chromium	ug/L	1.00	49.0	50.0	98.0	90 - 110
Nickel	ug/L	1.00	50.2	50.0	100	90 - 110
Selenium	ug/L	1.00	50.2	50.0	100	90 - 110
Zinc	ug/L	1.00	53.2	50.0	106	90 - 110
Antimony	ug/L	1.00	49.2	50.0	98.4	90 - 110
Copper	ug/L	1.00	49.2	50.0	98.5	90 - 110
Lead	ug/L	1.00	48.6	50.0	97.3	90 - 110
Thallium	ug/L	1.00	52.2	50.0	104	90 - 110
Vanadium	ug/L	1.00	47.7	50.0	95.4	90 - 110
Boron	ug/L	1.00	53.4	50.0	107	90 - 110
Manganese	ug/L	1.00	48.9	50.0	97.7	90 - 110
Molybdenum	ug/L	1.00	47.3	50.0	94.6	90 - 110
	-					
Matrix Spike	_					Lab ID = 990953-001
Parameter	Unit	DF	Result	Expected/Added	Recovery	
Parameter Aluminum	ug/L	1.00	Result 52.2			Lab ID = 990953-001
Parameter Aluminum Arsenic	ug/L ug/L	1.00 1.00	Result	Expected/Added	Recovery	Lab ID = 990953-001 Acceptance Range
Parameter Aluminum Arsenic Barium	ug/L	1.00 1.00 1.00	Result 52.2	Expected/Added 52.8(50.0)	Recovery 98.7	Lab ID = 990953-001 Acceptance Range 75 - 125
Parameter Aluminum Arsenic Barium Beryllium	ug/L ug/L ug/L ug/L	1.00 1.00	Result 52.2 54.8	Expected/Added 52.8(50.0) 64.0(50.0)	Recovery 98.7 81.7	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium	ug/L ug/L ug/L	1.00 1.00 1.00	Result 52.2 54.8 51.4	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0)	Recovery 98.7 81.7 41.4	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium	ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel	ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel Selenium	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9 52.2	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel	ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9 89.8	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel Selenium Zinc Antimony	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9 52.2	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 52.3(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9 89.8 104	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel Selenium Zinc Antimony Copper	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9 52.2 49.1	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 52.3(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9 89.8 104 93.6	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel Selenium Zinc Antimony Copper Lead	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9 52.2 49.1 51.7	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 52.3(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9 89.8 104 93.6 103	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel Selenium Zinc Antimony Copper Lead Thallium	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9 52.2 49.1 51.7 44.7	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 52.3(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9 89.8 104 93.6 103 89.3	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel Selenium Zinc Antimony Copper Lead Thallium Vanadium	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9 52.2 49.1 51.7 44.7 47.4	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 52.3(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9 89.8 104 93.6 103 89.3 94.7	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel Selenium Zinc Antimony Copper Lead Thallium	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9 52.2 49.1 51.7 44.7 47.4 47.1	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9 89.8 104 93.6 103 89.3 94.7	Lab ID = 990953-001 Acceptance Range 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125 75 - 125
Parameter Aluminum Arsenic Barium Beryllium Cadmium Chromium Nickel Selenium Zinc Antimony Copper Lead Thallium Vanadium	ug/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	Result 52.2 54.8 51.4 57.5 46.8 45.0 44.9 52.2 49.1 51.7 44.7 47.4 47.1 46.7	Expected/Added 52.8(50.0) 64.0(50.0) 80.7(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0) 50.0(50.0)	Recovery 98.7 81.7 41.4 115 93.7 89.9 89.8 104 93.6 103 89.3 94.7 94.1	Lab ID = 990953-001 Acceptance Range 75 - 125



Client: E2 Consulting Engi	neers, Inc.		Project Name: Project Number:	PG&E Topock Pro 408401.01.DM	ject	Page 14 of 34 Printed 10/4/2010
Matrix Spike Duplicate						Lab ID = 990953-001
Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Aluminum	ug/L	1.00	51.4	52.8(50.0)	97.1	75 - 125
Arsenic	ug/L	1.00	54.4	64.0(50.0)	80.8	75 - 125
Barium	ug/L	1.00	50.6	80.7(50.0)	39.7	75 - 125
Beryllium	ug/L	1.00	54.4	50.0(50.0)	109	75 - 125
Cadmium	ug/L	1.00	45.9	50.0(50.0)	91.8	75 - 125
Chromium	ug/L	1.00	45.1	50.0(50.0)	90.3	75 - 125
Nickel	ug/L	1.00	45.0	50.0(50.0)	90.0	75 - 125
Selenium	ug/L	1.00	53.0	50.0(50.0)	106	75 - 125
Zinc	ug/L	1.00	48.8	52.3(50.0)	93.2	75 - 125
Antimony	ug/L	1.00	50.9	50.0(50.0)	102	75 - 125
Copper	ug/L	1.00	44.6	50.0(50.0)	89.3	75 - 125
Lead	ug/L	1.00	46.4	50.0(50.0)	92.8	75 - 125
Thallium	ug/L	1.00	49.5	50.0(50.0)	99.1	75 - 125
Vanadium	ug/L	1.00	47.0	50.0(50.0)	94.0	75 - 125
Boron	ug/L	1.00	95.8	101(50.0)	89.0	75 - 125
Manganese	ug/L	1.00	47.8	61.8(50.0)	72.1	75 - 125
Molybdenum	ug/L	1.00	54.6	53.7(50.0)	102	75 - 125
MRCCS - Secondary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	51.4	50.0	103	90 - 110
Arsenic	ug/L	1.00	49.4	50.0	98.7	90 - 110
Barlum	ug/L	1.00	47.0	50.0	94.0	90 - 110
Beryllium	ug/L	1.00	52,1	50.0	104	90 - 110
Cadmium	ug/L	1.00	47.2	50.0	94.3	90 - 110
Chromium	ug/L	1.00	48.2	50.0	96.4	90 - 110
Nickel	ug/L	1.00	49.5	50.0	98.9	90 - 110
Selenium	ug/L	1.00	50.5	50.0	101	90 - 110
Zinc	ug/L	1.00	52.7	50.0	105	90 - 110
Antimony	ug/L	1.00	55.0	50.0	110.	90 - 110
Copper	ug/L	1.00	49.2	50.0	98.4	90 - 110
Lead	ug/L	1.00	51.1	50.0	102	90 - 110
Thallium	ug/L	1.00	50.2	50.0	100	90 - 110
Vanadium	ug/L	1.00	46.8	50.0	93.5	90 - 110
Boron	ug/L	1.00	51.4	50.0	103	90 - 110
Manganese	ug/L	1.00	51.7	50.0	103	90 - 110
Molybdenum	ug/L	1.00	45.3	50.0	90.7	90 - 110



Client: E2 Consulting En	gineers, Inc.		oject Name: oject Number	PG&E Topock r: 408401.01.DM	Project	Page 15 of 34 Printed 10/4/2010
MRCVS - Primary						
Parameter Aluminum MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.6	Expected 50.0	Recovery 105	Acceptance Range 90 - 110
Parameter Aluminum MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.5	Expected 50.0	Recovery 105	Acceptance Range 90 - 110
Parameter Aluminum MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.0	Expected 50.0	Recovery 104	Acceptance Range 90 - 110
Parameter Aluminum MRCVS - Primary	Unit ug/L	DF 1.00	Result 53.4	Expected 50.0	Recovery 107	Acceptance Range 90 - 110
Parameter Arsenic MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.8	Expected 50.0	Recovery 99.6	Acceptance Range 90 - 110
Parameter Arsenic MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.6	Expected 50.0	Recovery 97.2	Acceptance Range 90 - 110
Parameter Arsenic MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.5	Expected 50.0	Recovery 98.9	Acceptance Range 90 - 110
Parameter Arsenic MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.5	Expected 50.0	Recovery 98.9	Acceptance Range 90 - 110
Parameter Barium MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.3	Expected 50.0	Recovery 96.7	Acceptance Range 90 - 110
Parameter Barium MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.0	Expected 50.0	Recovery 100	Acceptance Range 90 - 110
Parameter Barium	Unit ug/L	DF 1.00	Result 50.9	Expected 50.0	Recovery 102	Acceptance Range 90 - 110



Client: E2 Consulting En	Engineers, Inc. Project Name: PG&E Topock Project Project Number: 408401.01.DM				Page 16 of 34 Printed 10/4/2010	
MRCVS - Primary						
Parameter Barium Beryllium	Unit ug/L ug/L	DF 1.00 1.00	Result 50.3 53.1	Expected 50.0 50.0	Recovery 101 106	Acceptance Range 90 - 110 90 - 110
MRCVS - Primary Parameter Beryllium MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.7	Expected 50.0	Recovery 105	Acceptance Range 90 - 110
Parameter Beryllium MRCVS - Primary	Unit ug/L	DF 1.00	Result 54.6	Expected 50.0	Recovery 109	Acceptance Range 90 - 110
Parameter Beryllium MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.6	Expected 50.0	Recovery 105	Acceptance Range 90 - 110
Parameter Cadmium MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.5	Expected 50.0	Recovery 98.9	Acceptance Range 90 - 110
Parameter Cadmium MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.4	Expected 50.0	Recovery 94.7	Acceptance Range 90 - 110
Parameter Cadmium MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.0	Expected 50.0	Recovery 96.0	Acceptance Range 90 - 110
Parameter Cadmium MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.5	Expected 50.0	Recovery 93.0	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.9	Expected 50.0	Recovery 93.8	Acceptance Range 90 - 110
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 45.8	Expected 50.0	Recovery 91.6	Acceptance Range 90 - 110
Parameter Chromium	Unit ug/L	DF 1.00	Result 46.0	Expected 50.0	Recovery 92.0	Acceptance Range 90 - 110



Client: E2 Consulting En	gineers, Inc	c. Project Name: PG&E Topock Project Project Number: 408401.01.DM				Page 17 of 34 Printed 10/4/2010
MRCVS - Primary						
Parameter Chromium MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.7	Expected 50.0	Recovery 95.5	Acceptance Range 90 - 110
Parameter Nickel MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.1	Expected 50.0	Recovery 92.3	Acceptance Range 90 - 110
Parameter Nickel MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.1	Expected 50.0	Recovery 94.2	Acceptance Range 90 - 110
Parameter Nickel MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.7	Expected 50.0	Recovery 93.4	Acceptance Range 90 - 110
Parameter Nickel MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.5	Expected 50.0	Recovery 97.1	Acceptance Range 90 - 110
Parameter Selenium MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.7	Expected 50.0	Recovery 99.5	Acceptance Range 90 - 110
Parameter Selenium MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.7	Expected 50.0	Recovery 97.5	Acceptance Range 90 - 110
Parameter Selenium MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.7	Expected 50.0	Recovery 97.4	Acceptance Range 90 - 110
Parameter Selenium MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.2	Expected 50.0	Recovery 98.4	Acceptance Range 90 - 110
Parameter Zinc MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.0	Expected 50.0	Recovery 100.	Acceptance Range 90 - 110
Parameter Zinc MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.3	Expected 50.0	Recovery 101	Acceptance Range 90 - 110
Parameter Zinc	Unit ug/L	DF 1.00	Result 50.7	Expected 50.0	Recovery 101	Acceptance Range 90 - 110

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Client: E2 Consulting En	gineers, Inc		oject Name: oject Numbe	PG&E Topock r: 408401.01.DM	Project	Page 18 of 34 Printed 10/4/2010
MRCVS - Primary						
Parameter Zinc MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.0	Expected 50.0	Recovery 102	Acceptance Range 90 - 110
Parameter Antimony MRCVS - Primary	Unit ug/L	DF 1.00	Result 50,9	Expected 50.0	Recovery 102	Acceptance Range 90 - 110
Parameter Antimony MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.2	Expected 50.0	Recovery 104	Acceptance Range 90 - 110
Parameter Antimony MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.9	Expected 50.0	Recovery 104	Acceptance Range 90 - 110
Parameter Antimony MRCVS - Primary	Unit ug/L	DF 1.00	Result 51.8	Expected 50.0	Recovery 104	Acceptance Range 90 - 110
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.2	Expected 50.0	Recovery 94.4	Acceptance Range 90 - 110
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.0	Expected 50.0	Recovery 92.0	Acceptance Range 90 - 110
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 45.4	Expected 50.0	Recovery 90.8	Acceptance Range 90 - 110
Parameter Copper MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.4	Expected 50.0	Recovery 92.7	Acceptance Range 90 - 110
Parameter Lead MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.9	Expected 50.0	Recovery 99.9	Acceptance Range 90 - 110
Parameter Lead MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.2	Expected 50.0	Recovery 100	Acceptance Range 90 - 110
Parameter Lead	Unit ug/L	DF 1.00	Result 50.4	Expected 50.0	Recovery 101	Acceptance Range 90 - 110



Client: E2 Consulting Er	Client: E2 Consulting Engineers, Inc.			Project Name: PG&E Topock Project Project Number: 408401.01.DM			
MRCVS - Primary							
Parameter Lead	Unit ug/L	DF 1.00	Result 47.9	Expected 50.0	Recovery 95.7	Acceptance Range 90 - 110	
MRCVS - Primary							
Parameter Thallium	Unit ug/L	DF 1.00	Result 52.4	Expected 50.0	Recovery 105	Acceptance Range 90 - 110	
MRCVS - Primary	l lait	DF	Donate	Commented	Dansus	A	
Parameter Thallium MRCVS - Primary	Unit ug/L	1,00	Result 52.7	Expected 50.0	Recovery 105	Acceptance Range 90 - 110	
Parameter Thallium	Unit ug/L	DF 1.00	Result 53.7	Expected 50.0	Recovery 107	Acceptance Range 90 - 110	
MRCVS - Primary							
Parameter Thallium	Unit ug/L	DF 1.00	Result 51.3	Expected 50.0	Recovery 103	Acceptance Range 90 - 110	
Vanadium MRCVS - Primary	ug/L	1.00	45.6	50.0	91.2	90 - 110	
Parameter Vanadium MRCVS - Primary	Unit ug/L	DF 1.00	Result 46.6	Expected 50.0	Recovery 93.2	Acceptance Range 90 - 110	
Parameter Vanadium MRCVS - Primary	Unit ug/L	DF 1.00	Result 45.9	Expected 50.0	Recovery 91.8	Acceptance Range 90 - 110	
Parameter Vanadium MRCVS - Primary	Unit ug/L	DF 1.00	Result 45.6	Expected 50.0	Recovery 91.2	Acceptance Range 90 - 110	
Parameter Boron MRCVS - Primary	Unit ug/L	DF 1.00	Result 52.3	Expected 50.0	Recovery 105	Acceptance Range 90 - 110	
Parameter Boron MRCVS - Primary	Unit ug/L	DF 1.00	Result 54.7	Expected 50.0	Recovery 109	Acceptance Range 90 - 110	
Parameter Boron	Unit ug/L	DF 1.00	Result 52.5	Expected 50.0	Recovery 105	Acceptance Range 90 - 110	

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Client: E2 Consulting Er	Client: E2 Consulting Engineers, Inc.			Project Name: PG&E Topock Project Project Number: 408401.01.DM		
MRCVS - Primary						
Parameter Boron MRCVS - Primary	Unit ug/L	DF 1.00	Result 50.1	Expected 50.0	Recovery 100	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 47.8	Expected 50.0	Recovery 95.6	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 48.7	Expected 50.0	Recovery 97.4	Acceptance Range 90 - 110
Parameter Manganese MRCVS - Primary	Unit ug/L	DF 1.00	Result 49.4	Expected 50.0	Recovery 98.9	Acceptance Range 90 - 110
Parameter Manganese Molybdenum MRCVS - Primary	Unit ug/L ug/L	DF 1.00 1.00	Result 46.5 59.4	Expected 50.0 50.0	Recovery 93.0 119	Acceptance Range 90 - 110 90 - 110
Parameter Molybdenum MRCVS - Primary	Unit ug/L	DF 1.00	Result 53.7	Expected 50.0	Recovery 107	Acceptance Range 90 - 110
Parameter Molybdenum MRCVS - Primary	Unit ug/L	DF 1.00	Result 54.2	Expected 50.0	Recovery 108	Acceptance Range 90 - 110
Parameter Molybdenum Interference Check S	Unit ug/L Standard A	DF 1.00	Result 52.7	Expected 50.0	Recovery 105	Acceptance Range 90 - 110
Parameter Aluminum Interference Check S	Unit ug/L Standard A	DF 1.00	Result 49.9	Expected 50.0	Recovery 99.8	Acceptance Range 80 - 120
Parameter Aluminum Interference Check S	Unit ug/L	DF 1.00	Result 49.2	Expected 50.0	Recovery 98.3	Acceptance Range 80 - 120
Parameter Arsenic	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range



Client: E2 Consulting E	ngineers, Inc.		oject Name: oject Number	PG&E Topock F :: 408401.01.DM	Project	Page 21 of 34 Printed 10/4/2010
Interference Check S	Standard A					
Parameter Arsenic	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Interference Check S		D.E.	D 11	.		
Parameter Barium	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Interference Check S	Standard A					
Parameter Barium	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Beryllium Interference Check S	ug/L Standard A	1.00	ND	0		
Parameter Beryllium Cadmium Interference Check	Unit ug/L ug/L Standard A	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Cadmium Interference Check	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Interference Check	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Chromium Nickel	Unit ug/L ug/L	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Interference Check			- "			
Parameter Nickel Selenium Interference Check	Unit ug/L ug/L Standard A	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Selenium Interference Check	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Zinc	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range



Client: E2 Consulting E	ngineers, Inc		oject Name: oject Numbe	PG&E Topock F r: 408401.01.DM	Project	Page 22 of 34 Printed 10/4/2010
Interference Check S	Standard A					
Parameter Zinc Antimony	Unit ug/L ug/L	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Interference Check S			<u> </u>		_	
Parameter Antimony Interference Check S	Unit ug/L Standard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Copper	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Interference Check S	Standard A					
Parameter Copper Lead	Unit ug/L ug/L	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Interference Check S	_	1.00	ND	Ū		
Parameter Lead Thallium Interference Check 5	Unit ug/L ug/L Standard A	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Thallium Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Vanadium Interference Check 5	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Vanadium Boron Interference Check S	Unit ug/L ug/L Standard A	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Boron Manganese Interference Check S	Unit ug/L ug/L	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Manganese	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range

