Pacific Gas and Electric Company

Curt Russell
Topock Site Manager
GT&D Remediation

Topock Compressor Station
145453 National Trails Hwy
Needles, CA 92363

Mailing Address
P.O. Box 337
Needles, CA 92363

760.326.5582
Fax: 760.326.5542
Email: gcr4@pge.com

July 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: Board Order R7-2006-0060
PG&E Topock Compressor Station, Needles, California
Interim Measure No. 3 Groundwater Treatment System Discharge to Injection Wells
Combined Second Quarter 2010 Monitoring and Semiannual January-June 2010 Operation and Maintenance Report for Interim Measure No. 3 Groundwater Treatment System
(Document ID: PGE20100715B)

Dear Mr. Perdue:

Enclosed is the Combined Second Quarter 2010 Monitoring and Semiannual January-June 2010 Operation and Maintenance 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 R7-2006-0060 and in compliance with the revised Monitoring and Reporting Program for Order R7-2006-0060, issued August 28, 2009. The WDRs apply to IM No. 3 Treatment System discharge by subsurface injection.

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

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

Sincerely,

Curt Russell
Topock Site Manager

Enclosures:

Combined Second Quarter 2010 Monitoring and Semiannual January-June 2010 Operation and Maintenance Report for Interim Measure No. 3 Groundwater Treatment System

cc: Jose Cortez, Regional Water Board
Tom Vandenberg, State Water Resources Control Board
Aaron Yue, DTSC

Document ID: PGE20100715B

Combined Second Quarter 2010 Monitoring and Semiannual January – June 2010 Operation and Maintenance Report for Interim Measure No. 3 Groundwater Treatment System

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

June 2010

CH2MHILL
155 Grand Avenue, Suite 800
Oakland, CA 94612

Combined Second Quarter 2010 Monitoring and Semiannual January – June 2010 Operation and Maintenance Report for Interim Measure No. 3 Groundwater Treatment System

Document ID: PGE20100715B

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

Prepared for
Pacific Gas and Electric Company

July 15, 2010

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

Dennis Fink, P.E.
Project Engineer

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Acronyms and Abbreviations

BLM	U.S. Bureau of Land Management
DTSC	California Department of Toxic Substance Control
FMIT	Fort Mojave Indian Tribe
gpm	gallons per minute
IM	Interim Measure
IM No. 3	Interim Measure No. 3 Groundwater Treatment Plant
MRP	Monitoring and Reporting Program
PG&E	Pacific Gas and Electric Company
ppb	parts per billion
RCRA	Resource Conservation and Recovery Act
RO	reverse osmosis
Regional Water Board	California Regional Water Quality Control Board, Colorado River Basin Region
Truesdail	Truesdail Laboratories, Inc.
WDR	Waste Discharge Requirements

1.0 Introduction

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

California Regional Water Quality Control Board, Colorado River Basin Region (Regional Water Board) 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, 2009, requires quarterly monitoring reports to be submitted by the fifteenth day of the month following the end of the quarter.

This report covers the IM No. 3 groundwater treatment system monitoring activities during the Second Quarter 2010 and the operation and maintenance activities during the January 1, 2010 to June 30, 2010 semiannual period (First and Second Quarters 2010). The groundwater monitoring results for wells OW-1S/M/D, OW-2S/M/D, OW-5S/M/D, CW-1M/D, CW-2M/D, CW-3M/D, and CW-4M/D will be submitted under separate cover, as part of the Compliance Monitoring Program.

2.0 Sampling Station Locations

Table 1 lists the locations of sampling stations. (Tables are located at the end of this report.) Sampling station locations are shown on the process and instrumentation diagrams provided at the end of this report; these diagrams are presented in the following figures:

- TP-PR-10-10-04 – Raw Water Storage and Treated Water Storage Tanks;
- PR-10-03 and PR-10-04 – Reverse Osmosis System (diagrams 1 and 2 of 2);
- TP-PR-10-10-06 – Sludge Storage Tanks;
- TP-PR-10-10-03 – Extraction Wells; and
- TP-PR-10-10-11 – Injection Wells.