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Client: E2 Consulting En	gineers, Inc.		oject Name: oject Number	PG&E Topock F :: 408401.01.DM	Project	Page 23 of 34 Printed 10/4/2010
Interference Check St	tandard A					
Parameter Molybdenum Interference Check S	Unit ug/L tandard A	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Molybdenum Interference Check S	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Aluminum Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 48.8	Expected 50.0	Recovery 97.6	Acceptance Range 80 - 120
Parameter Aluminum Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 49.4	Expected 50.0	Recovery 98.7	Acceptance Range 80 - 120
Parameter Arsenic Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 49.8	Expected 50.0	Recovery 99.6	Acceptance Range 80 - 120
Parameter Arsenic Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 49.5	Expected 50.0	Recovery 99.0	Acceptance Range 80 - 120
Parameter Barium Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Barium Beryllium Interference Check S	Unit ug/L ug/L	DF 1.00 1.00	Result ND ND	Expected 0 0	Recovery	Acceptance Range
Parameter Beryllium Cadmium	Unit ug/L ug/L	DF 1.00 1.00	Result ND 48.1	Expected 0 50.0	Recovery 96.2	Acceptance Range 80 - 120
Interference Check S Parameter Cadmium Interference Check S	Unit ug/L	DF 1.00	Result 48.2	Expected 50.0	Recovery 96.3	Acceptance Range 80 - 120
Parameter Chromium	Unit ug/L	DF 1.00	Result 47.4	Expected 50.0	Recovery 94.8	Acceptance Range 80 - 120



Client: E2 Consulting Er	gineers, Inc.		Project Name: Project Number:	PG&E Topock P 408401.01.DM	roject	Page 24 of 34 Printed 10/4/2010
Interference Check S	tandard AB					
Parameter Chromium Nickel Interference Check S	Unit ug/L ug/L tandard AB	DF 1.00 1.00	Result 45.4 46.0	Expected 50.0 50.0	Recovery 90.8 92.1	Acceptance Range 80 - 120 80 - 120
Parameter Nickel Selenium Interference Check S	Unit ug/L ug/L	DF 1.00 1.00		Expected 50.0 0	Recovery 97.5	Acceptance Range 80 - 120
Parameter Selenium Interference Check S	Unit ug/L tandard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Zinc Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 50.5	Expected 50.0	Recovery 101.	Acceptance Range 80 - 120
Parameter Zinc Antimony Interference Check S	Unit ug/L ug/L tandard AB	DF 1.00 1.00		Expected 50.0 0	Recovery 95.9	Acceptance Range 80 - 120
Parameter Antimony Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Copper Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 45.9	Expected 50.0	Recovery 91.8	Acceptance Range 80 - 120
Parameter Copper Lead Interference Check S	Unit ug/L ug/L tandard AB	DF 1.00 1.00		Expected 50.0 0	Recovery 98.5	Acceptance Range 80 - 120
Parameter Lead Thallium Interference Check S	Unit ug/L ug/L tandard AB	DF 1.00 1.00		Expected 0 0	Recovery	Acceptance Range
Parameter Thallium	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range

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Client: E2 Consulting Eng	jineers, Inc.		oject Name: oject Numbei	PG&E Topock F r: 408401.01.DM	Project	Page 25 of 34 Printed 10/4/2010
Interference Check Sta	andard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Vanadium	ug/L	1.00	ND	0		
Interference Check Sta	andard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Vanadium	ug/L	1.00	ND	0		
Boron	ug/L	1.00	ND	0		
Interference Check Sta	andard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	46.4	50.0	92.9	80 - 120
Interference Check St	andard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	52.4	50.0	105	80 - 120
Interference Check St	andard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Molybdenum	ug/L	1.00	ND	0		
Interference Check St	andard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Molybdenum	ug/L	1.00	ND	0		
Serial Dilution						Lab ID = 990967-001
Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Boron	ug/L	25.0	1140	1100	3.49	0 - 10
Serial Dilution						Lab ID = 990967-002
Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	25.0	893	962	7.38	0 - 10
Boron	ug/L	25.0	1160	1140	1.48	0 - 10

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Metals by EPA 200.8, Total

Batch 090810A

modulo by Elizabolo, it	J CCC 1		34(0)	0000,011				
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
990967-003 Mercury		ug/L	09/08	3/2010 23:06	5.00	0.198	1.0	ND
Method Blank						, , , , , , , , , , , , , , , , , , , ,		
Parameter Mercury	Unit ug/L	DF 1.00	Result ND					
Duplicate							Lab ID =	990967-003
Parameter Mercury Lab Control Sample	Unit ug/L	DF 5.00	Result ND	Expected 0		RPD 0	Accepta 0 - 20	ance Range
Parameter Mercury Matrix Spike	Unit ug/L	DF 1.00	Result 2.17	Expected 2.00		Recovery 108	90 - 110	ance Range) 990967-003
Parameter Mercury Matrix Spike Duplicat	Unit ug/L te	DF 5.00	Result 9.70	Expected/Ac 10.0(10.0)	ided	Recovery 97.0	75 - 125	ance Range 5 990967-003
Parameter Mercury MRCCS - Secondary	Unit ug/L	DF 5.00	Result 9.96	Expected/Ac 10.0(10.0)	dded	Recovery 99.6	Accepta 75 - 125	ance Range
Parameter Mercury MRCVS - Primary	Unit ug/L	DF 1.00	Result 2.04	Expected 2.00		Recovery 102.	Accepta 90 - 110	ance Range)
Parameter Mercury Interference Check S	Unit ug/L standard A	DF 1.00	Result 2.05	Expected 2.00		Recovery 102	Accepta 90 - 110	ance Range)
Parameter Mercury Interference Check S	Unit ug/L itandard A	DF 1,00	Result 2.09	Expected 2.00		Recovery 104	Accepta 80 - 120	ance Range)
Parameter Mercury Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 2.02	Expected 2.00		Recovery 101	Accepta 80 - 120	ance Range)
Parameter Mercury	Unit ug/L	DF 1.00	Result 2.01	Expected 2.00	l	Recovery 100	Accepta 80 - 120	ance Range)

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project Page 27 of 34

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Interference Check Standard AB

DF Recovery Parameter Unit Result Expected Acceptance Range Mercury ug/L 1.00 1.99 2.00 99.4 80 - 120



Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project Page 28 of 34

Project Number: 408401.01.DM Printed 10/4/2010

Metals by EPA 200.8, Tot	al		Batch	092210A			s eniant	
Parameter	****	Unit	Ana	lyzed	DF	MDL	RL	Result
990967-001 Barium		ug/L	09/22	/2010 12:16	5.00	0.185	10.0	ND
Manganese		ug/L	09/22	/2010 12:16	5.00	0.210	1.0	ND
Molybdenum		ug/L	09/22	/2010 12:16	5.00	0.660	10,0	16.5
990967-002 Barium		ug/L		/2010 12:43	5.00	0.185	10.0	26.0
Manganese		ug/L		/2010 12:43	5.00	0.210	1.0	10.3
Molybdenum		ug/L	09/22	/2010 12:43	5.00	0.660	10.0	22.4
990967-003 Barium		ug/L		/2010 12:50	5.00	0.185	10.0	ND
Cobalt		ug/L		/2010 12:50	5.00	0.0750	5.0	ND
Molybdenum		ug/L		/2010 12:50	5.00	0.660	10.0	ND
Silver		ug/L		/2010 12:50	5.00	0.200	5.0	ND
Method Blank						**************************************	······································	
Parameter	Unit	DF	Result					
Barium	ug/L	1.00	ND					
Cobalt	ug/L	1.00	ND					
Silver	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Molybdenum	ug/L	1.00	ND					
Duplicate							Lab ID =	990967-001
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	nce Range
Barium	ug/L	5.00	10.2	9.78	;	3.94	0 - 20	
Cobalt	ug/L	5.00	ND	0	I	ס	0 - 20	
Silver	ug/L	5.00	ND	0	I	0	0 - 20	
Manganese	ug/L	5.00	ND	0	1	0	0 - 20	
Molybdenum	ug/L	5.00	16.7	16.5	ı	0.844	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Barium	ug/L	1.00	48.8	50.0		97.5	90 - 110)
Cobalt	ug/L	1.00	51.5	50.0		103	90 - 110)
Silver	ug/L	1.00	48.5	50.0		96.9	90 - 110)
Manganese	ug/L	1.00	52.7	50.0		105	90 - 110)
Moiybdenum	ug/L	1.00	46.3	50.0	!	92.6	90 - 110)

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.



Client: E2 Consulting Engi	neers, Inc.		oject Name: oject Number:	PG&E Topock Pro 408401.01.DM	ject	Page 29 of 34 Printed 10/4/2010
Matrix Spike						Lab ID = 990967-001
Parameter Barium	Unit ug/L	DF 5.00	Result 255	Expected/Added 260(250.)	Recovery 97.9	Acceptance Range 75 - 125
Cobalt	ug/L	5.00	249.	250.(250.)	99.6	75 - 125
Silver	ug/L	5.00	197	250.(250.)	78.7	75 - 125
Manganese	ug/L	5.00	256	250.(250.)	102	75 - 125
Molybdenum	ug/L	5.00	245.	267(250.)	91.4	75 - 125
Matrix Spike Duplicate	-					Lab ID = 990967-001
Parameter Barium	Unit ug/L	DF 1.00	Result 256	Expected/Added 260(250.)	Recovery 98.4	Acceptance Range 75 - 125
Cobalt	ug/L ug/L	1.00	248	250.(250.)	99.2	75 - 125
Silver	ug/L ug/L	1.00	193.	250.(250.)	77.2	75 - 125
Manganese	ug/L ug/L	1.00	255	250.(250.)	102	75 - 125
Molybdenum	ug/L ug/L	1.00	249	267(250.)	93.1	75 - 125
MRCCS - Secondary	ugre	1.00	210	207 (200.7	33.1	, 0 120
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Barium	ug/L	1.00	49.6	50.0	99.1	90 - 110
Cobalt	ug/L	1.00	49.1	50.0	98.3	90 - 110
Silver	ug/L	1.00	48.6	50.0	97.3	90 - 110
Manganese	ug/L	1.00	50.0	50.0	100	90 - 110
Molybdenum	ug/L	1.00	47.7	50.0	95.4	90 - 110
MRCVS - Primary	J					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Barium	ug/L	1.00	50.6	50.0	101	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Barium	ug/L	1.00	51.7	50.0	103	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Cobalt	ug/L	1.00	50.6	50.0	101	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Cobalt	ug/L	1.00	52.0	50.0	104	90 - 110
Silver	ug/L	1.00	47.6	50.0	95.3	90 - 110

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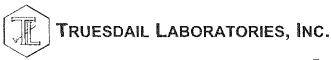


Client: E2 Consulting E	ngineers, Inc.		oject Name: oject Number	PG&E Topock P : 408401.01.DM	roject	Page 30 of 34 Printed 10/4/2010
MRCVS - Primary						
Parameter Silver	Unit ug/L	DF 1.00	Result 46.3	Expected 50.0	Recovery 92.7	Acceptance Range 90 - 110
Manganese MRCVS - Primary	ug/L	1.00	53.2	50.0	106	90 - 110
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	54.8	50.0	110	90 - 110
Molybdenum	ug/L	1.00	54.4	50.0	109	90 - 110
MRCVS - Primary						
Parameter Molybdenum	Unit ug/L	DF 1.00	Result 46.0	Expected 50.0	Recovery 91.9	Acceptance Range 90 - 110
Interference Check	Standard A					
Parameter Barium	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Interference Check	-	1,00	, 10	•		
	Unit	DF	Result	Expected	Recovery	Acceptance Range
Parameter Barium	ug/L	1,00	ND	0	Recovery	Acceptance range
Interference Check	-	,,,,,,	,,,_	•		
	Unit	DF	Result	Expected	Recovery	Acceptance Range
Parameter Cobalt	ug/L	1.00	ND	0	recovery	Acceptance Mange
Interference Check		1.00	,,,,	· ·		
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Cobalt	ug/L	1.00	ND	0	110001019	7 tooptanoo 1 tango
Silver	ug/L	1.00	ND	0		
Interference Check	_					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Silver	ug/L	1.00	ND	0		1 3
Manganese	ug/L	1.00	ND	0		
Interference Check	-					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	ND	0	,	. 5
Interference Check	Standard A					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Molybdenum	ug/L	1.00	ND	0	•	· · · · ·

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.



Client: E2 Consulting Engi	neers, Inc.		oject Name: oject Number	PG&E Topock Pi : 408401,01.DM	roject	Page 31 of 34 Printed 10/4/2010
Interference Check Stat	ndard A					
Parameter Molybdenum Interference Check Stal	Unit ug/L ndard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Barium Interference Check Sta	Unit ug/L ndard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Barium Interference Check Sta	Unit ug/L ndard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Cobalt Interference Check Sta	Unit ug/L ndard AB	DF 1.00	Result 49.0	Expected 50.0	Recovery 98.0	Acceptance Range 80 - 120
Parameter Cobalt Interference Check Sta	Unit ug/L ndard AB	DF 1.00	Result 50.7	Expected 50.0	Recovery 101	Acceptance Range 80 - 120
Parameter Silver Interference Check Sta	Unit ug/L ndard AB	DF 1.00	Result 47.4	Expected 50.0	Recovery 94,9	Acceptance Range 80 - 120
Parameter Silver Manganese Interference Check Sta	Unit ug/L ug/L ndard AB	DF 1.00 1.00	Result 46.2 52.3	Expected 50.0 50.0	Recovery 92.5 105	Acceptance Range 80 - 120 80 - 120
Parameter Manganese Interference Check Sta	Unit ug/L ndard AB	DF 1.00	Result 50.2	Expected 50.0	Recovery 100	Acceptance Range 80 - 120
Parameter Molybdenum Interference Check Sta	Unit ug/L ndard AB	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range
Parameter Molybdenum	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Acceptance Range



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Total Dissolved Solids I	by SM 254	0 C	Batch	09TDS10A		9/7/2010			
Parameter	Mark Company	Unit	Ana	lyzed	DF	MDL	RL	Result	
990967-001 Total Dissolved	Solids	mg/L	09/07	7/2010	1.00	0.434	250.	4550	
990967-002 Total Dissolved	Solids	mg/L	09/07	7/2010	1.00	0.434	250.	5550	
990967-003 Total Dissolved	Solids	mg/L	09/07	7/2010	1.00	0.434	50.0	804.	
Method Blank									
Parameter	Unit	DF	Result						
Total Dissolved Solids	mg/L	1.00	ND						
Duplicate							Lab ID =	991017-011	
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	ance Range	
Total Dissolved Solids	mg/L	1.00	576.	583.		1.21	0 - 5		
Lab Control Sample									
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	ance Range	
Total Dissolved Solids	mg/L	1.00	495.	500.		99.0	90 - 11	0	



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Printed 10/4/2010

Ammonia Nitrogen by SM	4500-NH	3D	Batch	09NH3-E10B	entro Entro		9/3/2010	
Parameter	14.1	Unit	Anal	yzed	DF	MDL	RL	Result
990967-001 Ammonia as N		mg/L	09/03	/2010 1	.00	0.00200	0.500	ND
990967-002 Ammonia as N		mg/L	09/03	/2010 1	.00	0.00200	0.500	ND
Method Blank								
Parameter Ammonia as N Duplicate	Unit mg/L	DF 1.00	Result ND				Lab ID =	990967-002
Parameter Ammonia as N	Unit mg/L	DF 1.00	Result ND	Expected 0	RPI 0	D	Accepta 0 - 20	nce Range
Lab Control Sample Parameter Ammonia as N Matrix Spike	Unit mg/L	DF 1.00	Result 10.3	Expected 10.0		covery 03	90 - 110	nce Range 990967-001
Parameter Ammonia as N Matrix Spike Duplicate	Unit mg/L	DF 1,00	Result 5.95	Expected/Adde 6.00(6.00)		overy 9.2	75 - 125	nce Range 990967-001
Parameter Ammonia as N MRCCS - Secondary	Unit mg/L	DF 1.00	Result 6.18	Expected/Adde 6.00(6.00)		covery 03	Accepta 75 - 125	nce Range
Parameter Ammonia as N MRCVS - Primary	Unit mg/L	DF 1.00	Result 5.75	Expected 6.00		covery 5.8	Accepta 90 - 110	ince Range)
Parameter Ammonia as N	Unit mg/L	DF 1.00	Result 5.77	Expected 6.00		covery 6.1	Accepta 90 - 110	ince Range)



Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project Page 34 of 34

Project Number: 408401.01.DM Printed 10/4/2010

Turbidity by SM 2130 B		· 五	Batch	09TUC10B			9/2/2010	
Parameter		Unit	Anal	yzed	DF	MDL	RL	Result
990967-001 Turbidity		NTU	09/02	/2010	1.00	0.0140	0.100	0.117
990967-002 Turbidity		NTU	09/02	/2010	1.00	0,0140	0.100	0.109
Method Blank								
Parameter	Unit	DF	Result					
Turbidity	NTU	1.00	ND					
Duplicat e							Lab ID = 9	990967-002
Parameter	Unit	DF	Result	Expected	RF	D	Accepta	nce Range
Turbidity	NTŲ	1.00	0.110	0.109	C).913	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Turbidity	NTU	1.00	7.73	8.00	Ş	96.6	90 - 110	
Lab Control Sample Du	plicate							
Parameter	Unit	DF	Result	Expected	Re	covery	Accepta	nce Range
Turbidity	NTU	1.00	7.70	8.00	9	96.2	90 - 110	****

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

For Mona Nassimi

Manager, Analytical Services



Total Dissolved Solids by SM 2540 C

Calculations

Batch: 09TDS10A Date Calculated: 9/9/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0,5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL , ppm	Reported Value, ppm	DF
BLANK	100	122.0336	122.0337	122.0337	0.0000	No	0.0001	1.0	25.0	ND	1
990966-1	20	50.5021	50.5708	50.5704	0.0004	No	0.0683	3415.0	125.0	3415.0	11
990966-2	10	49,4138	49.4628	49,4628	0.0000	No	0.0490	4900.0	250.0	4900.0	1
990967-1	10	49.9005	49.9464	49.946	0.0004	No	0.0455	4550.0	250.0	4550.0	1
990967-2	10	49.7273	49.7828	49.7828	0.0000	No	0.0555	5550.0	250.0	5550.0	11
990967-3	50	75.5468	75.5874	75.5870	0.0004	No	0.0402	804.0	50.0	804.0	1
990995	100	73.6657	73.7185	73,7185	0,0000	No	0.0528	528.0	25.0	528.0	11
991013-2	200	105.3616	105.3815	105.3811	0.0004	No	0.0195	97.5	12.5	97.5	11
991013-3	100	114.3497	114,3638	114.3638	0.0000	No	0.0141	141.0	25.0	141.0	11
991014-1	50	72.4784	72.5292	72.5291	0.0001	No	0.0507	1014.0	50.0	1014.0	1
991014-2	50	65.8331	65.8633	65.863	0.0003	No	0.0299	598.0	50.0	598.0	1
990995D	100	68.7064	68.7600	68.76	0.0000	No	0.0536	536.0	25.0	536.0	1
991014-3	100	69.2827	69.3311	69.3311	0.0000	No	0.0484	484.0	25.0	484.0	1
991014-4	100	67.8875	67,9296	67.9293	0.0003	No	0.0418	418.0	25.0	418.0	1
991017-10	100	67.8134	67.8740	67.8737	0.0003	No	0.0603	603.0	25.0	603.0	11
991017-11	100	68.4740	68.5327	68,5323	0.0004	No	0.0583	583.0	25.0	583.0	11
991017-11D	100	67.9305	67.9881	67.9881	0.0000	No	0.0576	576.0	25.0	576.0	1
LCS	100	112.1689	112.2187	112.2184	0.0003	No	0.0495	495.0	25.0	495.0	1

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 09TDS10A Date Calculated: 9/9/10

Laboratory Number	EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
990966-1	5900	0.58	3835	0.89
990966-2	8620	0.57	5603	0.87
990967-1	7360	0.62	4784	0.95
990967-2	7930	0.70	5154.5	1.08
990967-3	1210	0.66	786.5	1.02
990995	854	0.62	555.1	0.95
991013-2	177	0.55	115.05	0.85
991013-3	277	0.51	180.05	0.78
991014-1	1790	0.57	1163.5	0.87
991014-2	1010	0.59	656.5	0.91
990995D	854	0.63	555.1	0.97
991014-3	926	0.52	601.9	0.80
991014-4	827	0.51	537.55	0.78
991017-10	928	0.65	603.2	1.00
991017-11	930	0.63	604.5	0.96
991017-11D	930	0.62	604.5	0.95
(
	-			
	h			



M

Con 01/10/60 Rec'd

> CHAIN OF CUSTODY RECORD [IM3Plant-WDR-272]

> > 14201 Franklin Avenue, Tustin, CA 92780-7008 (714)730-6239 FAX: (714) 730-6462 www.fruesdail.com

TRUESDAIL LABORATORIES, INC.

COC Number

10 Days PAGE TURNAROUND TIME DATE 09/01/10

ᆼ

2000 Cook COMMENTS NUMBER OF CONTAINERS 4 Total Metals (200.7) Cr (300.0) F. NO3, NO2, SO4 70c (5310 C) 4 (0.00E) anoinA × × Total Metals (200.7) See List Below (EHN-0054) BINOMINA × × × ^{Turb} (2130) , (0 0485) 20T Title 22 Metals List (200.7, 200.8, 245.1) × × × × Cr(VI) (278.6) Lab Filtered × × × × × DESCRIPTION FAX 530-339-3303 SK OK 09/01/10 08/0 R 뿔 09/01/10 09/01/10 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 PG&E Topock IM3 530-229-3303 CH2M HILL Æ2 408401.01.DM SC-100B-WDR-272 SC-700B-WDR-272 SC-701-WDR-272 SAMPLERS (SIGNATURE PROJECT NAME P.O. NUMBER SAMPLE 1.D. COMPANY ADDRESS PHONE

DATA ON BACK

TOTAL NUMBER OF CONTAINERS

E.J

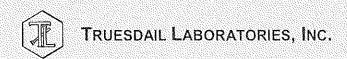
	CHAIN OF CUSTODY SIGNATU	ODY SIGNATURE RECORD	9-1-10	SAMPLE CONDITIONS
Signature (Relinquished)	Printed The Name	Company OME	Date/ Time /S.A.)	RECEIVED COOL [] WARM [] "F
Signature (Received) $\left\{ \mathcal{C}_{L_{IJ}} \right\}$	Printed A	o fax (Agency) To hand	77	CUSTODY SEALED YES 🔲 NO 🗖
Signature (Relinquished)	Printed A	Company/ Com	0.7	SPECIAL REQUIREMENTS:
Signature (Received)	Printed Name Name	Of Grives Agency	Datel 9, 00	The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, Mo, Ni, Fe, Zn
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Tíme	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	

		ANALYSIS	pH	EC 1.58	Cr6	78TH (TEMP. 79.8
900В 100В	0800 0800	0806					-
图 701	1330	1336	6.5	1243	-005	<i>₄ 0</i> 03	91.7

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

			1			
Date	Lab Number	***************************************	Buffer Added (mL)	Final pH	Time Buffered	Initials
0827/10	990893-5	9.5	N/A	15/A	N/A	SB
	1 -6			Ì		1
4	₩ -7	4	1	J	1	•
08/27/10	990902	7.0	5,00	9.5	11:00	SB
08/28/10	990908-1	7.0	2,00	9,5	19:00	SB
	ールース				ŀ	1
4	~ -3	J	<u> </u>		J	V
08/27/10	990909	7.0	2.00	9:5	19:00	SB
09/02/10	990966-1	7.0	5,00	9.5	8:15	SB
09/02/10	990967-1	7.0	2' @:	9.5	영: Oc	SB
<u> </u>	1 -2			(* 1	1
4	7 -3	75	4		~	
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Sample Integrity & Analysis Discrepancy Form

Clier	nt: E2	Lab# <u>9909</u> 67
Date	Delivered: 9 / 1 /10 Time: 21:30 By: □Mail □Fiel	
1.	Was a Chain of Custody received and signed?	dayes and and
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 □N/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No ŒWA
5.	Were all requested analyses understood and acceptable?	QYes ⊠No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>3 ° C</u>	DYes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	□Ves □No □N/A
8.	Were sample custody seals intact?	□Yes □No □N/A
9.	Does the number of samples received agree with COC?	WYes □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	ØYYes □No □N/A
12.	Were samples pH checked? pH = <u>See</u> 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 □ Std	ØYes □No □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground W	later □Waste Water ther <u>WATE</u> R
16.	Comments:	
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Kafael Davila

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

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

September 30, 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-272 PROJECT, SLUDGE

MONITORING,

TLI NO.: 990968

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-272 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 September 1, 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.

The reported result (Non-detect) for Total Thallium is from a 20x dilution, although the reporting limit exceeds the contract required detection limit. The recoveries for the straight run for the matrix spike (MS) and the post-digestion matrix spike (PDMS) were approximately 50%. The recovery for the PDMS with a 5x dilution was approximately 70%. The PDMS recovery for the 20x dilution was 96% and was within acceptable limits.

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. gg

K.R.P. Iyer

Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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.: 408401.01.DM

Laboratory No.: 990968

Date: September 30, 2010 Collected: September 1, 2010 Received: September 1, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 300.0	Fluoride	Giawad Ghenniwa
SM 2540 B	% Moisture	Gautam Savani
SW 6010B	Metals by ICP	Ethel Suico
SW 6020	Metals by ICP/MS	Daniel Kang / Hope Trinidad
SW 7199	Hexavalent Chromium	Sonya Bersudsky



Established 1931

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

Laboratory No.: 990968

Date Received: September 1, 2010 Revision 1; October 5, 2010

Attention: Shawn Duffy

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

Oakland, CA 94612

Project Name: PG&E Topock Project Project No.: 408401.01.DM

P.O. No.: 408401.01.DM

Analytical Results Summary

		- Avantamental
SM 2540 B % Moisture	%	51.3
EPA 300.0 Fluoride	mg/kg	97.7
SW 7199 Hexavalent Chromium	mg/kg	22.1
Sample Time		udge-WDR-272 08:00 22.1 97.7 51.3
Sample I.D.	The control of the co	SC-Sludge-WD
<u>Lab I.D.</u>	00000	298088

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Result above or equal to 0.01ppm 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: Results below 0.01ppm wilt have two (2) significant figures.

TRUESDAIL LABORATORIES, INC.

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.

155 Grand Ave. Suite 1000

Oakland, CA 94612 Attention: Shawn Duffy Project Name: PG&E Topock Project Project No.: 408401.01.DM

P.O. No.: 408401.01.DM

Date Received: September 1, 2010

Laboratory No.: 990968

Revision 1

Analytical Results Summary

Total Metal Analyses as Requested
METALS ANALYSIS:

	<u>.</u>	Date of Analysis:	Antimony SW 6010B 09/13/10	Arsenic SW 6010B 09/13/10	Barium SW 6010B 09/13/10	Beryllium SW 6010B 09/13/10	Cadmium SW 6010B 09/13/10	Chromium SW 6010B 09/15/10	Cobalt SW 6010B 09/13/10	Copper SW 6010B 09/13/10	Lead SW 6010B 09/13/10
990968	SC-Sludge-WDR-272 08:00	R-272 08:00	1119/Ng 25.5	3.93	mg/kg 52.9	nig/kg ND	7.93	mg/kg 3410	6.04	1119/kg 50.2	5.46
Lab I.D.	Sample ID	Date of Analysis: Time Coll.	Mercury SW 6020 09/15/10 mg/kg	Molybdenum SW 6010B 09/13/10 mg/kg	Nickel SW 6010B 09/13/10 mg/kg	Sefenium SW 6010B 09/27/10 mg/kg	Silver SW 6010B 09/13/10 mg/kg	Thallium SW 6010B 09/15/10 mg/kg	Vanadium SW 6010B 09/13/10 mg/kg	Zinc SW 6010B 09/13/10 mg/kg	
896066	SC-Sludge-WDR-272 08:00	3-272 08:00	0.140	3.33	19.8	Q	Q	ND	76.1	27.5	

NOTES:

ND: Not detected, or below limit of detection

Truesdail Laboratories, Inc.

Laboratory

EXCELLENCE IN INDEPENDENT TESTING



Relative

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) Soil Sample Project Name: PG&E Topock Project

Project No.: 408401.01.DM P.O. No.: 408401.01.DM Prep. Batch: 09CrH10D

Laboratory No.: 990968

Date: October 5, 2010 Collected: September 1, 2010

QC Within

Received: September 1, 2010 Prep/ Analyzed: September 9, 2010

Analytical Batch: 09CrH10D

Revision 1

Acceptance

Investigation:

Hexavalent Chromium by IC Using Method SW 7199

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	<u>Units</u>	<u>DF</u>	RL	Results
990968	SC-Sludge-WDR-2	72 08:00	12:43	mg/kg	5.00	4.11	22.1

QA/QC Summary

Sample

	QC STI	D I.D.	Number	Concentra			entration	Percent Difference	limits	Control	
	Duplic	cate	990968	22.1			22.3	0.77%	≤ 20%	Yes	
QC Std I.D,	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.		iS ount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	990968	22.1	10.0	16.4	16	34	194	187	105%	75-125%	Yes
IMS	990968	22.1	50.0	35.2	17	59	1620	1781	90.8%	75-125%	Yes
PDMS	990968	22.1	25.0	13.2	30	20	352	351	100%	85.115%	Voc

Duplicate

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.400		<0.400	Yes
MRCCS	1.94	2.00	96.8%	90% - 110%	Yes
MRCVS#1	2.02	2.00	101%	90% - 110%	Yes
LCS	1.92	2.00	96.1%	80% - 120%	Yes

ND: Below the reporting limit (Not Detected).

QC STD I.D.

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

💪 – Mona Nassimi, Manager Analytical Services

TRUESDAIL LABORATORIES, INC.

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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.: 408401.01.DM P.O. No.: 408401.01.DM Laboratory No.: 990968

Date: October 5, 2010

Collected: September 1, 2010 Received: September 1, 2010 Prep/ Analyzed: September 15, 2010

Analytical Batch: 09SOLID10A

Revision 1

Investigation:

Total Solids by SM 2540 B

REPORT

Analytical Results % Moisture

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

 990968
 SC-Sludge-WDR-272
 08:00
 %
 51.3

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control	
Duplicate	990968	51.3	51.7	0.65%	≤ 20%	Yes	

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

TRUESDAIL LABORATORIES, INC.

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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) Soil Sample Project Name: PG&E Topock Project

Project No.: 408401.01.DM P.O. No.: 408401.01.DM Laboratory No.: 990968

Date: October 5, 2010

Collected: September 1, 2010 Received: September 1, 2010

Prep/ Analyzed: September 2, 2010

Analytical Batch: 09AN10C

Revision 1

Investigation:

Fluoride by Ion Chromatography using EPA 300.0

Analytical Results Fluoride

TLI I.D. Field I.D. Sample Time **Run Time** <u>Units</u> DF RL Results 990968 SC-Sludge-WDR-272 08:00 23:43 mg/kg 1.00 4.11 97.7

QA/QC Summary

	QC STD I.D.		Number		incentration (entration Percent Difference		Acceptance limits	QC Within Control	
	Duplic	ate	990912	ND ND	l	···	ND	0.00%	≤ 20%	Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	l Dilution	Added Spike Conc.		WS lount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	990912	0.00	1.00	2.00	2	.00	2.09	2.00	105%	85-115%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control	
Blank	ND	<0.500		<0.500	Yes	
MRCCS	4.12	4.00	103%	90% - 110%	Yes	
MRCVS#1	3,11	3.00	104%	90% - 110%	Yes	
MRCVS#2	3.10	3.00	103%	90% - 110%	Yes	
MRCVS#3	3.11	3.00	104%	90% - 110%	Yes	
LCS	4.12	4.00	103%	90% - 110%	Yes	

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

155 Grand Ave. Suite 1000

Oakland, CA 94612

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

Laboratory No.: 990968

Reported: October 5, 2010 Collected: September 1, 2010 Received: September 1, 2010

Analyzed: See Below

Revision 1

Client: E2 Consulting Engineers, Inc. REPORT

Samples: One (1) Soil Sample

Attention: Shawn Duffy

Project Name: PG&E Topock Project Project No.: 408401.01.DM P.O. No.: 408401.01.DM

Investigation: Total Metal Analyses as Requested

Analytical Results

SAMPLE ID:	SC-Sludge-WDR-272	Time Coll	ected:	08:00		LAB ID	: 990968	***************************************
Dagat	••	Reported					Date	Time
Parameter	Method	Value	DF	Units	RL	Batch	Analyzed	Analyzed
Antimon y	SW 6010B	25.5	1.00	mg/kg	2.00	091310B-Th	09/13/10	18:30
Arsenic	SW 6010B	3.93	1.00	mg/kg	0.851	091310B-Th	09/13/10	18:30
Barium	SW 6010B	52.9	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Beryllium	SW 6010B	ND	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Cadmium	SW 6010B	7.93	1.00	mg/kg	0.851	091310B-Th	09/13/10	18:30
Chromium	SW 6010B	3410	20.0	mg/kg	17.0	091510A-Th	09/15/10	13:52
Cobalt	SW 6010B	6.04	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Copper	SW 6010B	50.2	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Lead	SW 6010B	5.46	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Mercury	SW 6020	0.140	5.00	mg/kg	0.100	091510A-Hg	09/15/10	14:18
Molybdenum	SW 6010B	3.33	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Nickel	SW 6010B	19.8	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Selenium	SW 6010B	ND	1.00	mg/kg	1.00	092710A-Th	09/27/10	15:06
Silver	SW 6010B	ND	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Thallium	SW 6010B	ND	20.0	mg/kg	17,0	091510B-Th	09/15/10	13:52
/anadium	SW 6010B	76.1	1.00	mg/kg	1.00	091310B-Th	09/13/10	18:30
Zinc	SW 6010B	27.5	1.00	mg/kg	2.00	091310B-Th	09/13/10	18:30

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.

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

14201 FRANKLIN AVENUE - TUSTIN, CALIFORNIA 92780-7008

Established 1931

[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

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

Project No.: 408401.01.DM

P.O. No.: 408401.01.DM

Reported: September 30, 2010 Laboratory No.: 990968

Collected: September 1, 2010 Received: September 1, 2010

Quality Control/Quality Assurance Report

			DIGES	DIGESTED BLANK		MRCCS				MRCVS			
						Observed	TRUE	%	Control	Observed	TRUE	%	Control
Parameter	Method	Batch	Units	Bíank	뇞	Value	Value	Rec	Limits	Value	Value	Rec	Limits %
Antimony	SW 6010B	091310B-Th	mg/kg	Q	2.00	4.82	5.00	96.4%	90-110%	4.59	5.00	91.8%	90-110%
Arsenic	SW 6010B	091310B-Th	mg/kg	ND	0.50	4.86	5.00	97.3%	90-110%	4.52	5.00	90.4%	90-110%
Barium	SW 6010B	091310B-Th	mg/kg	Q	1.00	4.89	5.00	97.7%	90-110%	4.72	5.00	94.4%	90-110%
Beryllium	SW 6010B	091310B-Th	mg/kg	Q	8.	4.85	5.00	97.1%	90-110%	4.64	5.00	92.8%	90-110%
Cadmium	SW 6010B	091310B-Th	mg/kg	9	0.50	4.95	5.00	98.9%	90-110%	4.82	5.00	96.4%	90-110%
Chromium	SW 6010B	091510A-Th	mg/kg	Ð	1,00	4.88	5.00	92.6%	90-110%	4.78	5.00	95.6%	90-110%
Cobalt	SW 6010B	_ :	mg/kg	O _N	1.00	4.87	5.00	97.4%	90-110%	4.77	5.00	95.4%	90-110%
Copper	SW 6010B	091310B-Th	mg/kg	S	1.00	4.91	5.00	98.2%	90-110%	4.56	5.00	91.2%	90-110%
Lead	SW 6010B	091310B-Th	mg/kg	ON	1.00	4,91	5.00	98.2%	90-110%	4.77	5.00	95.4%	90-110%
Mercury	SW 6020	091510A-Hg	mg/kg	Q	0.100	0.00214	0.00200	107%	90-110%	0.00	0.00200	106%	90-110%
Molybdenum	SW 6010B	091310B-Th	mg/kg	ᄝ	1.00	4.82	5.00	96.4%	90-110%	4.62	5.00	92.4%	90-110%
Nickel	SW 6010B	091310B-Th	mg/kg	2	1.00	4.88	5.00	97.6%	90-110%	4.68	5.00	93.6%	90-110%
Selenium	SW 6010B	092710A-Th	mg/kg	9	1.00	5.09	5.00	102%	90-110%	4.82	5.00	96.4%	90-110%
Silver	SW 6010B	091310B-Th	mg/kg	Q	1.00	4.88	5.00	97.7%	90-110%	4.84	5.00	96.8%	90-110%
Thallium	SW 6010B	091510B-Th	mg/kg	2	2.00	4.87	5.00	97.4%	90-110%	4.87	5.00	97.4%	90-110%
Vanadium	SW 6010B	091310B-Th	mg/kg	9	1.00	4.86	5.00	97.2%	90-110%	4.87	5.00	97.4%	90-110%
Zinc	SW 6010B	091310B-Th	mg/kg	2	2.00	5.03	5.00	101%	90-110%	4.98	5.00	99.6%	90-110%
							Andreas			** * * * * * * * * * * * * * * * * * *	Company of the Control of the Contro		