3.0 Description of Monitoring Activities

This report describes Second Quarter 2010 monitoring activities and the January1, 2010 through June 30, 2010 (First and Second Quarters) operation and maintenance activities related to the IM No. 3 groundwater treatment system. IM No. 3 monitoring activities from January 1, 2010 through March 31, 2010 (First Quarter monitoring) were presented in the following monitoring report:

- *IM No. 3 First Quarter 2010 Monitoring Report for Groundwater Treatment System Waste Discharge Requirements Order No. R7-2006-0060,* submitted to the Regional Water Board April 15, 2010.

The present report therefore also serves as the semiannual January through June 2010 Operation and Maintenance Report for IM No. 3.

3.1 Groundwater Treatment System

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 R7-2004-0103. Full-time operation of the treatment system commenced in August 2005.

Influent to the treatment facility, permitted by Order R7-2006-0060 (successor to Order 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.

Operation of the groundwater treatment system results in the following three effluent streams:

- **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, which occurs either when a sludge waste storage bin reaches capacity, or within 90 days of the start date for accumulation in the storage container, whichever occurs first.

3.2 Groundwater Treatment System Flow Rates for Second Quarter 2010

Downtime is defined as any periods when all extraction wells are not operating so that no groundwater is being extracted and piped into IM No. 3 as influent. Periods of planned and unplanned extraction system downtime (that together resulted in approximately 7.5 percent downtime during Second Quarter 2010) are summarized in the Semiannual Operations and Maintenance Log provided in Appendix A. The times shown are in Pacific Standard Time to be consistent with other data collected (e.g., water level data) at the site. Periods of planned and unplanned extraction system downtime during the months January 2010 – March 2010 are reported in the *First Quarter 2010 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System Waste Discharge Requirements Order No. R7-2006-0060, PG&E Topock Compressor Station, Needles, CA*, published April 15, 2010.

Data regarding daily volumes of groundwater treated and discharged are provided in Appendix B. The IM No. 3 groundwater treatment system flowmeter calibration records are included in Appendix C.

3.2.1 Treatment System Influent

During the Second Quarter 2010, extraction wells TW-3D and PE-1 operated at a target pumping rate of 135 gallons per minute (gpm), excluding periods of planned and unplanned downtime. Extraction wells TW-2D and TW-2S were not pumped during Second Quarter 2010. The operational run time for the IM groundwater extraction system (combined or individual pumping), by month, was approximately:

- 85.0 percent during April 2010.
- 98.9 percent during May 2010.
- 93.7 percent during June 2010.

The Second Quarter 2010 treatment system monthly average flow rates (influent, effluent, and RO concentrate) are presented in Table 2. The system influent flow rate was measured by flowmeters at groundwater extraction wells TW-2S, TW-2D, TW-3D, and PE-1 (Figure TP-PR-10-10-03).

The IM No. 3 facility treated approximately 16,411,289 gallons of extracted groundwater during Second Quarter 2010.

In addition to extracted groundwater, during Second Quarter 2010 the IM No. 3 facility treated 3,380 gallons of water generated from the groundwater monitoring program and 51,800 gallons of injection well development water.

3.2.2 Effluent Streams

The treatment system effluent flow rate was measured by flowmeters in the piping leading to injection wells IW-2 and IW-3 (Figure TP-PR-10-10-11) and in the piping running from the treated water tank T-700 to the injection wells (Figure TP-PR-10-10-04). The IM No. 3 facility injected 16,081,696 gallons of treatment system effluent during Second Quarter 2010. The monthly average flow rate to injection wells is shown in Table 2.

The reverse osmosis concentrate flow rate was measured by a flowmeter at the piping carrying water from RO concentrate tank T-701 to the truck load-out station (Figures PR-10-03 and PR-10-04). The IM No. 3 facility generated 338,662 gallons of RO concentrate during Second Quarter 2010. The monthly average RO concentrate flow rate is shown in Table 2.

The sludge flow rate is measured by the size and weight of containers shipped offsite. Nine sludge containers were shipped offsite from the IM No. 3 facility during Second Quarter 2010. The shipment dates and approximate weights are provided in Section 5.3.

3.3 Sampling and Analytical Procedures

With the exception of samples for pH analyses, all samples collected at the designated sampling locations were 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 the laboratories via courier under chain-of-custody documentation. The laboratories confirmed the samples were received in chilled condition upon arrival.

Samples analysis for 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 (ppb), and the analytical method selected for hexavalent chromium has a method detection limit of 0.2 ppb.