Revision 1; October 5, 2010

INTERFERENCE CHECK STANDARD AB

				THE PROPERTY OF THE PROPERTY O			TO STATE OF THE PROPERTY OF TH	THE PART OF THE PA	The state of the s
Control	Limits	80-120%	80-120%	80-120%	80-120%	80-120%	80-120%	80-120%	80-120%
%	Rec.	93.5%	97.5%	98.0%	95.0%	95.0%	106%	95.0%	88.5%
ics	Theo.	2.00	2.00	2.00	2.00	2.00	0.00200	2.00	2.00
CS	Obs.	1.87	1.95	1.96	1.90	1.90	0.00211	1.90	1.77
Units		mg/kg	mg/kg	mg/kg	тд/кд	mg/kg	mg/kg	mg/kg	mg/kg
Method		SW 6010B	SW 6010B	SW 6010B	SW 6010B	SW 6010B	SW 6020	SW 6010B	SW 6010B
Parameter		Arsenic	Cadmium	Сһготіит	Cobalt	Copper	Mercury	Nickel	Silver

LABORATORY CONTROL SAMPLES	

Parameter	Mathod	10,14	-	-	à						Precision
		2	3 ;	?] 	%	Control	SAMPLE	SAMPLE	DUP	%	Control
			Obs.	Theo.	Rec.	Limits	Q	RESULT	RESULT	RPD	(imits %
Antimony	SW 6010B	mg/kg	90.1	100	90.1%	85-115%	896066	25.5	25.0	2 N3%	977
Arsenic	SW 6010B	mg/kg	93.9	100	93.9%	85-115%	990968	7.05	70 6	7070	7
Вапит	SW 6010B	mg/kg	100	100	100%	85-115%	990968	52.5	50.5	19.4%	0.75
Beryllium	SW 6010B	mg/kg	99.0	100	%0.66	85-115%	00000		0.20	0.62%	≤20
Cadmium	SW 6010B	тg/kg	103	100	103%	85-115%	990098		DN	0.00%	
Chromium	SW 6010B	mg/kg	100	100	100%	85-115%	990000	2740	0.53	4.90%	\$20
Cobalt	SW 6010B	mg/kg	100	100	100%	85-115%	990300	0140	0110	7.29%	\$220
Copper	SW 6010B	mg/kg	100	100	100%	85-115%	990968	50.0	53 a	4.85%	220
Lead	SW 6010B	mg/kg	99.9	100	99.9%	85-115%	990968	5.46	5.64	0.08%	270
Mercury	SW 6020	тв/ка	0.104	0.100	104%	85-115%	990968	0.140	1000	3.30%	075
Molybdenum	SW 6010B	mg/kg	94.1	100	94.1%	85-115%	00000	0. to	87.0	0.35%	0220
Nickei	SW 6010B	mg/kg	99.4	100	99.4%	R5-115%	00000	0.00	5,43	3.16%	\$20
Selenium	SW 6010B	ma/ka	01.4	100	04 40/	05 4450/	000000	0.70	ZU.1	1.38%	820
Silver	SW ROTOD	D 4		3	P +:- 1	02-112%	896086	9	2	%00.0	\$20
F	0100 400	IIIG/KG	40.4	100	96.4%	85-115%	896066	2	9	0.00%	<20
Inalisum	SW 6010B	mg/kg	94.6	100	94.6%	85-115%	896066	Q	QN	%0U 0	
Vanadium	SW 6010B	mg/kg	96.5	100	96.5%	85-115%	990968	76.1	787	/090 0	0.00
Zinc	SW 6010B	mg/kg	108	100	108%	85-115%	990368	27.5	30.3	0.0076	075
013				Value of the state		ATTENDED TO THE STATE OF THE ST	The state of the s		17.00	3.44.70	0755

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 these laboratories.

TRUESDAIL	

MATRIX SPIKE	PIKE								
,				Sample		Spike	Total Amt.	Theo.	MS
Sample ID	Sample ID Parameter	Method	Units	Resuft	DF	Level	of Spike	Value	Obs.
896066	Antimony	SW 6010B	mg/kg	25.5	1.00	202	202	228	228
896066	- 1	SW 6010B	mg/kg	3.93	1.00	202	202	206	208
896066	Barium	SW 6010B	mg/kg	52.9	1.00	202	202	255	256
896066	Beryllium	SW 6010B	mg/kg	0.00	1.00	202	202	202	218
896066	Cadmium	SW 6010B	mg/kg	7.93	1.00	202	202	210	185
896068	Chramium	SW 6010B	mg/kg	3410	20.0	170	3403	6813	6528
896066	Cobalt	SW 6010B	mg/kg	6.04	1.00	202	202	208	194
896066	Copper	SW 6010B	mg/kg	50.2	1.00	202	202	252	250
990968	Lead	SW 6010B	mg/kg	5.46	1.00	202	202	208	180
896066	i	SW 6020	mg/kg	0.140	5.00	0.170	0.851	0 991	0 937
990968	Molybdenum	SW 6010B	mg/kg	3.33	1.00	202	202	206	198
896066	Nickel	SW 6010B	mg/kg	19.8	1,00	202	202	222	192
896066	Seleníum	SW 6010B	mg/kg	0.00	1.00	202	202	202	167
890068	Silver	SW 6010B	mg/kg	0.00	1.00	202	202	202	208
990968	Thallium	SW 6010B	mg/kg	0.00	20.0	170	3403	3403	3282
896066	Vanadium	SW 6010B	mg/kg	76.1	1.00	202	202	27.8	261
896066	Zinc	SW 6010B	mg/kg	27.5	1.00	202	202	230	241

75-125%

75-125%

75-125%

86.3% 93.6% 96.4% 85.3% 82.7% 103% 96.5%

75-125%

75-125% 75-125% 75-125% 75-125%

106%

Accuracy

75-125%

100%

Limits %

Rec.

Control

75-125% 75-125% 75-125% 75-125% 75-125% 75-125% 75-125%

> 87.7% 91.6% 93.1% 89.0%

75-125%

101% 100% 108%

ND: Not detected, or below limit of detection. DF: Dilution Factor

TRUESDAIL LABORATORIES, INC. Respectfully submitted,

Mona Nassimi, Manager Analytical Services 4



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

Dry Weight Calculations

Date Calculated: 9/30/2010

	Sample Result Wet Weight mg/kg	Dilution Factor	% Moisture %	Sample Result Dry* Weight mg/kg	Reported Value mg/kg	Reporting Limit Wet Weight mg/kg	Reporting Limit Dry Weight mg/kg
Fluoride	47.536		51.3	97.7021	97.7	2.00	4.11
Hexavalent Chromium	10.7602	***	51.3	22.1157	22.1	2.00	4 4 4
Hexavalent Chromium - Dup	10.8430		51.3	22.286	22.3	2.00	4.11 4.11
Hexavalent Chromium - MS	94.4081		51.3	194,040	194	4.00	8.22
Hexavalent Chromium - IMS	788,777		51.3	1621.196	1620	20.0	0.22 41.1
Hexavalent Chromium - PDMS	171.436	~~~	51.3	352,357	352	10.0	20.6
Antimony	12.42	1.00	51.3	25.5272	25.5	0.414	0.00
Arsenic	1,914	1.00	51,3	3.9339	3.93	0.414	2.00
Barium	25.74	1.00	51.3	52.904	52.9	0.414	0.851
Beryllium	0.3589	1.00	51,3	0.7377	ND	0.414	1.00
Cadmium	3.86	1.00	51.3	7.9336	7.93	0.414	1.00 0.851
Chromium	1659	20.0	51.3	3410	3410	8.28	17.0
Cobalt	2,937	1.00	51.3	6.0365	6.04	0.414	1.00
Соррег	24.43	1.00	51.3	50.212	50.2	0.414	1.00
Lead	2.655	1.00	51.3	5.4569	5.46	0.414	1.00
Mercury	0.06799	5.00	51.3	0.13974	0.140	0.0414	0.100
Molybdenum	1.618	1.00	51.3	3.3255	3.33	0.0414	1.00
Nickel	9.638	1.00	51.3	19.8093	19.8	0.414	1.00
Selenium	ND	1.00	51.3	ND	ND	0.414	1.00
Silver	ND	1.00	51.3	ND	ND	0.414	1.00
Thallium	ND	20,00	51.3	ND	ND	8.28	17.0
/anadium	37.02	1.00	51.3	76.088	76.1	0.414	1,00
Zinc	13.38	1.00	51.3	27.500	27.5	0.414	2.00

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

where:

Sample www = Sample result in wet weight

RUESI	DAIL LA	ABORATO	RIES. INC.



TOTAL SOLIDS BY SM 2540 B

Date of Analysis: 09/15/10

Analytical Batch: 09SOLID10A Oven Temp, °C: 105

Lab No.	Dish Number	Weight of dish,	Wt of wet sample, g	Wt of wet sample+ dish, g	Wt of dried residue+dish,g	Wt of dried residue, g	% Total Solids	% Moisture
990968	1	1.3171	2.0845	3,4016	2.3313	1.0142	48.654	51.346
990968D	2	1.302	2.0736	3.3756	2.3039	1,0019	48.317	51.683
							-	
				_				
							1	
					§		+	

	Relati	ve Percent Difference	
Sample ID	Sample	Sample Dup	RPD
990968	51.346	51.683	0.7

% Total Solids =

(A-B)*100 =

Weight of dried residue x 100
Weight of wet sample

Where:

A = Weight of dried Residue + Dish, g

B = Weight of dish, g

C = Weight of wet sample + Dish, g

G. Savani Analyst Name

Analyst Signature

Povious Name

Reviewer Signature

CHAIN OF CUSTODY RECORD

[IM3plant-WDR-272]

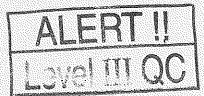
TRUESDAIL LABORATORIES, INC. 14201 Franklin Avenue, Tustin, CA 92780-7008 (714)730-6239 FAX: (714) 730-6462 www.truesdail.com

R PAGE 1 10 Days TURNAROUND TIME DATE 09/01/10 COC Number

COMPANY	CH2M HILL						<u> </u>		Uno.	_	_		_	\		_	_	COMMENTS	ENTS
PROJECT NAME	PG&E Topock IM3	IM3				_		W SE		_		_	\	_		\		_	
PHONE	530-229-3303		AX 530	FAX 530-339-3303			_	Prijol		Re	Rec'd	/60	11/10		_		_	S	
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612	Ste 1000 1612	1 1				116 22, (Ir.)	(P) (S > 2)			(n) \ x	9606	<u> </u>	တ (()			NTAINER	War.	· · · · · ·
P.O. NUMBER	408401.01.DM	1/4				7 /c	T (80)			\							COV		
SAMPLERS (SIGNATURE	ATURE	W.			10E) SU	09) sl	09) 8/	(661)									BEB C		
SAMPLE LD.	7	DATE	TIME	DESCRIPTION	loin ^A	Seola	9/O eza::				/					4 1/4	NO.		
SC-Sludge	SC-Sludge-WDR-272	01/10/60	1	Sludge	×	×	×									4			
	A THE RESEARCH AND THE PARTY OF	en er sellegen en mende en en en en en en en en en en en en en		entile anninent at street anninentary age		onson A	T) And the Market Section Sect	Mary Bettywen	PEC BENEFICATION	ANNEAR MANAGEMENT	Stoman and a								
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						***************************************				*	=								
	រី វិ	5				CPERSON NAME OF THE PERSON NAME	۵	9											
	THE ACTION OF THE PROPERTY OF			orwest of the people substitution of the subst			ENOWED REAL PROPERTY.	Colored continue	receptoresession as	MENTANO GRANINE	WWW RESIDENCE	***							
SAMOLE	SAMOLE DATES 6-14-10	01-11-															01	TOTAL NUMBER OF CONTAINERS	AINERS
,	уe.	6.29-10														·			

۴ õ WARM | SAMPLE CONDITIONS YES C00L SPECIAL REQUIREMENTS: CUSTODY SEALED RECEIVED Date! 9 . (. , / o Time 9 . (. , / o Time Date! Time Date! Time Time Date/9_/ Date/ 9. Date/ Time CHAIN OF CUSTODY SIGNATURE RECORD Company/ Agency /Company/ Agency Company/ Agency Company/ Agency Company/ Agency Company/ Agency Printed Name< Printed/ Name/ Printed Printed Printed Name Printed Name Name (Name Signature (Relinquished) (Relinquished) (Refinguished) Signature (Received) Signature (Received) (Received) Signature Signature Signature





Sample Integrity & Analysis Discrepancy Form

Client	: <u>E2</u>	Lab# <u>990</u> 963
Date i	Delivered: 9/1/10 Time: كناكة By: 🗆 Mail 🗆 Field	Service □Client
1.	Was a Chain of Custody received and signed?	tryes UNO UNA
2.	Does Customer require an acknowledgement of the COC?	□Yes □No CEN/A
3.	Are there any special requirements or notes on the COC?	□Yes □No DAN/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No □WA
5.	Were all requested analyses understood and acceptable?	De S ONO ONA
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>3 ° C</u>	ØVes □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?	ØYes □No □N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: ☐Truesdail ☐Client	Maryes □No □N/A
12.	Were samples pH checked? pH = See 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	ØYes □No □N/A
15.	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ 	her Waste Water
16.	Comments:	
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Kafay Davila

LABORATORY REPORT

Date:

September 8, 2010

Client:

Truesdail Laboratories, Inc.

14201 Franklin Avenue Tustin, CA 92780

Attn: Mona Nassimi



"dedicated to providing quality aquatic toxicity testing"

4350 Transport Street, Unit 107 Ventura, CA 93003

(805) 650-0546 FAX (805) 650-0756

CA DOHS ELAP Cert. No.: 1775

Laboratory No.:

A-10090301-001

Sample ID.:

990968

Sample Control:

The sample was received by ATL chilled, with the chain of custody record attached.

Date Sampled:

09/01/10

Date Received:

09/03/10

Date Tested:

09/04/10 to 09/08/10

Sample Analysis:

The following analyses were performed on your sample:

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

Attached are the test data generated from the analysis of your sample.

Result Summary:

Sample ID.

Results

990968

PASS (LC50 > 750 mg/l)

Quality Control:

Reviewed and approved by:

Joseph A. LeMay

Laboratory Director

FATHEAD MINNOW HAZARDOUS WASTE SCREEN BIOASSAY

Aquatic
Testing
Laboratories

Client/ID: Truesdail 990968

TEST SUMMARY

Species: Pimephales promelas.

Fish length (mm): av: 27.7; min: 27; max: 30. Fish weight (gm): av: 0.47; min: 0.42; max: 0.56.

Test chamber volume: 10 liters.

Temperature: 20 +/- 2°C.

Aeration: Single bubble through 30 bore tube.

Number of replicates: 2.

Dilution water: Soft reconstituted water (40 - 48 mg/l CaCO₃).

QA/QC Batch No.: RT-100901.

Source: In-Lab Culture. Regulations: CCR Title 22.

Test Protocol: California F&G/DHS 1988.

Endpoints: Survival at 96 hrs.

Test type: Static. Feeding: None.

Number of fish per chamber: 10. Photoperiod: 16/8 hrs light/dark.

TEST DATA

	IN	NITIAL 24 Hr				48	Hr		72 Hr				96 Hr						
Date/Time:	9-0	1-10	2	9-	5-10	10	σV	4.0	9-6-10 1100		9.7	-10	/	ממני	9-8-10 /10		′συ		
Analyst:	Mood		V		J.					2			څېر) }			<u> </u>	<u>~~</u>	
randij sei	°C	DO	рН	°C	DO	рН	# D	°C	DO	pН	# D	°C	DO	pН	# D	°C	DO	pН	# D
Control A	20.1	B-1	7.3	26.7	79	7,2	0	709	8.0	7.2	0	21.0	K.O	20	0	201	8.1	7.1	0
Control B	201	83	7.3	ריטב	7.8	7.1	0	20.9	4.1	7.2	0	21.0	28	21	0	20.9	7.8	7./	1)
400 mg/l A	200	84	7-9	206	76	7.8		20. 4		74	0	21.1	21	74	1)	209	7.8	7.3	Ü
400 mg/l B	201	8.4	74	201	7.6			201	8.1	7.4	Ô	21.0	8.1	2.4	0	219	8.0	24	1)
750 mg/l A	200	8-3	8.1	20.5	7-6	7-7	0	7,05	8.1	7.5	0	20.9	8.1	75		22.8	82	75	0
750 mg/l B	201	8.3	8.1	20.5	7-7	7-8	0	26	8.4	7.5	0	20.9	8.3	25	1	208	8.4	7.5	0
Comments:	Ext	ractio	n met	hod: N	Mecha	nical	shaki	ng	بسبا										

Comments: Extraction method: Mechanical shaking
None (aqueous solution)

Dissolved Oxygen (DO) readings in mg/l O₂.

		CONT	ROL		Н	GH CONCE	ENTRA	TION
	Alk	alinity	Ha	rdness	All	kalinity	Ha	rdness
Initial	30	mg/l CaCO ₃	45	mg/l CaCO ₃	32	mg/l CaCO ₁	48	mg/I CaCO ₃
Final	33	mg/l CaCO ₃	44	mg/l CaCO ₃	74	mg/l CaCO ₃	83	mg/l CaCO ₃

Total Number Dead									
Control	0	/20							
400 mg/l	0	/20							
750 mg/l	0	/20							

	(1	RESULTS the checked result applies based on fish survival rates)
	PASSED	LC50 > 750 mg/l (<40% dead in 750 mg/l conc.)
NA	FAILED	≥40% dead in 750 mg/l (close to passing - definitive test recommended)
NA	FAILED	LC50 < 400 mg/l (>60% dead in 400 mg/l conc.)



14201 Franklin Avenue, Tustin, California 92780

Laboratory Transmittal Form

Please sign, date, & return this form with results to: TRUESDAIL LABORATORIES, INC.

Please include Truesdail Sample ID on your invoice 14201 Franklin Avenue, Tustin, California 92780-7008

Address: 4350 Transport St. #107, Ph.:805-650-0546

City: Ventura State: CA Zip: 93003

Laboratory: Aquatic Testing Laboratories

Attention: Joe LeMay

Date: 09/02/10 Page: 1 of 1

Attn: Mona Nassimi

Comments/Container Type Level 3 QC Required Containers Total 9 oz / Glass Container Qty. Tests/Methods Required Bioassay 96hr Acute Sludge Matrix 08:00 AM Time 09/01/10 Date Sample ID 896066

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Special Shipment/Handling or Storage Requirements: Sealed? Sample Conditions: Kes/No ived on Ice?

		TLIF
Printed Name してして	Printed Name	
Signature	/ Signature	Document/Forms/ATL (Aquatic Testing Labs)/09/02/10 12:49 PM/CH
Received by:		(Aquatic Testin

シュシン Company

0200

15:30 Time

09/02/10 Date

Truesdail Labs, Inc.