Truesdail is certified by the California Department of Health Services 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 United States Environmental Protection Agency.

Influent, effluent, reverse osmosis concentrate, and sludge sampling were conducted in accordance with the revised MRP, issued August 28, 2009. See Table 3 for sample collection dates and frequencies.

Groundwater quality is being monitored in observation and compliance wells according to Order R7-2006-0060 and the procedures and schedules approved in the *Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area* submitted to the Regional Water Board on June 17, 2005. Quarterly groundwater monitoring analytical results for the injection area (wells OW-1S/M/D, OW-2S/M/D, OW-5S/M/D, CW-1M/D, CW-2M/D, CW-3M/D, and CW-4M/D) are reported in a separate document, in conjunction with groundwater level maps of the same monitoring wells.

4.0 Analytical Results

The analytical results and laboratory reports for the IM No. 3 groundwater treatment system monitoring program between January 1, 2010 and March 31, 2010 were included in the First Quarter Monitoring Reports submitted to the Regional Water Board (see Section 3.0).

Laboratory reports for samples collected in Second Quarter 2010 were prepared by certified analytical laboratories, and are presented in Appendix D. The Second Quarter 2010 analytical results are presented in Tables 4, 5, 6, and 7:

- Influent analytical results are presented in Table 4.
- Effluent analytical results are presented in Table 5. There were no exceedances of effluent limitations during the reporting period.
- Reverse osmosis concentrate analytical results are presented in Table 6.
- Sludge analytical results are presented in Table 7.

The sludge is required to have an aquatic bioassay test annually. The aquatic bioassay test results were conducted on a September 2009 sample and were presented in the Third Quarter Monitoring Report submitted to the Regional Water Board October 15, 2009. The 2010 sludge aquatic bioassay test for IM No. 3 will be performed in the second half of the year.

Table 8 identifies the following information for each analysis:

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

5.0 Semiannual Operation and Maintenance

Pursuant to the WDR's Operations and Maintenance Section 1:

> *The discharger shall inspect and document any operation/maintenance problems by inspecting each unit process. In addition, calibration of flow meters and equipment shall be performed in a timely manner and documented. Operation and Maintenance reports shall be submitted to the Regional Water Board Office twice annually.*

This section includes the Semiannual Operation and Maintenance Report for the IM No. 3 groundwater treatment system for the period January 1, 2010 through June 30, 2010.

All operations and maintenance records are maintained at the facility, including site inspection forms, process monitoring records, hazardous waste generator records (i.e., waste manifests), and self-monitoring reports. These records will be maintained onsite for a period of at least 5 years. Operational programmable logic controller data (flow rates, system alarms, process monitoring data, etc.) are maintained electronically via data historian software. Operations and maintenance records are also archived using maintenance software. The subsections below summarize the operations and maintenance activities during this semiannual reporting period.

5.1 Flowmeter Calibration Records

The IM No. 3 groundwater treatment system flowmeter calibration records are included in Appendix C. Flowmeter calibrations are performed in a timely manner consistent with the use, flow, material, and manufacturer recommendations. The following flowmeters are used at the plant to measure groundwater flow.

Location	Flowmeter Location ID	Current Flowmeter Serial No.	Date of Calibration	Date of Installation
Extraction well PE-1	FIT-103	7700F216000	11/30/06	2/25/09
Extraction well TW-3D	FIT-102	6C037016000	9/12/07	1/25/09
Extraction well TW-2D[a]	FIT-101	6A021F16000	11/29/04	7/28/05
Extraction well TW-2S[b]	FIT-100	6A022016000	11/29/04	7/28/05
Injection well IW-02	FIT-1202	6C037316000	2/26/09	2/26/09
Injection well IW-03	FIT-1203	6C037216000	7/6/09	4/21/10
Combined IW-02 and IW-03	FIT-700	6A022416000	11/29/04	2/13/09
Reverse osmosis concentrate	FIT-701	6C037116000	1/31/05	2/25/09

Notes:
[a] TW-2D is a backup extraction well only operated for brief testing and sampling periods since January 2006.
[b] TW-2S is a backup extraction well only operated for brief testing and sampling periods since October 2005.

5.2 Volumes of Groundwater Treated

Data regarding daily volumes of groundwater treated between January 1, 2010 and June 30, 2010 are provided in Appendix B.

Approximately 33,082,542 gallons of groundwater were extracted and treated between January 1, 2010 and June 30, 2010. Treatment of this water at the IM No. 3 facility is being performed in accordance with the conditions of Order No. R7-2006-0060.

Additionally, approximately 9,020 gallons of well purge water (generated during well development, monitoring well sampling, and/or aquifer testing) and 118,300 gallons of injection well re-development water were treated at the IM No. 3 facility during the January 1, 2010 through June 30, 2010 semiannual period.

A total of approximately 32,370,931 gallons of treated groundwater was injected back into the Alluvial Aquifer between January 1, 2010 and June 30, 2010.

5.3 Residual Solids Generated (Sludge)

During the January 1, 2010 through June 30, 2010 reporting period, eight containers of sludge were shipped offsite for disposal. The sludge was shipped to Chemical Waste Management at Kettleman Hills for disposal. A listing of each shipment during the January 1, 2010 through June 30, 2010 reporting period is provided below.

Date Sludge Bin Removed from Site	Approximate Quantity from Waste Manifests (cubic yards)	Approximate Wet Weight (lbs)	Type of Shipment
1/15/2010	9	12,560	non-RCRA hazardous waste
2/18/2010	8	12,420	non-RCRA hazardous waste
3/11/2010	9	14,580	non-RCRA hazardous waste
4/8/2010	8	15,880	non-RCRA hazardous waste
4/13/2010	8	15,480	non-RCRA hazardous waste
5/19/2010	8	17,060	non-RCRA hazardous waste
5/19/2010	8	17,100	non-RCRA hazardous waste
6/17/2010	8	14,240	non-RCRA hazardous waste

Notes:
The approximate wet weight is provided by the disposal facility based on full container weight less the empty container weight.
RCRA = Resource Conservation and Recovery Act.

5.4 Reverse Osmosis Concentrate Generated

Data regarding daily volumes of reverse osmosis concentrate generated are provided in Appendix B, as measured by flowmeter FIT-701 (Figures PR-10-03 and PR-10-04). From January 1, 2010 through June 30, 2010, approximately 667,009 gallons of RO concentrate were transported to Liquid Environmental Solutions in Phoenix, Arizona for disposal.

5.5 Summary of WDR Compliance

No WDR violations were identified during the January 1, 2010 through June 30, 2010 semiannual reporting period.

One release event occurred during the January 1, 2010 through June 30, 2010 semiannual reporting period. The release occurred on May 19, 2010, and was reported to the Regional Water Board via telephone and email on May 19, 2010. The following is a description of the release:

A release of approximately 3,200 gallons of IM No. 3 treated effluent water occurred May 19, 2010 at approximately 6:40 a.m. from one of the vaults along the IM No. 3 above-ground effluent pipeline that goes to the injection wells. The water released was non-hazardous and did not threaten human health or the environment. A sample of effluent was analyzed at the IM No. 3 onsite laboratory on May 19, 2010. Analysis results showed that the specific conductivity was 7,900 micro-mhos; the total chromium was non-detect; the hexavalent chromium was non-detect; and the pH was 7.1 pH units. See Table 5 for weekly effluent sampling results from analyses conducted at a California certified laboratory. The vault is located on U.S. Bureau of Land Management (BLM) property (along Historic Route 66, west of the treatment plant, just east of the first wash to the west of the treatment plant) and some of the water flowed east onto land owned by the Fort Mojave Indian Tribe (FMIT).

The release occurred due to failure of a ¾-inch steel pipe nipple (welded to the treated water pipeline) caused by corrosion of the pipe threads. The air release valve piping broke off of the treated water pipeline and water was released into the vault, until the leak was detected at 7:10 a.m. on May 19, 2010, and the effluent pipeline was shut down. The treated water flowed from the vault east into the drainage ditch alongside Historic Route 66. The water flowed no further than the culvert at the driveway into the treatment plant. The water flow had no effect on the protective gravel cover on top of Historic Route 66. According to IM No. 3 flowmeter data, up to 3,200 gallons of treated water may have been released.

The broken pipe nipple was repaired with a temporary extension and re-installed. The IM No. 3 plant and effluent pipeline were put back in service at approximately 3:30 p.m. on May 19, 2010. PG&E ordered replacement parts for the air release valve assembly and will replace the temporarily-repaired assembly when the parts arrive. PG&E also inspected the other similar air release assemblies in the system and determined that none were leaking; however, PG&E will systematically replace parts that are subject to similar corrosive conditions.