Amir Marivani

Amir Marivani

Relinquished by:

Сотрад

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

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

September 23, 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-273 PROJECT, GROUNDWATER

MONITORING, TLI NO.: 991053

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-273 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 September 8, 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 result from the matrix spike for sample SC-700B-WDR-273 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 and Total Manganese were 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. gye

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.: 408401.01.DM

Laboratory No.: 991053

Date: September 23, 2010 Collected: September 8, 2010 Received: September 8, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	Daniel Kang / Hope Trinidad
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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

Oakland, CA 94612

Attention: Shawn Duffy

Established 1931

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

Laboratory No.: 991053

Date Received: September 8, 2010

Project Name: PG&E Topock Project

Project No.: 408401.01.DM P.O. No.: 408401.01.DM

Analytical Results Summary

U	Analysis E Method	Extraction Method	xtraction Method Sample Date	Sample Time	Parameter	Result	Units	RL
SC-700B-WDR-273 E120.1		NONE	9/8/2010	8:00	EC	7160	umhos/cm	2 00
E200.8		NONE	9/8/2010	8:00	Chromium	<u> </u>	1/01	; -
E200.8		NONE	9/8/2010	8:00	Manganese	2.7] /bil	
E218.6	_	LABFLT	9/8/2010	8:00	Chromium, hexavalent	iZ] /b/l	020
SM2130B		NONE	9/8/2010	8:00	Turbidity	0,114		0.100
SC-700B-WDR-273 SM2540C		NONE	9/8/2010	8:00	Total Dissolved Solids	4460	mg/L	250

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

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

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401.01.DM Project Number: 408401.01.DM Laboratory No. 991053

Page 1 of 5 Printed 9/27/2010

Samples Received on 9/8/2010 9:30:00 PM

Field ID				Lab ID	Colle	ected	Matri	Κ
SC-700B-WDR-273				991053-001	09/08/2	2010 08:00	Wate	Γ
Specific Conductivity - E	PA 120.1		Batch	09EC10B		•	9/13/2010	٠,
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
991053-001 Specific Conducti	vity	umhos/	cm 09/13	/2010	1.00	0.0380	2.00	7160
Method Blank							***************************************	
Parameter Specific Conductivity	Unit umhos	DF 1,00	Result ND					
Duplicate							Lab ID = 9	91077-002
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 5450	Expected 5440	RPD 0.184		Acceptar 0 - 20	nce Range
Lab Control Sample								
Parameter Specific Conductivity Lab Control Sample De	Unit umhos	DF 1.00	Result 703.	Expected 706.		ecovery 99.6	Acceptar 90 - 110	nce Range
·	•	55	.		_			
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 701.	Expected 706.		ecovery 99.3	Acceptar 90 - 110	nce Range
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 698.	Expected 706.		ecovery 98.9	Acceptar 90 - 110	nce Range
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 989.	Expected 1000		ecovery 98.9	Acceptar 90 - 110	nce Range

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.



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 2 of 5

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Printed 9/27/2010

Chrome VI by EPA 218.6

Batch 09CrH10E

Officiale At DA ELM 710'0			Batcr	1 09CIHTUE				
Parameter		Unit	Ana	lyzed	OF.	MDL	RL	Result
991053-001 Chromium, Hexa	valent	ug/L	09/10	0/2010 09:16 1	.05	0.0210	0.20	ND
Method Blank								
Parameter Chromium, Hexavalent Duplicate	Unit ug/L	DF 1.00	Result ND				lah ID ≕	991070-001
Parameter Chromium, Hexavalent Lab Control Sample	Unit ug/L	DF 1.05	Result 6.22	Expected 5.92	R	RPD 4.94		ince Range
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.00	Result 5.08	Expected 5.00	R	ecovery 102	90 - 110	nce Range 991053-001
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 5.25	Result 5.36	Expected/Adde 5.25(5.25)	d R	lecovery 102	90 - 110	nce Range 991053-001
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 1.06	Result 1.26	Expected/Adde 1.24(1.06)	d R	ecovery 101	Accepta 90 - 110	nce Range
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 5.11	Expected 5.00	R	ecovery 102	Accepta 90 - 110	nce Range
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 10.4	Expected 10.0	R	ecovery 104	Accepta 95 - 105	nce Range



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 3 of 5 Printed 9/27/2010

Metals by EPA 200.8, Total

Batch 091610A

	, cu ;		Date	0010107				
Parameter	**************************************	Unit	Ana	alyzed	OF.	MDL	RL	Result
991053-001 Chromium		ug/L	09/1	6/2010 13:51 5	.00	0.0950	1.0	1.3
Manganese		ug/L	09/16	6/2010 13:51 5	.00	0.210	1.0	2.1
Method Blank			- *************************************					
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID =	991053-001
Parameter	Unit	DF	Result	Expected	RF	מי	Accenta	ince Range
Chromium	ug/L	5.00	1.24	1.33		5.62	0 - 20	ince realige
Manganese	ug/L	5.00	2.34	2.09	1	1.0	0 - 20	
Lab Control Sample							5	
Parameter	Unit	DF	Result	Expected	Re	covery	Accenta	nce Range
Chromium	ug/L	1.00	47.8	50.0		95.5	90 - 110	-
Manganese	ug/L	1.00	48.1	50.0		6.2	90 - 110	
Matrix Spike								991053-001
Parameter	Unit	DF	Result	Expected/Adde	d Re	covery	Accenta	nce Range
Chromium	ug/L	5.00	234.	251(250.)		3.1	75 - 125	-
Manganese	ug/L	5.00	242	252(250.)	9	5.9	75 - 125	
Matrix Spike Duplicate	9							991053-001
Parameter	Unit	DF	Result	Expected/Added	d Re	covery	Accenta	nce Range
Chromium	ug/L	5.00	237	251(250.)		4.1	75 - 125	
Manganese	ug/L	5.00	256	252(250.)	1	02	75 - 125	
MRCCS - Secondary				,				
Parameter	Unit	DF	Result	Expected	Rei	covery	Accenta	nce Range
Chromium	ug/L	1.00	47.6	50.0		5.2	90 - 110	_
Manganese	ug/L	1.00	52.3	50.0	1	05	90 - 110	
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Red	covery	Accenta	nce Range
Chromium	ug/L	1.00	47.5	50.0		4.9	90 - 110	-
Manganese	ug/L	1.00	53.0	50.0	1	06	90 - 110	
Interference Check Sta	andard A						•	
Parameter	Unit	DF	Result	Expected	Red	covery	Accentai	nce Range
Chromium	ug/L	1.00	ND	o		· - · J	····	.so range

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.

009



Client: E2 Consulting E	ngineers, Ir		Project Name: Project Numbe	PG&E Topo er: 408401.01.[Page 4 of 5 10/1/2010
Interference Check S	Standard A						
Parameter Chromium	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Accept	ance Range
Interference Check S	Standard A						
Parameter Manganese Interference Check S	Unit ug/L standard A	DF 1.00	Result ND	Expected 0	Recovery	Accepta	ance Range
Parameter Manganese Interference Check S	Unit ug/L	DF 1.00	Result ND	Expected 0	Recovery	Accepta	ance Range
Parameter Chromium Interference Check S	Unit ug/L	DF 1.00	Result 46.4	Expected 50.0	Recovery 92.9	Accepta 80 - 120	ance Range)
Parameter Chromium Interference Check S	Unit ug/L tandard AB	DF 1.00	Result 45.9	Expected 50.0	Recovery 91.9	Accepta 80 - 120	ance Range)
Parameter Manganese Interference Check Si	Unit ug/L tandard AB	DF 1.00	Result 49.3	Expected 50.0	Recovery 98.7	Accepta 80 - 120	ance Range)
Parameter Manganese	Unit ug/L	DF 1.00	Result 51.3	Expected 50.0	Recovery 103	Accepta 80 - 120	ince Range)
Total Dissolved Solids b) C Unit		09TDS10B yzed	DF MDL	9/1 3/201 0 RL) Result
991053-001 Total Dissolved S	Solids	mg/L	09/13/	/2010	1.00 0.434	250.	4460
Method Blank Parameter Total Dissolved Solids Duplicate	Unit mg/L	DF 1.00	Result ND				
Parameter Total Dissolved Solids Lab Control Sample	Unit mg/L	DF 1.00	Result 144.	Expected 148.	RPD 2.74		991089-003 nce Range
Parameter Total Dissolved Solids	Unit mg/L	DF 1.00	Result 493.	Expected 500.	Recovery 98.6	Acceptar 90 - 110	nce Range

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.

Intention Blank

011



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Page 5 of 5

Project Number: 408401.01.DM

Printed 9/27/2010

Turbidity by SM 2130 B			Batch	09TUC10F			9/9/2010		
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result	
991053-001 Turbidity		NTU	09/09)/2010	1.00	0.0140	0.100	0.114	
Method Blank									
Parameter Turbidity	Unit NTU	DF 1.00	Result ND						
Duplicate							Lab ID = 9	991053-001	
Parameter Turbidity Lab Control Sample	Unit NTU	DF 1.00	Result 0.116	Expected 0.114		PD 1.74	Accepta 0 - 20	nce Range	
Parameter Turbidity Lab Control Sample D	Unit NTU uplicate	DF 1.00	Result 7.40	Expected 8.00		ecovery 92.5	Accepta 90 - 110	nce Range	
Parameter Turbidity	Unit NTU	DF 1.00	Result 7.44	Expected 8.00		ecovery 93.0	Accepta 90 - 110	nce Range	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Manager, Analytical Services

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Total Dissolved Solids by SM 2540 C

Calculations

Batch: 09TDS10B

Date Calculated: 9/20/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final Weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
BLANK	100	110.2392	110,2392	110.2392	0.0000	No	0.0000	0.0	25.0	ND	1
991022-16	100	78.3915	78.4410	78.4408	0.0002	No	0.0493	493.0	25.0	493.0	1
991053	10	78.4100	78.4550	78,4546	0.0004	No	0.0446	4460.0	250.0	4460.0	11
991077-1	20	72.8362	72.9381	72.938	0.0001	No	0.1018	5090.0	125.0	5090.0	1
991077-2	20	65.9977	66.0792	66.0792	0.0000	No	0.0815	4075.0	125.0	4075.0	1
991089-2	200	112.3626	112.3839	112.3839	0.0000	No	0.0213	106,5	12.5	106.5	11
991089-3	100	69.8177	69.8326	69.8325	0.0001	Nο	0.0148	148.0	25.0	148.0	1
991095-2	200	115.2522	115.2685	115.2685	0.0000	No	0.0163	81.5	12.5	81.5	1
991095-3	100	110.8016	110,8162	110.8162	0.0000	No	0.0146	146.0	25.0	146.0	1
991089-3D	100	76.5308	76,5454	76.5452	0.0002	No	0.0144	144.0	25.0	144.0	1
LCS	100	111.3977	111.4470	111.447	0.0000	No	0.0493	493.0	25.0	493.0	1

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Analyst Signature

Reviewer Printed Name

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 09TDS10B Date Calculated: 9/20/10

EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
815	0.60	529.75	0.93
7100	0.63	4615	0.97
6350	0.80	4127.5	1.23
5330	0.76	3464.5	1.18
198	0.54	128.7	0,83
275	0.54	178,75	0.83
154	0.53	100,1	0.81
278	0.53	180.7	0.81
275	0.52	178.75	0.81
	815 7100 6350 5330 198 275 154	815 0.60 7100 0.63 6350 0.80 5330 0.76 198 0.54 275 0.54 154 0.53 278 0.53	EC 1DS/EC Ratio: 0.559 TDS (EC*0.65) 815 0.60 529.75 7100 0.63 4615 6350 0.80 4127.5 5330 0.76 3464.5 198 0.54 128.7 275 0.54 178.75 154 0.53 100.1 278 0.53 180.7



K

£991053 Rec'd 09/08/10

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

PROJECT NAME

COMPANY

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-273]

ᆼ 10 Days PAGE 1 TURNAROUND TIME DATE 09/08/10 COC Number

7,20,2 TOTAL NUMBER OF CONTAINERS COMMENTS NUMBER OF CONTAINERS 3 m Turbidity (SM2730) 100 (SM2540C) Specific Conductance (120.1) 707 DT × (7.005) slatal (50.07) Cr6 (218.6) Lab Fillerad × × 9,0 DESCRIPTION Water FAX (530) 339-3303 FC TEAM 09/08/10 TIME P.9 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 ANTHYSIS (530) 229-3303 408401.01.DM PG&E Topock SC-700B-WDR-273 SAMPLERS (SIGNATURE **E**2 Twee

P,O. NUMBER

ADDRESS

PHONE

SAMPLE 1.D.

Tor Sample Condition See Form Attached

,003

400.

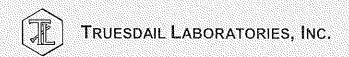
4080

088

	CHAIN OF CUSTODY SIGNA	GNATURE RECORD		SAMPLE CONDITIONS
Signature (Relinquished)	Printed #10£	Companyl OW) Z	Date/ 9/8/10 Time /5-3()	RECEIVED COOL WARM F
Signature (Received)	ad Maried Laton	T. 6, 7	Date/ 9-8-10	CUSTODY SEALED YES 🔲 NO 🗀
Signature (Relinquished)	Printed Koley	7-67	Time 9 - 8 - 10	SPECIAL REQUIREMENTS:
Signature College	Day Chame & Co	Company/ /	Date/ 2/13	0
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

(8)27/10 99083-5 9.5 N/A N/A SB (8)27/10 930902 7.0 0.00 9.5 11:00 SB (8)27/10 990908-1 7.0 0.00 9.5 19:00 SB (8)27/10 990909 7.0 0.00 9.5 19:00 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 8:15 SB (9)27/10 990909 7.0 0.00 9.5 SB (9)28/10 990909 7.0 0.00 9.5 SB (9)29/10 99090 7.0 0.00 9.5 SB (9)29/10 99090 7.0 0.00 9.5 SB (9)29/10 90090 7.0 0.00 9.5 SB (9)29/10 90090 7.0 0.00 9.5 SB (9)29/10 90090 7.0 0.00 9.5 SB (10)20/10 90090 7.0	Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	08/27/10					N/A	SB
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1	۵- ا	·				\ \
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	7	₩ -7	4	4	J	1	4
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	08/27/10	990902	7.0	5,00	9.5	11:00	SB.
08/27/10 990909 7.0 5.00 9.5 19:00 SB 09/02/10 990966-1 7.0 5.00 9.5 8:15 SB 09/02/10 990967-1 7.0 5.00 9.5 8:00 SB 1 -2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	08/28/10	990908-1	7.0	5.00	9.5	19:00	SB
08/27/c0 990909 7.0 5.00 9.5 19:00 SB 09/02/10 990966-1 7.0 5.00 9.5 8:15 SB 09/02/10 990967-1 7.0 5.00 9.5 8:00 SB 1 -2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		ース				ţ.	1
09/02/10 990966-1 7.0 5.00 9.5 8:15 8:18 09/02/10 990967-1 7.0 5.00 9.5 8:00 SB 1 1-2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	7		J	J		<u> </u>	<u>J</u>
09/03/10 $990967-1$ 7.0 5.00 9.5 8:00 SB $1-2$ $1-3$			7.0	2.00	9,5	19:00	SB
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$			7.0	2,00	9.5	8:15	SB
$\frac{1}{9} + \frac{1}{3} + \frac{1}{4} + \frac{1}{4}$ $\frac{1}{9} + \frac{1}{9} + \frac{1}$	09/02/10	· · · · · · · · · · · · · · · · · · ·	7. 0	2.00	9.5	\$ co	SB
09/09/10 991053 7.0 5.00 9.5 7:00 SE							
		+ -3	b	<u>+</u>	<u> </u>	4	1
09/09/10 991070 9.5 N/A N/A N/A SB						7:00	SB
	09/09/10	991070	9,5	N/A	A/40	N/A	SB
	-						
				***************************************		***	
			,	•			
						•	





Sample Integrity & Analysis Discrepancy Form

Clien	t:E2	Lab # <u>9</u>	<u>91</u> 053
Date i	Delivered: 9 / 8 /10 Time: 2/:30By: □Mail UField	Service 🗆	Client
1.	Was a Chain of Custody received and signed?	dYes □No	□N/A_
2.	Does Customer require an acknowledgement of the COC?	□Yes □No	DANIA
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	TANVA
5.	Were all requested analyses understood and acceptable?	BYes □No	□N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? <u>3 ° C</u>	Taxes \(\text{\text{\$\exitt{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exitt{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\exitt{\$\text{\$\exittit{\$\text{\$\exittit{\$\text{\$\exittit{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\text{\$\}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}}	□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?	res □No	□N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □Truesdail □Client	□Yes □No	TONIA
12.	Were samples pH checked? pH =	□Yes □No	DENVA
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	□Wes □No	□N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): RUSH Std	ØYes □No	□N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground Wa □Sludge □Soil □Wipe □Paint □Solid 望Oth	fer □Waste ner <u>WA7</u>	e Water ER
16.	Comments:		.
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Cofael	<u>Varila</u>

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

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

September 28, 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-274 PROJECT, GROUNDWATER MONITORING, TLI NO.: 991140

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-274 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 September 14, 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 and Total Manganese were 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. gyer

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.: 408401.01.DM

Laboratory No.: 991140

Date: September 28, 2010 Collected: September 14, 2010 Received: September 14, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 2540C	Total Dissolved Solids	jenny Tankunakorn
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	Daniel Kang / Hope Trinidad
EPA 218.6	Hexavalent Chromium	Sonya Bersudsky

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.: 408401.01.DM

P.O. No.: 408401.01.DM

Established 1931

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

Laboratory No.: 991140

Date Received: September 14, 2010

Analytical Results Summary

RL	m 2.00 1.0 1.0 0.20 0.100 250
Units	umhos/cm ug/L ug/L ug/L NTU
Result	7190 ND 4.1 ND 0.106 4020
Parameter	EC Chromium Manganese Chromium, hexavalent Turbidity Total Dissolved Solids
Sample Time	14:45 14:45 14:45 14:45 14:45 14:45
Sample Date	9/14/2010 9/14/2010 9/14/2010 9/14/2010 9/14/2010
Extraction Method	NONE NONE NONE LABFLT NONE
Analysis Method	E120.1 E200.8 E200.8 E218.6 SM2130B SM2540C
) Field ID	SC-700B-WDR-274 E120.1 SC-700B-WDR-274 E200.8 SC-700B-WDR-274 E200.8 SC-700B-WDR-274 E218.6 SC-700B-WDR-274 SM213 SC-700B-WDR-274 SM213
Lab Sample ID Field ID	991140-001 991140-001 991140-001 991140-001 991140-001

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

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

Quality Control data will always have three (3) significant figures.

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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 Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401,01,DM

Project Number: 408401.01.DM

Laboratory No. 991140

Page 1 of 5

Printed 9/28/2010

Samples Received on 9/14/2010 9:30:00 PM

Field ID				Lab ID	Collected	Matrix
SC-700B-WDR-274				991140-001	09/14/2010 14:4	5 Water
Specific Conductivity - E	PA 120.1	Unit	\$44.000	09EC10C	DF MDL	9/15/2010 RL Result
991140-001 Specific Conduct	ivity	umhos	cm 09/15/	5/2010	1.00 0.0380	2.00 7190
Method Blank						
Parameter Specific Conductivity Duplicate	Unit umhos	DF 1.00	Result ND			Lab ID = 991140-001
Parameter Specific Conductivity Lab Control Sample	Unit umhos	DF 1.00	Result 7200	Expected 7190	RPD 0.139	Acceptance Range 0 - 10
Parameter Specific Conductivity Lab Control Sample Di	Unit umhos uplicate	DF 1.00	Result 698.	Expected 706.	Recovery 98.9	Acceptance Range 90 - 110
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 699.	Expected 706.	Recovery 99.0	Acceptance Range 90 - 110
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 694.	Expected 706.	Recovery 98.3	Acceptance Range 90 - 110
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 992.	Expected 999.	Recovery 99.3	Acceptance Range 90 - 110

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 2 of 5

Printed 9/28/2010

Chrome VI by EPA 218.6

Batch 09CrH10F

Cinomie VI by EFA 218.6		ij kalingaj	Batch	1 09CrH10F				
Parameter		Unit	Ana	alyzed	DF	MDL	RL	Result
991140-001 Chromium, Hexa	valent	ug/L	09/17	7/2010 09:03 1	.05	0.0210	0.20	ND
Method Blank					·			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
Parameter Chromium, Hexavalent Duplicate	Unit ug/L	DF 1.00	Result N D				Iah i∩ ≕	991141-006
Parameter Chromium, Hexavalent Lab Control Sample	Unit ug/L	DF 1.05	Result 11.3	Expected 11.4		PD 0.960		nce Range
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.00	Result 5.45	Expected 5.00		ecovery 109	90 - 110	nce Range 991140-001
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 1.06	Result 1.31	Expected/Adde 1.24(1.06)		ecovery 106		nce Range
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 5.22	Expected 5.00		ecovery 104	Accepta 90 - 110	nce Range
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.2	Expected 10.0		ecovery 102	Accepta 95 - 105	nce Range
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 10.2	Expected 10.0		ecovery 102	Acceptar 95 - 105	nce Range



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 3 of 5 Printed 9/28/2010

Metals by EPA 200.8, Total Parameter		Unit		i 091610A ilyzed	DF	MDL	RL	Result
991140-001 Chromium		ug/L		5/2010 14:27	5.00		1.0	ND
Manganese		ug/L		3/2010 14:27 3/2010 14:27	5.00		1.0	4.1
Method Blank		ug/L	03/10	72010 14.27	3.00	0.210	1.0	4.1
Parameter	Lleit	DE	Doguit					
Chromium	Unit ug/L	DF 1.00	Result ND					
Manganese	ug/L	1.00	ND					
Duplicate	ug, L	1.00	ND				Lab ID ⇒	991053-001
Parameter	Unit	DF	Result	Expected		RPD		ance Range
Chromium	ug/L	5.00	1.24	1.33		6.62	0 - 20	ance range
Manganese	ug/L	5.00	2.34	2.09		11.0	0 - 20	
Lab Control Sample	Ü						0 20	
Parameter	Unit	DF	Result	Expected		Recovery	Accenta	nce Range
Chromium	ug/L	1.00	47.8	50.0		95.5	90 - 110	_
Manganese	ug/L	1.00	48.1	50.0		96,2	90 - 110	
Matrix Spike								991053-001
Parameter	Unit	DF	Result	Expected/Add	led	Recovery	Accepta	ance Range
Chromium	ug/L	5.00	234.	251(250.)		93.1	75 - 125	_
Manganese	ug/L	5.00	242	252(250.)		95.9	75 - 125	5
Matrix Spike Duplicate							Lab ID =	991053-001
Parameter	Unit	DF	Result	Expected/Add	led	Recovery	Accepta	ince Range
Chromium	ug/L	5.00	237	251(250.)		94.1	75 - 125	
Manganese	ug/L	5.00	256	252(250.)		102	75 - 125	5
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected		Recovery	Accepta	nce Range
Chromium	ug/L	1.00	47.6	50.0		95.2	90 - 110	_
Manganese	ug/L	1.00	52.3	50.0		105	90 - 110)
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected		Recovery	Accepta	nce Range
Chromium	ug/L	1.00	47.5	50.0		94.9	90 - 110	•
Manganese	ug/L	1.00	53.0	50.0		106	90 - 110)
Interference Check Sta	ndard A							
Parameter	Unit	DF	Result	Expected		Recovery	Accepta	nce Range
Chromium	ug/L	1.00	ND	0		•	,	. 3-

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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Client: E2 Consulting En	gineers, Ind		oject Name: oject Numbe	PG&E Topo r: 408401.01.E	-		Printed 9/	age 4 of 5 28/2010
Interference Check St	andard A							
Parameter Chromium Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recov	ery	Accepta	nce Range
Parameter Manganese Interference Check St	Unit ug/L andard A	DF 1.00	Result ND	Expected 0	Recov	ery	Accepta	nce Range
Parameter Manganese Interference Check St	Unit ug/L andard AB	DF 1.00	Result ND	Expected 0	Recov	ery	Accepta	nce Range
Parameter Chromium Interference Check St	Unit ug/L andard AB	DF 1.00	Result 46.4	Expected 50.0	Recov 92.9	ery	Accepta 80 - 120	nce Range
Parameter Chromium Interference Check St	Unit ug/L andard AB	DF 1.00	Result 45.9	Expected 50.0	Recov	,	Accepta 80 - 120	nce Range
Parameter Manganese Interference Check St	Unit ug/L andard AB	DF 1.00	Result 49.3	Expected 50.0	Recov 98.7	ery	Accepta 80 - 120	nce Range
Parameter Manganese	Unit ug/L	DF 1.00	Result 51.3	Expected 50.0	Recov	ery	Accepta 80 - 120	nce Range
Total Dissolved Solids b	y SM 2540) C Unit		09TDS10C lyzed	DF I	MDL	9/16/2010 RL	Result
991140-001 Total Dissolved S	Solids	mg/L	09/16	/2010	1.00 0	.434	250.	4020
Method Blank								
Parameter Total Dissolved Solids Duplicate	Unit mg/L	DF 1.00	Result ND				Lab ID = 9	991176-001
Parameter Total Dissolved Solids Lab Control Sample	Unit mg/L	DF 1.00	Result 2660	Expected 2540	RPD 4.43		Accepta 0 - 5	nce Range
Parameter Total Dissolved Solids	Unit mg/L	DF 1.00	Result 494.	Expected 500.	Recove	ery	Accepta 90 - 110	nce Range

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

Page 5 of 5 Printed 9/28/2010

011

Turbidity by SM 2130 B			Batch	09TUC10J		in a dija	9/15/2010	
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
991140-001 Turbidity		NTU	09/15	5/2010	1.00	0.0140	0.100	0.106
Method Blank								
Parameter	Unit	DF	Result					
Turbidity	NTU	1.00	ND					
Duplicate							Lab ID =	991140-001
Parameter	Unit	DF	Result	Expected	RI	PD	Accepta	nce Range
Turbidity	NTU	1.00	0.108	0.106		1.87	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Turbidity	NTU	1.00	7.96	8.00		99.5	90 - 110	U
Lab Control Sample D	uplicate							
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range
Turbidity	NTU	1.00	8.01	8.00		100	90 - 110	_

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

to - 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.



Total Dissolved Solids by SM 2540 C

Calculations

Batch: 09TDS10C

Date Calculated: 9/20/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
BLANK	100	109.4442	109.4445	109,4445	0.0000	No	0.0003	3.0	25.0	ND	1
99113 0	50 .	74.7227	74,7833	74.7829	0.0004	No	0.0602	1204.0	50.0	1204.0	1
991140	. 10	50.2400	50.2802	50,2802	0.0000	No	0.0402	4020.0	250.0	4020.0	1
991149-2	100	103.7196	103.7688	103.7684	0.0004	No	0.0488	488.0	25.0	488.0	1
991173-1	20	49.3574	49.4258	49.4254	0.0004	No	0.0680	3400.0	125.0	3400.0	1
991173-2	20	48.1869	48.2682	48.2682	0.0000	No	0.0813	4065.0	125.0	4065.0	1
991176	20	73,1497	73.2005	73.2005	0.0000	No	0.0508	2540.0	125.0	2540.0	1
991176D	20	51.1419	51.1952	51.1950	0.0002	No	0.0531	2655.0	125.0	2655.0	1

									:		
							1	· · · · · · · · · · · · · · · · · · ·			
LCS	100	109.4014	109.4508	109.4508	0.0000	No	0.0494	494.0	25.0	494.0	1

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Analyst Printed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 09TDS10C Date Calculated: 9/20/10

Laboratory Number	EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
00/170				
991130	1892	0.64	1229.8	0.98
991140	7190	0.56	4673.5	0.86
991149-2	775	0.63	503.75	0.97
991173-1	4350	0.78	2827.5	1.20
991173-2	5550	0.73	3607.5	1.13
991176	4260	0.60	2769	0.92
991176D	4260	0.62	2769	0.96
	·			***************************************



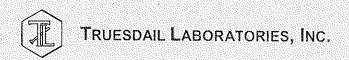


TRUE: 14201 (714)7 (714)7 www.	TRUESDAL LABORATO 14201 Franklin Avenue, ` (714)730-6239 FAX: (71) www.truesdail.com	TRUESDAIL LABORATORIES, INC. 14201 Franklin Avenue, Tustin, CA 92780-7008 (714)730-6239 FAX: (714) 730-6462	1008		CHAIN OF CUSTODY RECORD	OF CUSTODY R [IM3Plant-WDR-274]	ECORD		COC TURN DATE	Rec'd COC Number Seb TURNAROUND TIME DATE 08/14/10	10 10 PAGE	70 40 bays	[-]
COMPANY PROJECT NAME PHONE ADDRESS	E2 PG&E Topock (530) 229-3303 155 Grand Ave Ste Oakland, CA 94612	1000	FAX (530) 339-3303	-3303	p	(1001)				The state of the s	NIMERS	COMMENTS	
P.O. NUMBER 408. SAMPLERS (SIGNATURE -	408401.01.DM	DATE	₹ ()	1 DESCRIPTION	Cie (218.6) Lab Fillere	OS (SWS STOC)	(OE 15MS) (SIMS) (SIMS)			NUMBER OF CON			
SC-700B-WDR-274	Saurie Tiwe	19714/10 14	- Cd: 44	Water P H	× × ×	×	(a)		Cr(T)	w W	DTAL NUMBER	TOTAL NUMBER OF CONTAINERS TOTAL NUMBER OF CONTAINERS	
1 88 J	(4:42)	82.5"F@14:50		7,3@ 14:53		7.31@ 14:54 For S	,004 (2) 14:38 Imple Con	14:54 ,004 (2) 14:38 ,004 (For Sumple Conclidion.	B C C C C C C C C C C C C C C C C C C C	(5:0/		ALEXANDER DO DO	
Signature (Relinquished) Signature (Received)		CHAIN OF CU	custoby s	SIGNATUR Companyl Companyl Companyl	RE RECORD	Date/ Time Date/ Time	9-19-19	Andre RECEIVED 9-14-70 CUSTODY SE	RECEIVED COOL	AMPLECO	WARM O	8	
Signature (Received) Signature (Relinquished) Signature (Relinquished) Signature (Received)	Sept Day	Myree Anne Anne Printed Name Name Name	a color	Agency Company/ Agency Company/ Agency Company/ Agency	7.7	Time Date/	212/2	200	SPECIAL REQUIREMENTS:	έ			

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
082710	990893-5	9,5	N/A	N/A	N/A	SB
	4-6	Ì				ί.
4	₩ -7	4	+	J	1	•
08/27/10	990902	7.0	6,00	9.5	11:00	SB
08/28/10	990908-1	7.0	2,00	9.5	19:00	SB
	-2			l		1
4	-3	J	J	· 1	J	1 de
08/27/10	990909	7.0	2.00	9.5	19:00	SB
09/02/10		7.0	5.00	9.5	8:15	SB
09/02/10	990967-1	7.0	5.60	9.5	ଷ୍ଟ: ୦୦	SB
	1 -2					1
4	-3	<u> </u>	7	J	م	¥
09/09/00	991053	ጉ ୦	5 .00	9,5	7:00	SB
09/09/10	991070	9,5	N/A	A/co	N/A	SB
09/15/10	991140	7.0	5.00	9.5	%:∞	SB
09/15/10	991141-1	7.0	5.00	9.5	8:05	SB
<u> </u>	[-2				8:10	
	-3				8:15	
	_4				8:20	
	-5				8:25	
4	¥ -6	4	4	4	8:30	4
09/16/10	991173-1	9.5	N/A	NA	NA	SB
<u> </u>	4-2	4	4	<u> </u>	4	
				'		
	·-					
					·	

al.





Sample Integrity & Analysis Discrepancy Form

Clier	nt: <u>E2</u>	_ Lab# 991140
Date	Delivered: 9/14/10 Time: 2/130By: DMail GFi	eld Service
1.	Was a Chain of Custody received and signed?	ØYes □No □N/A
2.	Does Customer require an acknowledgement of the COC?	□Yes □No DM/A
}.	Are there any special requirements or notes on the COC?	□Yes □No ÞÍNA
	If a letter was sent with the COC, does it match the COC?	□Yes □No ŒN/A
).	Were all requested analyses understood and acceptable?	DYES ONO ONA
),	Were samples received in a chilled condition? Temperature (if yes)? <u>3 ° C</u>	ØYes □No □N/A
•	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	dYes □No □N/A
•	Were sample custody seals intact?	□Yes □No □N/A
	Does the number of samples received agree with COC?	ØYes □No □N/A
0.	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 ÞIN/A
2.	Were samples pH checked? pH =	□Yes □No ĐN/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	ØYes □No □N/A
5.	Sample Matrix: □Liquid □Drinking Water □Ground	Water □Waste Water
	□Sludge □Soil □Wipe □Paint □Solid 🗹	Other WATER
6.	Comments:	<u> </u>
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Kafay Day

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

October 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-275 PROJECT, GROUNDWATER

MONITORING, TLI No.: 991276

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-275 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 September 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.

Total Chromium and Total Manganese were 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. gyer

K.R.P. Iyer

Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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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.: 408401.01.DM

Laboratory No.: 991276

Date: October 5, 2010 Collected: September 22, 2010 Received: September 22, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	Hope Trinidad
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.: 408401.01.DM P.O. No.: 408401.01.DM



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

Laboratory No.: 991276

Date Received: September 22, 2010

Analytical Results Summary

Lab Sample ID Field ID	Field ID	Analysis Method	Extraction Method	xtraction Method Sample Date	Sample Time	Parameter	Result	Units	R
991276-001	SC-700B-WDR-275 E120.1	E120.1	NONE	9/22/2010	8:00	EC	7130	umhos/cm	2.00
991276-001	SC-700B-WDR-275	E200.8	NON	9/22/2010	8:00	Chromíum	Q	ng/L	1.0
991276-001	SC-700B-WDR-275	E200.8	NONE	9/22/2010	8:00	Manganese	1.0	ug/L	1.0
991276-001	SC-700B-WDR-275	E218.6	LABFLT	9/22/2010	8:00	Chromium, hexavalent	0.21	ng/L	0.20
991276-001	SC-700B-WDR-275	SM2130B	NONE	9/22/2010	8:00	Turbidity	QN	NTO	0.100
991276-001	SC-700B-WDR-275 SM2540C	SM2540C	NONE	9/22/2010	8:00	Total Dissolved Solids	4030	mg/L	250

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

Results below 0.01ppm will have two (2) significant figures. Result above or equal to 0.01ppm 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:

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401.01.DM Project Number: 408401.01.DM

Laboratory No. 991276

Page 1 of 7

Printed 10/5/2010

Samples Received on 9/22/2010 9:30:00 PM

Field ID				Lab ID	Colle	ected	Matri	ix
SC-700B-WDR-275				991276-001	09/22/2	2010 08:00	Wate	er
Specific Conductivity - E Parameter	PA 120.1	Unit		09EC10I lyzed	DF	MDL	9/24/2010 RL	Result
991276-001 Specific Conducti	vity	umhos/d	cm 09/24	/2010	1.00	0.0380	2.00	7130
Method Blank								
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result ND					
Duplicate							Lab ID =	991276-001
Parameter Specific Conductivity Lab Control Sample	Unit umhos	DF 1.00	Result 7110	Expected 7130		PD 0.281	Accepta 0 - 10	nce Range
Parameter Specific Conductivity Lab Control Sample Du	Unit umhos uplicate	DF 1.00	Result 707.	Expected 706.		ecovery 100	Accepta 90 - 110	nce Range
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 708.	Expected 706.		ecovery 100	Accepta 90 - 110	nce Range
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 699.	Expected 706.		ecovery 99.0	Accepta 90 - 110	nce Range
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 987.	Expected 999.		ecovery 98.8	Accepta 90 - 110	nce Range



Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project

Page 2 of 7 Project Number: 408401.01.DM Printed 10/5/2010

Chrome VI by EPA 218.6			Batch	10CrH10A				
Parameter		Unit	Ana	llyzed	DF	MDL	RL	Result
991276-001 Chromium, Hexa	avalent	ug/L	10/01	1/2010 09:03	1.05	0.0210	0.20	0.21
Method Blank								
Parameter	Unit	DF	Result					
Chromium, Hexavalent Duplicate	ug/L	1.00	ND				Lab ID =	991359-003
Parameter	Unit	DF	Result	Expected	F	RPD	Accepta	ance Range
Chromium, Hexavalent Lab Control Sample	ug/L	5.25	1.66	1.72		3.31	0 - 20	
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ance Range
Chromium, Hexavalent Matrix Spike	ug/L	1.00	5.30	5.00		106	90 - 110 Lab ID =) 991276-001
Parameter	Unit	DF	Result	Expected/Add	ed F	Recovery	Accepta	ance Range
Chromium, Hexavalent	ug/L	1.06	1.19	1.27(1.06)		92.5	90 - 110	_
Matrix Spike							Lab ID =	991358-001
Parameter	Unit	DF	Result	Expected/Add	ed F	Recovery	Accepta	ance Range
Chromium, Hexavalent	ug/L	1.06	1.33	1.38(1.06)		96.0	90 - 110)
Matrix Spike							Lab ID =	991359-001
Parameter	Unit	DF	Result	Expected/Add	ed F	Recovery	Accepta	ance Range
Chromium, Hexavalent	ug/L	5.25	5.09	5.47(5.25)		92.7	90 - 110	
Matrix Spike							Lab ID =	991359-001
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.06	Result 0.992	Expected/Add 1.06(1.06)	ed F	Recovery 93.6	Accepta 90 - 110	ance Range)
Matrix Spike							Lab ID =	991359-002
Parameter Chromium, Hexavalent	Unit ug/L	DF 5.25	Result 5.25	Expected/Adde 5.25(5.25)	ed F	Recovery 100.	Accepta 90 - 110	ance Range)
Matrix Spike							Lab ID =	991359-002
Parameter	Unit	DF	Result	Expected/Adde	ed F	Recovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	1.06	0.927	1.06(1.06)	•	87.5	90 - 110	•
Matrix Spike							Lab ID =	991359-003
Parameter	Unit	DF	Result	Expected/Adde	ed F	Recovery	Accepta	ance Range
Chromium, Hexavalent	ug/L	5.25	7.26	6.97(5.25)		105	90 - 110	•