In addition to telephone and email notifications to the Regional Water Board, PG&E notified BLM, FMIT, and California Department of Toxic Substance Control (DTSC) by telephone on May 19, 2010. PG&E also brought tribal monitor representatives from FMIT and the Hualapai tribe to the release location for observations.

5.6 Operation and Maintenance – Required Shutdowns

Records of maintenance activities are kept onsite.

Appendix A contains a summary of the operation and maintenance issues that required the groundwater extraction system to be shut down during the January 1, 2010 through June 30, 2010 semiannual reporting period.

Activities during the Second Quarter 2010 included one extended shutdown. No extended shutdowns of the IM No. 3 extraction system occurred during the First Quarter 2010. The extended shutdown was in April, due primarily to the planned annual plant maintenance outage.

April Extended Shutdown

The IM No. 3 extraction system was shut down for 108 hours during April 2010, for both planned and unplanned events. See Appendix A for a summary of the operation and maintenance issues. The main cause of the extraction system downtime was:

- The planned annual plant outage for maintenance.

5.7 Treatment Plant Modifications

No major IM No. 3 treatment plant modifications that affected the quality or quantity of treated effluent were performed during the January 1, 2010 through June 30, 2010 semiannual period.

6.0 Conclusions

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

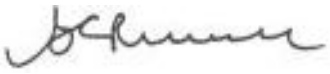
In addition, no incidents of non-compliance were identified during the reporting period. No events that caused an immediate or potential threat to human health or the environment, and no new releases of hazardous waste or hazardous waste constituents, or new solid waste management units, were identified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

7.0 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 R7-2004-0103. Order R7-2006-0060 is the successor to Order 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: 

Name: Curt Russell

Company: Pacific Gas and Electric Company

Title: Topock Site Manager

Date: July 15, 2010

Tables

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

Sampling 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-PR-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-PR-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 Figures PR-10-03 and PR-10-04).
Sampling Station E: Groundwater Treatment System Sludge	SC-SLUDGE-WDR-###	Sample collected from sludge accumulated in the phase separator used this quarter (see Figure TP-PR-10-10-06).

Note:

= Sequential sample identification number at each sample station.

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

Parameter	System Influent [a,b] (gpm)	System Effluent [b,c] (gpm)	Reverse Osmosis Concentrate [b] (gpm)
April 2010 Average Monthly Flowrate	114.4	112.0	3.7
May 2010 Average Monthly Flowrate	134.3	131.8	2.1
June 2010 Average Monthly Flowrate	126.7	123.9	1.9

Notes:

gpm: gallons per minute.

January, February, and March 2010 Average Monthly Flowrates were presented in the IM No. 3 First Quarter 2010 Monitoring Report

[a] Extraction wells TW-3D and PE-1 were operated during the Second Quarter 2010 at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW-2S and TW-2D were not operated during Second Quarter 2010.

[b] The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during the Second Quarter 2010 is approximately 0.69 percent.

[c] Effluent was discharged into injection well IW-02 and IW-03 during the Second Quarter 2010.

TABLE 3
Sample Collection Dates
Second Quarter 2010 Monitoring Report for Interim Measure No. 3

Parameter	Sample Collection Dates	Results
Influent[a]	April 7, 2010	See Table 4
	May 4, 2010	
	June 2, 2010	
Effluent[b]	April 7, 2010	See Table 5
	April 14, 2010	
	April 19, 2010	
	April 23, 2010	
	April 28, 2010	
	May 4, 2010	
	May 12, 2010	
	May 18, 2010	
	May 26, 2010	
	June 2, 2010	
	June 9, 2010	
	June 17, 2010	
	June 23, 2010	
	June 30, 2010	
Reverse Osmosis Concentrate[c]	June 2, 2010	See Table 6
Sludge[d]	January 15, 2010	See Table 7
	February 18, 2010	
	March 11, 2010	
	April 8, 2010	
	April 13, 2010	
	May 19, 2010	
	May 19, 2010	

Notes:

[a] Influent sampling is required monthly.

[b] Effluent sampling is required weekly.

[c] Reverse Osmosis Concentrate sampling is required quarterly.