Client: E2 Consulting Eng	ineers, Inc		roject Name: roject Number	PG&E Topock Pro :: 408401.01.DM	ject	Page 3 of 7 Printed 10/5/2010
Matrix Spike						Lab ID = 991359-004
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 5.25	Result 7.36	Expected/Added 6.99(5.25)	Recovery 107	Acceptance Range 90 - 110 Lab ID = 991359-005
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 5.25	Result 6.39	Expected/Added 6.13(5.25)	Recovery 105	Acceptance Range 90 - 110 Lab ID = 991359-006
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 5.25	Result 5.30	Expected/Added 5.54(5.25)	Recovery 95.4	Acceptance Range 90 - 110 Lab ID = 991359-006
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 0.984	Expected/Added 1.06(1.06)	Recovery 92.8	Acceptance Range 90 - 110 Lab ID = 991359-007
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 0.989	Expected/Added 1.06(1.06)	Recovery 93.3	Acceptance Range 90 - 110 Lab ID = 991359-008
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 52.5	Result 757	Expected/Added 794(525.)	Recovery 92.9	Acceptance Range 90 - 110
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 5.21	Expected 5.00	Recovery 104	Acceptance Range 90 - 110
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.96	Expected 10.0	Recovery 99.6	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.4	Expected 10.0	Recovery 104	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.2	Expected 10.0	Recovery 102	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 9.78	Expected 10.0	Recovery 97.8	Acceptance Range 95 - 105



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

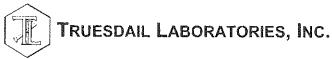
Project Number: 408401.01.DM

Page 4 of 7 Printed 10/5/2010

Metals by EPA 200.8, To	otal		Batch	092810A				
Parameter		Unit	Ana	ılyzed [OF .	MDL	RL	Result
991276-001 Chromium		ug/L	10/05	5/2010 12:20 5	.00	0.0950	1.0	ND
Manganese		ug/L	10/05	5/2010 12:20 5	.00	0.210	1.0	1.0
Method Blank						1,		
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID = 9	991276-001
Parameter	Unit	DF	Result	Expected	RPD		Accepta	nce Range
Chromium	ug/L	5.00	ND	o o	0		0 - 20	
Manganese	ug/L	5.00	0.949	1.04	9.1	7	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Reco	verv	Accepta	nce Range
Chromium	ug/L	1.00	48.3	50.0	96.0	•	90 - 110	•
Manganese	ug/L	1.00	48.0	50.0	96.	1	90 - 110	
Matrix Spike								991276-001
Parameter	Unit	DF	Result	Expected/Adde	d Reco	verv	Accepta	nce Range
Chromium	ug/L	5.00	246	250.(250.)	98.0	•	75 - 125	_
Manganese	ug/L	5.00	245	251(250.)	97.	7	75 - 125	
Matrix Spike Duplicat	te						Lab ID = 9	991276-001
Parameter	Unit	DF	Result	Expected/Adde	d Reco	very	Accepta	nce Range
Chromium	ug/L	5.00	246	250.(250.)	98.	•	75 - 125	_
Manganese	ug/L	5.00	233	251(250.)	92.9	9	75 - 125	
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	Reco	very	Accepta	nce Range
Chromium	ug/L	1.00	48.3	50.0	96.	•	90 - 110	•
Manganese	ug/L	1.00	46.5	50.0	93.	1	90 - 110	
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	Reco	very	Accepta	nce Range
Chromium	ug/L	1.00	49.4	50.0	98.	-	90 - 110	_
Manganese	ug/L	1.00	51.0	50.0	102	!	90 - 110	
Interference Check S	tandard A							
Parameter	Unit	DF	Result	Expected	Reco	very	Accepta	nce Range
Chromium	ug/L	1.00	ND	0	-	-		



Client: E2 Consulting Engi	neers, Inc.		Project Name: Project Number:	PG&E Topock Pro 408401.01.DM	oject	Page 5 of 7 Printed 10/5/2010
Interference Check Star	ndard A					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0	•	
Interference Check Star	ndard A					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	ND	0	·	
Interference Check Star	ndard A					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	ND	0	·	,
Interference Check Star	ndard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.3	50.0	103	80 - 120
Interference Check Star	ndard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.9	50.0	102	80 - 120
Interference Check Star	ndard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	53.1	50.0	106	80 - 120
Interference Check Star	ndard AB					
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Manganese	ug/L	1.00	49.7	50.0	99.4	80 - 120



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Parameter		0 C		Batch 09TDS10D			9/24/2010			
Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result		
991276-001 Total Dissolved	Solids	mg/L	09/24	I/2010	1.00	0.434	250.	4030		
Method Blank										
Parameter	Unit	DF	Result							
Total Dissolved Solids Duplicate	mg/L	1.00	ND				Lab ID =	991214-003		
Parameter	Unit	DF	Result	Expected	R	PD	Accepta	nce Range		
Total Dissolved Solids	mg/L	1.00	174.	179.		2.83	0 - 5	J		
Lab Control Sample										
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range		
Total Dissolved Solids	mg/L	1.00	491.	500.		98.2	90 - 110	1		
Lab Control Sample [Duplicate									
Parameter	Unit	DF	Result	Expected	R	ecovery	Accepta	nce Range		
Total Dissolved Solids	mg/L	1.00	507.	500.		101	90 - 110	1		
Turbidity by SM 2130 B			Batch	09TUC10O			9/23/2010			
Turbidity by SM 2130 B Parameter		Unit		09TUC100 lyzed	DF	MDL	9/23/2010 RL) Result		
그리고 있는 아이를 하지 않는 그리고 있는 그리고 하는데 없는 그것		Unit NTU	Ana		DF 1.00	MDL 0.0140				
Parameter			Ana	lyzed			RL	Result		
Parameter 991276-001 Turbidity	Unit		Ana	lyzed			RL	Result		
Parameter 991276-001 Turbidity Method Blank	Unit NTU	NTU	Ana 09/23	lyzed			RL	Result		
Parameter 991276-001 Turbidity Method Blank Parameter		NTU DF	Ana 09/23 Result	lyzed			RL 0.100	Result ND		
Parameter 991276-001 Turbidity Method Blank Parameter Turbidity		NTU DF	Ana 09/23 Result	lyzed	1.00		RL 0.100	Result ND 991276-001		
Parameter 991276-001 Turbidity Method Blank Parameter Turbidity Duplicate	NTU	DF 1.00	Ana 09/23 Result ND	lyzed 3/2010	1.00 R	0.0140	RL 0.100	Result ND 991276-001		
Parameter 991276-001 Turbidity Method Blank Parameter Turbidity Duplicate Parameter	NTU Unit	DF 1.00	Ana 09/23 Result ND Result	lyzed 3/2010 Expected	1.00 R	0.0140 PD	RL 0.100 Lab ID = Accepta	Result ND 991276-001		
Parameter 991276-001 Turbidity Method Blank Parameter Turbidity Duplicate Parameter Turbidity	NTU Unit	DF 1.00	Ana 09/23 Result ND Result	lyzed 3/2010 Expected	1.00 R	0.0140 PD	RL 0.100 Lab ID = Accepta 0 - 20	Result ND 991276-001 Ince Range		
Parameter 991276-001 Turbidity Method Blank Parameter Turbidity Duplicate Parameter Turbidity Lab Control Sample	NTU Unit NTU	DF 1.00 DF 1.00	Ana 09/23 Result ND Result ND	lyzed 3/2010 Expected 0	1.00 R	0.0140 PD 0	RL 0.100 Lab ID = Accepta 0 - 20	Result ND 991276-001 Ince Range		
Parameter 991276-001 Turbidity Method Blank Parameter Turbidity Duplicate Parameter Turbidity Lab Control Sample Parameter	Unit NTU Unit Unit NTU	DF 1.00 DF 1.00	Ana 09/23 Result ND Result ND Result	lyzed 3/2010 Expected 0 Expected	1.00 R	0.0140 PD 0	RL 0.100 Lab ID = Accepta 0 - 20 Accepta	Result ND 991276-001 Ince Range		
Parameter 991276-001 Turbidity Method Blank Parameter Turbidity Duplicate Parameter Turbidity Lab Control Sample Parameter Turbidity	Unit NTU Unit Unit NTU	DF 1.00 DF 1.00	Ana 09/23 Result ND Result ND Result	lyzed 3/2010 Expected 0 Expected	1.00 R	0.0140 PD 0	RL 0.100 Lab ID = Accepta 0 - 20 Accepta 90 - 110	Result ND 991276-001 Ince Range		



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Printed 10/5/2010

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi

Manager, Analytical Services





Total Dissolved Solids by SM 2540 C

Calculations

Batch: 09TDS10D Date Calculated: 9/24/10

Laboratory Number	Sample volume, mi	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
BLANK	100	111.0572	111.0575	111.0575	0.0000	No	0.0003	3.0	25.0	ND	1
991183	468	159.3341	159.3370	159.3369	0.0001	No	0.0028	6.0	5.3	6.0	1
9911214-2	200	92.1063	92.1271	92.1267	0.0004	No	0.0204	102.0	12.5	102,0	1
9911214-3	100	73.8396	73.8575	73.8575	0.0000	No	0.0179	179.0	25.0	179.0	1
9911214-3D	100	68.2463	68.2640	68.2637	0.0003	No	0.0174	174.0	25.0	174.0	1
991276	10	73,0377	73.0781	73.0780	0.0001	No	0.0403	4030.0	250.0	4030.0	1
LCS	100	103.4232	103.4725	103.4723	0.0002	No	0.0491	491.0	25.0	491.0	1
								*			

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LCSD	100	112.9015	112,9526	112.9522	0.0004	No	0.0507	507.0	25.0	507.0	1

Calculation as follows:

Filterable residue (TDS), mg/L = $\left(\frac{A-B}{C}\right) x \cdot 1 \cdot 0^6$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 09TDS10D Date Calculated: 9/24/10

			. 5,2 11 10	
Laboratory Number	EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
991183	3.61	1.66	2.3465	2.55
9911214-2	187	0.55	121.55	
9911214-3	317	0.56	206.05	0.84 0.87
9911214-3D	317	0.55	206.05	0.84
991276	7120	0.57	4628	0.87
LCS		0.07	4026	U.07

W.

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-275]

FOR TURNAROUND TIME DATE 09/22/10 COC Number

9F

PAGE

10 Days

COMPANY	E2						_						/		_				COMMENTS
PROJECT NAME	PG&E Topock											_			_		\		
PHONE	(530) 229-3303		FAX (530) 339-3303	339-3303	· -					_				<u></u>					
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612	Ste 1000 1612	***************************************			As	UW 'S	(150:1)									NTAINERS		
P.O. NUMBER	408401.01.DW	7	TEAM	_		D Fifter	(200	90Up:-	(OE)	15						,00 ₃	160		
SAMPLERS (SIGNATURE	IATURE	19				e7 (9's	Cone	X25400	ZWS)							ENO			
SAMPLE LO.		DATE	TIME	DESCRIPTION	sc) 910	Crs (278	^{Ogj} O∂dS	NS) SQI	Turbidity							BWINN			
SC-700B-WDR-275	R-275	09/22/10	0280		×	×	×	×	×				-		f	9		10	9 = <i>I</i> (
Mercelogación de la company de	Parking the second of the seco	1014		Ì		74/		127		1					<u>'''</u>	3	OTAL NI.	MBERO	TOTAL NUMBER OF CONTAINERS
		CN#7550	j	ر رئ	10/12/	-	7)	7-	:)				
		0801	~	£00°	5000	ſŊ	-	226	<u></u>	0,	TVAMAESKOROZINES	derick general state of the	NAMES AND ASSOCIATION OF THE PERSON OF THE P		The state of the s		**GPS-BB-CUT-MACED-MARINE PROTECTION OF THE P		

TO SEE CONTROLL OF THE SECOND PROPERTY OF THE See Form Attacked

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<u>&</u>
CW

0)-77-b 15:40 Date/ Time CHAIN OF CUSTODY SIGNATURE RECORD Ž Company/ Agency Chalan Printed Name Christ (Relinquished) (Received)

SAMPLE CONDITIONS

456 4 WARM | 2 YES 🗆 C00L [] SPECIAL REQUIREMENTS: CUSTODY SEALED RECEIVED 21:30 Date/ TimeSEP 2 2 2010 Date/9-22-Datel 9-22 Date/ Time Date/ Time Company/ Agency Company/ Agency Company/ Company Company/ Agency Agency Agency Printed Printed Printed Name Printed Name Printed . V. Mame Name Name aleriza

8 Signature (Refinquished)

Signature (Received)

Signature 1,7 (Relinquished)

Signature

Signature

Signature

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial pH	Buffer Added (mL)	Final pH	Time Buffered	Initials
08/27/10	990893-5	9.5	N/A	15/A	N/A	SB
	1 -0	l				1
4	₩ -7	J	+	J	1	4
08/27/10	990902	7.0	2,00	9.5	(\1:∞	SB
08/28/10	990908-1	スロ	5.00	9.5	19:00	SB
l l	ース		<u> </u>		ŀ	1
4	-3	<u> </u>	<u></u>	· J)	14-
08/27/10	990909	7.0	2.00	9:5	19:00	SB
	990966-1	7.0	2.00	9.5	8:15	SB
09/02/10	990967-1	7.0	5.60	9.5	\$: Oc	SB
	1 -2			(1
4	+ -3	V		J		¥
09/08/00	991053	7.c	5 .00	9.5	7:00	SB
09/09/10	991070	9,5	N/A	ALO	A/M	SB
09/15/10	991140	7.0	5.00	9.5	శ్రీ:∞	SB
09/15/10	991141-1	7.0	5.00	9.5	8:05	50
	-2)	î	8:10	1
	-3				8:15	
	-4				8:20	
	-5				8:25	
4	4 -6	4	4	4	%:°30	Ą
09/16/10	991173-1	9.5	N/A	NA	NA	5Z
<u>J</u>	1-2	4	<u> </u>	<u></u>	<u>J. </u>	<u> </u>
09/23/10	991276	7-0	.5100	9.5	7:30	S 🕏
09 (30 (0	991358	7.0	2.69	9.5	7:35	SB
09/30/10	991359-1	9.5	AG	AU	N/A	<i>88</i>
<u> </u>	-2		<u> </u>			
	-4					
	-5					
.}	W -6	4		4	A	Ţ

all

Sample Integrity & Analysis Discrepancy Form

Clier	nt: E2	Lab# <u>9912</u> 76
Date	e Delivered: <u>09</u> / <u>12</u> /10 Time: <u>2/∶30</u> By: □Mail ØI	Field 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 図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 □No ⊠dN/A
5.	Were all requested analyses understood and acceptable?	√DYes □No □N/A
6.	Were samples received in a chilled condition? Temperature (if yes)?4 <u>,5°C</u>	Ma Yes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	⊠iYes □No □N/A
8.	Were sample custody seals intact?	□Yes □No x QN/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?	Maryes □No □N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: □Truesdail □Client	□Yes □No ÆN/A
12.	Were samples pH checked? pH = <u>Lee C</u> .O.C.	ZeYes □No □N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	Ø Yes □No □N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): □ RUSH	a(Yes □No □N/A
15.	<u>Sample Matrix:</u> □Liquid □Drinking Water □Ground	
	□Sludge □Soil □Wipe □Paint □Solid	DOOTHER Water
16.	Comments:	
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Shabunina



TRUESDAIL LABORATORIES, INC.

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Established 1931

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

October 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-276 PROJECT, GROUNDWATER MONITORING, TLI NO.: 991358

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-276 project groundwater monitoring for Hexavalent and Total Chromium, Total Manganese, 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 September 29, 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 and Total Manganese were 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.

for Mona Nassimi

Manager, Analytical Services

K. R. P. gyer

K.R.P. Iver

Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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

Oakland, CA 94612

Attention: Shawn Duffy

Sample: Two (2) Groundwater Samples

Project Name: PG&E Topock Project

Project No.: 408401.01.DM

Laboratory No.: 991358

Date: October 5, 2010

Collected: September 29, 2010 Received: September 29, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	lordan Stavrev
SM 4500-NO2 B	Nitrite as N	Jenny Tankunakorn
SM 2540C	Total Dissolved Solids	Jenny Tankunakorn
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Metals	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

P.O. No.: 408401.01.DM Project No.: 408401.01.DM

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Laboratory No.: 991358

Date Received: September 29, 2010

Revision 1; October 6, 2010

Analytical Results Summary

Lab Sample ID Field ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
991358-001	SC-700B-WDR-276 E120.1	E120.1	NONE	9/29/2010	8:00	EC	7100	umhos/cm	2.00
991358-001	SC-700B-WDR-276	E200.8	NONE	9/29/2010	8:00	Chromium	2	ng/L	1.0
991358-001	SC-700B-WDR-276	E200.8	NONE	9/29/2010	8:00	Manganese	<u>.</u> .	ng/L	1.0
991358-001	SC-700B-WDR-276	E218.6	LABFLT	9/29/2010	8:00	Chromium, hexavalent	0.32	ng/L	0.20
991358-001		SM2130B	NONE	9/29/2010	8:00	Turbidity	0.119	NTO	0.100
991358-001		SM2540C	NONE	9/29/2010	8:00	Total Dissolved Solids	4100	mg/L	250
991358-001	SC-700B-WDR-276 SM4500NO2B	SM4500NO2B	NONE	9/29/2010	8:00	Nitrite as N	2	mg/L	0.0050
991358-002	SC-100B-WDR-276 SM4500NO2B	SM4500NO2B	NONE	9/29/2010	12:00	Nitrite as N	2	mg/L	0.0050

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter.

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

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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 Avenue, Suite 800

Oakland, CA 94612

Attention: Shawn Duffy

Project Name: PG&E Topock Project

P.O. Number: 408401.01.DM Project Number: 408401.01.DM Laboratory No. 991358

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Samples Received on 9/29/2010 8:30:00 PM

Field ID				Lab ID	Colle	ected	Matrix	(
SC-700B-WDR-276				991358-001		2010 08:00	Wate	
SC-100B-WDR-276				991358-002	09/29/2	2010 12:00	Wate	r
Nitrite SM 4500-NO2 B			Batch	09NO210M				
Parameter		Unit	Anal	yzed	DF	MDL	RL	Result
991358-001 Nitrite as Nitroger	1	mg/L	09/30	/2010 11:48	1.00	0.000200	0.0050	ND
991358-002 Nitrite as Nitroger	1	mg/L	09/30	/2010 11:49	1.00	0.000200	0.0050	ND
Method Blank								
Parameter	Unit	DF	Result					
Nitrite as Nitrogen	mg/L	1.00	ND					
Duplicate							Lab ID = 9	91358-002
Parameter	Unit	DF	Result	Expected	RF	PD	Acceptar	ce Range
Nitrite as Nitrogen	mg/L	1.00	ND	0	(ס	0 - 20	
Lab Control Sample								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Acceptan	ce Range
Nitrite as Nitrogen	mg/L	1.00	0.0467	0.0450	•	104	90 - 110	
Lab Control Sample Du	ıplicate							
Parameter	Unit	DF	Result	Expected	Re	covery	Acceptan	ce Range
Nitrite as Nitrogen	mg/L	1.00	0.0471	0.0450	•	105	90 - 110	
Matrix Spike							Lab ID = 9	91358-002
Parameter	Unit	DF	Result	Expected/Ad	ded Re	ecovery	Acceptan	ce Range
Nitrite as Nitrogen	mg/L	1.00	0.0205	0.0200(0.02	200 -	102	75 - 125	
MRCCS - Secondary								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Acceptan	ce Range
Nitrite as Nitrogen	mg/L	1.00	0.0296	0.0270	-	110	90 - 110	



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0208	0.0200	104.	90 - 110

Specific Conductivity - E	PA 120.1		Batc	h 09EC10J			9/30/2010)
Parameter	eti esi Televe si Tesi jove	Unit	An	alyzed	DF	MDL	RL	Result
991358-001 Specific Conducti	vity	umhos/c	m 09/3	0/2010	1.00	0.0380	2.00	7100
Method Blank								
Parameter Specific Conductivity Duplicate	Unit umhos	DF 1.00	Result ND				Lab ID =	991358-001
Parameter Specific Conductivity Lab Control Sample	Unit umhos	DF 1.00	Result 7150	Expected 7100		PD 0.702		ince Range
Parameter Specific Conductivity Lab Control Sample Do	Unit umhos unlicate	DF 1.00	Result 700.	Expected 706.		ecovery 99.2	Accepta 90 - 110	ince Range)
Parameter Specific Conductivity MRCCS - Secondary	Unit umhos	DF 1.00	Result 698.	Expected 706.		ecovery 98.9	Accepta 90 - 110	ince Range)
Parameter Specific Conductivity MRCVS - Primary	Unit umhos	DF 1.00	Result 702.	Expected 706.		ecovery 99.4	Accepta 90 - 110	ince Range)
Parameter Specific Conductivity	Unit umhos	DF 1.00	Result 995.	Expected 999.		ecovery 99.6	Accepta 90 - 110	ince Range)



Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Chrome VI by EPA 218.6			Batch	1 10CrH10A				
Parameter		Unit	Ana	ılyzed	DF	MDL	RL	Result
991358-001 Chromium, Hexa	avalent	ug/L	10/01	1/2010 09:13	1.05	0.0210	0.20	0.32
Method Blank								
Parameter	Unit	DF	Result					
Chromium, Hexavalent Duplicate	ug/L	1.00	ND				Lab ID =	991359-003
Parameter	Unit	DF	Result	Expected		RPD	Accepta	ance Range
Chromium, Hexavalent Lab Control Sample	ug/L	5.25	1.66	1.72		3.31	0 - 20	J
Parameter	Unit	DF	Result	Expected		Recovery	Accepta	nce Range
Chromium, Hexavalent Matrix Spike	ug/L	1.00	5.30	5.00		106	90 - 110 Lab ID =	991276-001
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	Accepta	nce Range
Chromium, Hexavalent Matrix Spike	ug/L	1.06	1.19	1.27(1.06)		92.5	90 - 110)
Parameter	11-4	DE	D 44	F 1 1/A 1 1		-		991358-001
Chromium, Hexavalent	Unit ug/ L	DF 1.06	Result 1.33	Expected/Add 1.38(1.06)	ed	Recovery 96.0	Accepta 90 - 110	ince Range
Matrix Spike	ug, L	1.00	1.00	1.50(1.00)		90.0		991359-001
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	5.25	5.09	5.47(5.25)		92.7	90 - 110	_
Matrix Spike							Lab ID =	991359-001
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.06	Result 0.992	Expected/Add 1.06(1.06)	ed	Recovery 93.6	Accepta 90 - 110	nce Range
Matrix Spike	_			,				991359-002
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	Accepta	nce Range
Chromium, Hexavalent	ug/L	5.25	5.25	5.25(5.25)		100.	90 - 110	_
Matrix Spike							Lab ID =	991359-002
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	Accepta	ince Range
Chromium, Hexavalent	ug/L	1.06	0.927	1.06(1.06)		87.5	90 - 110	_
Matrix Spike							Lab ID =	991359-003
Parameter	Unit	DF	Result	Expected/Add	ed	Recovery	Accepta	ince Range
Chromium, Hexavalent	ug/L	5.25	7.26	6.97(5.25)		105	90 - 110	_

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Client: E2 Consulting Eng	ineers, Inc		oject Name: oject Number	PG&E Topock Pro :: 408401.01.DM	ject	Page 4 of 7 Printed 10/5/2010
Matrix Spike						Lab ID = 991359-004
Parameter Chromium, Hexavalent	Unit ug/L	DF 5.25	Result 7.36	Expected/Added 6.99(5.25)	Recovery 107	Acceptance Range 90 - 110
Matrix Spike						Lab ID = 991359-005
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 5.25	Result 6.39	Expected/Added 6.13(5.25)	Recovery 105	Acceptance Range 90 - 110 Lab ID = 991359-006
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 5.25	Result 5.30	Expected/Added 5.54(5.25)	Recovery 95.4	Acceptance Range 90 - 110 Lab ID = 991359-006
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 0.984	Expected/Added 1.06(1.06)	Recovery 92.8	Acceptance Range 90 - 110 Lab ID = 991359-007
Parameter Chromium, Hexavalent Matrix Spike	Unit ug/L	DF 1.06	Result 0.989	Expected/Added 1.06(1.06)	Recovery 93.3	Acceptance Range 90 - 110 Lab ID = 991359-008
Parameter Chromium, Hexavalent MRCCS - Secondary	Unit ug/L	DF 52.5	Result 757	Expected/Added 794(525.)	Recovery 92.9	Acceptance Range 90 - 110
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 5.21	Expected 5.00	Recovery 104	Acceptance Range 90 - 110
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 9.96	Expected 10.0	Recovery 99.6	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.4	Expected 10.0	Recovery 104	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent MRCVS - Primary	Unit ug/L	DF 1.00	Result 10.2	Expected 10.0	Recovery 102	Acceptance Range 95 - 105
Parameter Chromium, Hexavalent	Unit ug/L	DF 1.00	Result 9.78	Expected 10.0	Recovery 97.8	Acceptance Range 95 - 105

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

Project Number: 408401.01.DM

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Parameter		Unit	Ana	lyzed	DF	MDL	RL	Result
991358-001 Chromium		ug/L	10/01	/2010 14:47	5.00	0.0950	1,0	ND
Manganese		ug/L	10/01	/2010 14:47	5.00	0.210	1,0	1.1
Method Blank								
Parameter	Unit	DF	Result					
Chromium	ug/L	1.00	ND					
Manganese	ug/L	1.00	ND					
Duplicate							Lab ID =	991358-001
Parameter	Unit	DF	Result	Expected	ŀ	RPD	Accepta	nce Range
Chromium	ug/L	5.00	ND	0		0	0 - 20	3
Manganese	ug/L	5.00	1.18	1.15		3.18	0 - 20	
Lab Control Sample	le							
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	nce Range
Chromium	ug/L	1.00	47.1	50.0		94.2	90 - 110	_
Manganese	ug/L	1.00	50.3	50.0		101	90 - 110)
Matrix Spike							Lab ID =	991358-001
Parameter	Unit	DF	Result	Expected/Adde	ed F	Recovery	Accepta	nce Range
Chromium	ug/L	5.00	251	250.(250.)		101	75 - 125	-
Manganese	ug/L	5.00	266	251(250.)		106	75 - 125	5
MRCCS - Seconda	ary							
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	nce Range
Chromium	ug/L	1.00	47.6	50.0		95.2	90 - 110	_
Manganese	ug/L	1.00	50.5	50.0		101	90 - 110)
MRCVS - Primary								
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	ince Range
Chromium	ug/L	1.00	47.5	50.0		95.0	90 - 110	_
Manganese	ug/L	1.00	51.2	50.0		102	90 - 110)
Interference Check	k Standard A							
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	nce Range
Chromium	ug/L	1.00	ND	o o		,		
Interference Check	Standard A							
Parameter	Unit	DF	Result	Expected	F	Recovery	Accepta	nce Range
Chromium	ug/L	1.00	ND	0	•	,	, ,550ptc	se range

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Client: E2 Consulting Eng	Client: E2 Consulting Engineers, Inc.		Project Name: PG&E Topock Project Project Number: 408401.01.DM			Page 6 of 7 Printed 10/5/2010
Interference Check Sta	andard A					
Parameter Manganese Interference Check Sta	Unit ug/L	DF 1.00	Result ND	Expected 0	Recover	y Acceptance Range
Parameter Manganese Interference Check Sta	Unit ug/L	DF 1.00	Result ND	Expected 0	Recover	y Acceptance Range
Parameter Chromium Interference Check Sta	Unit ug/L andard AB	DF 1.00	Result 47.7	Expected 50.0	Recover	y Acceptance Range 80 - 120
Parameter Chromium Interference Check Sta	Unit ug/L andard AB	DF 1.00	Result 45.9	Expected 50.0	Recover 91.8	y Acceptance Range 80 - 120
Parameter Manganese Interference Check Sta	Unit ug/L andard AB	DF 1.00	Result 51.4	Expected 50.0	Recover	y Acceptance Range 80 - 120
Parameter Manganese	Unit ug/L	DF 1.00	Result 50.1	Expected 50.0	Recover	y Acceptance Range 80 - 120
Total Dissolved Solids by Parameter	y SM 2540) C Unit		09TDS10F lyzed	DF MI	9/30/2010 DL RL Result
991358-001 Total Dissolved S	olids	mg/L	09/30/2010		1.00 0.4	34 250. 4100
Method Blank						
Parameter Total Dissolved Solids Duplicate	Unit mg/L	DF 1.00	Result ND			Lab ID = 991358-001
Parameter Total Dissolved Solids Lab Control Sample	Unit mg/L	DF 1.00	Result 3900	Expected 4100	RPD 5.00	Acceptance Range 0 - 5
Parameter Total Dissolved Solids Lab Control Sample D	Unit mg/L uplicate	DF 1.00	Result 475.	Expected 500.	Recover 95.0	y Acceptance Range 90 - 110
Parameter Total Dissolved Solids	Unit mg/L	DF 1.00	Result 470.	Expected 500.	Recover	y Acceptance Range 90 - 110

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Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project

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Project Number: 408401.01.DM

Printed 10/5/2010

Turbidity by SM 2130 B Parameter 991358-001 Turbidity			Batch 09TUC10S			9/30/2010			
		Unit Analyzed		DF	MDL	RL	Result		
		NTU	09/30/2010		1.00	0.0140	0.100	0.119	
Method Blank								-	
Parameter	Unit	DF	Result						
Turbidity	NTU	1.00	ND						
Duplicate							Lab ID =	991358-001	
Parameter	Unit	DF	Result	Expected	RPD ,		Accepta	Acceptance Range	
Turbidity	NTU	1.00	0.121	0.119	1.67		0 - 20		
Lab Control Sample									
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range	
Turbidity	NTU	1.00	7.88	8.00		98.5	90 - 110		
Lab Control Sample D	uplicate								
Parameter	Unit	DF	Result	Expected	Re	ecovery	Accepta	nce Range	
Turbidity	NTU	1.00	7.92	8.00	!	99.0	90 - 110	_ 	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

A Mona Nassimi

Manager, Analytical Services



Total Dissolved Solids by SM 2540 C

Calculations

Batch: 09TDS10F

Date Calculated: 9/30/10

Laboratory Number	Sample volume, ml	Initial weight,g	1st Final weight,g	2nd Final weight,g	Weight Difference, g	Exceeds 0.5mg? Yes/No	Residue weight,g	Filterable residue, ppm	RL, ppm	Reported Value, ppm	DF
BLANK	100	110.7195	110.7201	110.7201	0.0000	No	0.0006	6.0	25.0	ND	1
991351	100	105.4268	105.4729	105.4728	0.0001	No	0.0460	460.0	25.0	460.0	1
991352	100	68.1953	68.2417	68.2413	0.0004	No	0.0460	460.0	25.0	460.0	1
991358-1	10	51.1362	51.1776	51.1772	0.0004	No	0.0410	4100.0	250.0	4100.0	1
991358-1D	10	51,5113	51.5505	51.5503	0.0002	No	0.0390	3900.0	250.0	3900.0	1
LCS	100	111.5254	111.5732	111.5729	0.0003	No	0.0475	475.0	25.0	475.0	1
								A			
		-									
											·····
LCSD	100	105.6343	105.6817	105.6813	0.0004	No	0.0470	470.0	25.0	470.0	. 1

Calculation as follows:

Filterable residue (TDS), mg/L =
$$\left(\frac{A-B}{C}\right) \times 10^6$$

Where: A = weight of dish + residue in grams.

B = weight of dish in grams.

C = mL of sample filtered.

RL= reporting limit.

ND = not detected (below the reporting limit)

nalyst Printed Name

Analyst Signature

Reviewer Printed Name

Reviewer Signature

Total Dissolved Solids by SM 2540 C

TDS/EC CHECK

Batch: 09TDS10F Date Calculated: 9/30/10

Laboratory Number	EC	TDS/EC Ratio: 0.559	Calculated TDS (EC*0.65)	Measured TDS / Calc TDS <1.3
991351	700			
	792	0.58	514.8	0.89
991352	802	0.57	521.3	0.88
991358-1	7100	0.58	4615	0.89
991358-1D	7100	0.55	4615	0.85
LCS				



And

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

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-276]

Р

5 Days PAGE

COC Number

COMMENTS candition Attorior For Sample NUMBER OF CONTAINERS S S TURNAROUND TIME DATE 09/29/10 CC Total Metals (200.7) Cr. Mn (300.0) F, NO3, NO2, SO4 (850N-005P) 50N × 4 (0.00E) snoinA Total Metals (2.005) See List Below Title 22 Metals List (200.7, 200.8, 245.1) × × Cr(VI) (218.6) Lab Fillered × × DESCRIPTION FAX 530-339-3303 0000 TIME 09/29/10 09/29/10 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 PG&E Topock IM3 530-229-3303 CH2M HILL /E2 408401.01.DM SC-700B-WDR-276 SC-100B-WDR-276 SAMPLERS (SIGNATURE PROJECT NAME P.O. NUMBER SAMPLE I.D. COMPANY ADDRESS PHONE Ņ

Ļ 3,48 WARM | ջ SAMPLE CONDITIONS YES Ē COOL SPECIAL REQUIREMENTS: CUSTODY SEALED RECEIVED 2030 Date/ 9/29/10 2013. Date/ Time 9-24-35 1575 Date/ Time 7--29--70 $\vec{\gamma}_{\rm me}$ Date/ Time Date/ Time 1208 CHAIN OF CUSTODY SIGNATURE RECORD 777 177 Company/ Agency Company/ Agency Company/ Company/ Company/ Agency Company/ Agency Agency 246 シアベマのマグ Printed Printed Out MAG. Printed Name (And and Printed Name / Printed Printed Name Printed Name 1860 gacto 878 (Refinquished) Signature (Refinquished) (Relinquished) Signature (Received) . Signature (Received) Signature (Received) Signature Signature 100B-13 040

TOTAL NUMBER OF CONTAINERS

7

41/4/1/5/5

TEM?

ton4

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30

· 002

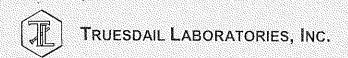
7,23

700B.70

Hexavalent Chromium Method EPA 218.6 and SW 7199 Sample pH Log

Date	Lab Number	Initial nH	Buffer Added (mL)	Final pH	Time Buffered	Initials
0827/10	990893-5	9.5	N/A	15/A	N/A	SB
1	1 -6	1	1	17/17	1	1
7	-7					
08/27/10	990902	7.0	2,00	9.5	11:00	SB
08/28/10	990908-1	えの	5.00	9.5	19:00	sB
ſ	1 -2		. 1	Į.	t	1
4	3 -3	J	J			4
08/27/10	990909	7.0	2.00	g. 5	19:00	SB
09/02/10	990966-1	7.0	5,00	9.5	8:15	SB
09/02/10	990967-1	ን የ	5.60	9.5	% ; O≎	SB
	1 -2					\
4	√ -3	→	Y	J	7-	2
09/09/00	991053	ጉ.୦	\$,∞	9.5	7:00	SB
09/09/10	991070	9.5	N/A	A/ca	N/A	SB
09/15/10	991140	7.0	5.00	9.5	% ∶∞	SB
09/15/10	991141-1	7.0	2.00	9.5	8:05	<i>51</i> 3
—	[-2			f	8:10	(
	-3	·			8:15	
	-4	·			8.20	
	-5				8:25	
4	7 -6	4	4	4	8:30	Ą.
09/16/10	991173-1	9.5	N/A	N/A	NA	5B
<u>J</u>	1-2	.4	<u> </u>	<u> </u>	J	الملا
	991276	7.0	5100	9,5	平:30	SB
09 30 (0	991358	7.0	2.es	9.5	7:35	SB
09/20/10	991359-1	9.5	A4	NA	N/A	$\mathcal{E}_{\mathcal{E}}$
	-2	<u> </u>	<u> </u>			
				<u> </u>	`	
	-4				,	
	-5					
7	4-6	4	. 4	4	4	Ţ

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Sample Integrity & Analysis Discrepancy Form

Clie	nt: <u>E2</u>	Lab # 991358
Date	Delivered: 9 / 29 /10 Time: 21"3 By: Mail Fiel	d Service □Client
1.	Was a Chain of Custody received and signed?	dYes □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 ŒN/A
4.	If a letter was sent with the COC, does it match the COC?	□Yes □No dn/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>3.46</u>	□Wes □No □N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc)?	dYes ONO ON/A
8.	Were sample custody seals intact?	□Yes □No □N/A
9.	Does the number of samples received agree with COC?	¹Yes □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	ĽYes □No □N/A
12.	Were samples pH checked? pH = <u>SEC</u> 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 □ Std	ØYes □No □N/A
15.	Sample Matrix: □Liquid □Drinking Water □Ground W	′ater □Waste Water
	□Sludge □Soil □Wipe □Paint □Solid ੴ	ther WATER
16.	Comments:	
17.	Sample Check-In completed by Truesdail Log-In/Receiving:	Kafal Davile