[d] One composite sludge sample is required quarterly. Two sludge bins were shipped off-site May 19, 2010 and both were sampled to add to the composite sample. Sludge bioassay analysis is required annually, and was conducted on the Third Quarter 2009 sludge composite sample, reported (pass at 95 percent survival rate) in the IM No. 3 Third Quarter 2009 Monitoring Report. IM No. 3 will conduct the 2010 sludge aquatic bioassay test in the second half of the year.

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

Required Sampling Frequency		Monthly																					
Analytes		TDS	Turbidity	Specific Conductance	Field pH [c]	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 [b]		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
MDL		0.434	0.0140	0.0220	---	0.0750	2.00	2.36	0.0020	0.495	0.140	0.210	0.0050	0.520	0.0600	0.0750	0.0600	0.725	0.205	0.0950	0.00020	1.00	10.0	1.32
Sample ID	**Date**																							
SC-100B-WDR-251	**4/7/2010**	**4600**	**ND (0.100)**	**8010**	**7.3**	**1040**	**928**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**3.82**	**26.7**	**1.01**	**ND (5.00)**	**2.54**	**ND (10.0)**	**ND (10.0)**	**24.7**	**ND (10.0)**	**3.16**	**ND (0.0050)**	**569**	**ND (20.0)**	**ND (10.0)**
RL		250	0.100	2.00	---	1.00	21.0	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.0050	12.5	20.0	10.0
SC-100B-WDR-255	**5/4/2010**	**4570**	**ND (0.100)**	**7990**	**7.4**	**995**	**838**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**3.45**	**25.1**	**1.04**	**ND (5.00)**	**2.68**	**ND (10.0)**	**10.4**	**19.9**	**ND (10.0)**	**3.12**	**ND (0.500)**	**570**	**ND (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	0.500	50.0	20.0	10.0
SC-100B-WDR-259	**6/2/2010**	**4950**	**ND (0.100)**	**7970**	**7.3**	**993**	**1030**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**4.40**	**26.7**	**0.951**	**ND (5.00)**	**2.67**	**ND (10.0)**	**10.6**	**23.6**	**ND (10.0)**	**3.67**	**ND (0.500)**	**548**	**ND (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	0.500	12.5	20.0	10.0

NOTES:

(---) = not required by the WDR Monitoring and Reporting Program
J = concentration or reporting limits estimated by laboratory or validation
MDL = method detection limit
mg/L = milligrams per liter
N = nitrogen
ND = parameter not detected at the listed value
NTU = nephelometric turbidity units
RL = project reporting limit
µg/L = micrograms per liter
µmhos/cm = micromhos per centimeter

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

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

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

TABLE 5
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Effluent Monitoring Results[a]
Second 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 Frequency		**Weekly**						**Monthly**																
Analytes		TDS	Turbidity	Specific Conductance	Field pH[e]	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
MDL[d]		0.434	0.0140	0.0220	---	0.0750	0.0200	2.36	0.0020	0.495	0.140	0.210	0.0050	0.520	0.0600	0.0750	0.0600	0.725	0.205	0.0950	0.00020	1.00	10.0	1.32
Sample ID	**Date**																							
SC-700B-WDR-251	**4/7/2010**	**4270**	**ND (0.100)**	**7260**	**7.00**	**ND (1.00)**	**0.290**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**ND (1.00)**	**11.3**	**0.982**	**ND (5.00)**	**1.82**	**ND (10.0)**	**ND (10.0)**	**18.6**	**ND (10.0)**	**2.87**	**ND (0.0050)**	**512**	**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	12.5	20.0	10.0
SC-700B-WDR-252	**4/14/2010**	**4060**	**ND (0.100)**	**7010**	**7.30**	**1.09**	**0.270**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-253a	**4/19/2010**	**4290**	**ND (0.100)**	**7300**	**7.20**	**ND (1.00)**	**0.390**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-253b	**4/23/2010**	**3780**	**ND (0.100)**	**6380**	**7.20**	**3.54**	**3.22**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		125	0.100	2.00	---	1.00	1.05	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-254	**4/28/2010**	**4120**	**ND (0.100)**	**7070**	**7.40**	**ND (1.00)**	**0.310**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**13.7**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-254	**4/28/2010**	**4120**	**ND (0.100)**	**7070**	**7.40**	**ND (1.00)**	**0.310**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**13.7**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-255	**5/4/2010**	**4140**	**ND (0.100)**	**7210**	**7.10**	**1.05**	**0.770**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**ND (1.00)**	**ND (10.0)**	**1.00**	**ND (5.00)**	**2.09**	**ND (10.0)**	**ND (10.0)**	**18.5**	**ND (10.0)**	**2.88**	**ND (0.500)**	**515**	**ND (20.0)**	**21.5**
RL		250	0.100	2.00	---	1.00	0.200	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.500	25.0	20.0	10.0
SC-700B-WDR-256	**5/12/2010**	**4380**	**ND (0.100)**	**7560**	**6.90**	**ND (1.00)**	**0.680**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-257	**5/18/2010**	**4330**	**ND (0.100)**	**7580**	**7.00**	**ND (1.00)**	**0.640**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-258	**5/26/2010**	**4440**	**ND (0.100)**	**7380**	**7.10**	**1.30**	**0.550**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-259	**6/2/2010**	**4650**	**ND (0.100)**	**7300**	**7.10**	**1.10**	**0.490**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**ND (1.00)**	**11.7**	**0.871**	**ND (5.00)**	**2.06**	**ND (10.0)**	**ND (10.0)**	**17.7**	**ND (10.0)**	**3.04**	**ND (0.500)**	**522**	**ND (20.0)**	**ND (10.0)**
RL		250	0.100	2.00	---	1.00	0.200	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.500	50.0	20.0	10.0
SC-700B-WDR-260	**6/9/2010**	**4530**	**ND (0.100)**	**7280**	**7.60**	**ND (1.00)**	**0.670**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-261	**6/17/2010**	**4350**	**ND (0.100)**	**7530**	**7.00**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-262	**6/23/2010**	**4530**	**ND (0.100)**	**7250**	**7.00**	**ND (1.00)**	**0.220**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---
SC-700B-WDR-263	**6/30/2010**	**4580**	**ND (0.100)**	**7710**	**7.10**	**ND (1.00)**	**0.310**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**ND (10.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	10.0	---	---	---	---	---	---	---

TABLE 5
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Effluent Monitoring Results [a]
Second 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.

TABLE 6
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Reverse Osmosis Concentrate Monitoring Results [a]
Second Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Required Sampling Frequency		Quarterly																				
Analytes		TDS	Specific Conductance	Field pH [c]	Chromium	Hexavalent Chromium	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Copper	Fluoride	Lead	Molybdenum	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Units [b]		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
MDL		0.434	2.00	---	0.0010	0.00050	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.500	0.0010	0.0020	0.00050	0.0010	0.0010	0.0010	0.0010	0.0010	0.0050
Sample ID	**Date**																						
SC-701-WDR-259	**6/2/2010**	**33100**	**58600**	**7.4**	**0.00910**	**0.00680**	**ND (0.0100)**	**0.00160**	**0.113**	**ND (0.0010)**	**ND (0.0030)**	**ND (0.0050)**	**0.00530**	**19.7**	**ND (0.0100)**	**0.183**	**ND (0.0040)**	**ND (0.0100)**	**0.0365**	**ND (0.0050)**	**ND (0.0010)**	**ND (0.0050)**	**0.0133**
RL		1250	2.00	---	0.0010	0.0052	0.0100	0.0010	0.0100	0.0010	0.0030	0.0050	0.0050	0.500	0.0100	0.0100	0.0040	0.0100	0.0100	0.0050	0.0010	0.0050	0.0100

NOTES:
(---) = not required by the WDR Monitoring and Reporting Program
J = concentration or reporting limits estimated by laboratory or validation
MDL = method detection limit
mg/L = milligrams per liter
ND = parameter not detected at the listed value
RL = project reporting limit
µg/L = micrograms per liter
µmhos/cm = micromhos per centimeter

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

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

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

TABLE 7
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Sludge Monitoring Results[a]
Second Quarter 2010 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Required Sampling Frequency		Quarterly																		
Analytes		Chromium	Hexavalent Chromium	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Copper	Fluoride	Lead	Molybdenum	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Units[b]		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL		0.0875	0.875	0.0100	0.0100	0.0100	0.0100	0.0100	0.0100	0.0050	0.500	0.0100	0.0100	0.00035	0.0100	0.0500	0.0200	0.0200	0.0050	0.0100
Sample ID	**Date**																			
SC-Sludge-WDR-259	**6/2/2010**	**10300**	**87.0**	**117**	**8.50**	**96.2**	**2.29**	**10.6**	**11.2**	**197**	**37.6**	**11.7**	**18.8**	**0.282**	**41.7**	**ND (1.26)**	**ND (1.26)**	**ND (2.00)**	**133**	**264**
RL		13.9	5.83	2.00	1.26	1.26	1.26	1.26	1.26	1.26	11.7	1.26	1.26	0.126	1.26	1.26	1.26	2.00	1.26	2.00

NOTES:

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

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

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

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

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-100B	SC-100B-WDR-251	J. Aide	4/7/2010	8:00:00 AM	TLI	EPA 120.1	SC	4/8/2010	Tina Acquiat
					TLI	EPA 200.7	B	4/15/2010	Kris Collins
					TLI	EPA 200.7	FE	4/15/2010	Kris Collins
					TLI	EPA 200.8	AL	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	AS	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	BA	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	CR	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	CU	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	MN	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	MO	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	NI	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	PB	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	SB	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	ZN	4/12/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	4/8/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	4/8/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	4/8/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	4/8/2010	Giawad Ghenniwa
					FIELD	HACH	PH	4/7/2010	J. Aide
					TLI	SM2130B	TRB	4/8/2010	Gautam Savani
					TLI	SM2540C	TDS	4/8/2010	Tina Acquiat
					TLI	SM4500NH3D	NH3N	4/9/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	4/8/2010	Tina Acquiat
SC-100B	SC-100B-WDR-255	Ron Phelps	5/4/2010	9:15:00 AM	TLI	EPA 120.1	SC	5/6/2010	Iordan Stavrev
					TLI	EPA 200.7	B	5/12/2010	Kris Collins
					TLI	EPA 200.7	FE	5/12/2010	Kris Collins
					TLI	EPA 200.8	AL	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	AS	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	BA	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	CR	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	CU	5/21/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	MN	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	MO	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	NI	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	PB	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	SB	5/11/2010	Daniel Kang/Linda Saetern

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

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-100B	SC-100B-WDR-255	Ron Phelps	5/4/2010	9:15:00 AM	TLI	EPA 200.8	ZN	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 218.6	CR6	5/5/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	5/5/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	5/5/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	5/5/2010	Giawad Ghenniwa
					FIELD	HACH	PH	5/4/2010	Ron Phelps
					TLI	SM2130B	TRB	5/5/2010	Gautam Savani
					TLI	SM2540C	TDS	5/6/2010	Ethel Suico
					TLI	SM4500NH3D	NH3N	5/10/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	5/5/2010	Ethel Suico
SC-100B	SC-100B-WDR-259	Ron Phelps	6/2/2010	8:00:00 AM	TLI	EPA 120.1	SC	6/4/2010	Iordan Stavrev
					TLI	EPA 200.7	AL	6/10/2010	Daniel Kang
					TLI	EPA 200.7	B	6/8/2010	Daniel Kang
					TLI	EPA 200.7	FE	6/8/2010	Daniel Kang
					TLI	EPA 200.8	AS	6/10/2010	Daniel Kang
					TLI	EPA 200.8	BA	6/8/2010	Daniel Kang
					TLI	EPA 200.8	CR	6/8/2010	Daniel Kang
					TLI	EPA 200.8	CU	6/8/2010	Daniel Kang
					TLI	EPA 200.8	MN	6/8/2010	Daniel Kang
					TLI	EPA 200.8	MO	6/8/2010	Daniel Kang
					TLI	EPA 200.8	NI	6/8/2010	Daniel Kang
					TLI	EPA 200.8	PB	6/8/2010	Daniel Kang
					TLI	EPA 200.8	SB	6/8/2010	Daniel Kang
					TLI	EPA 200.8	ZN	6/8/2010	Daniel Kang
					TLI	EPA 218.6	CR6	6/4/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	6/3/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	6/3/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	6/3/2010	Giawad Ghenniwa
					FIELD	HACH	PH	6/2/2010	Ron Phelps
					TLI	SM2130B	TRB	6/3/2010	Gautam Savani
					TLI	SM2540C	TDS	6/7/2010	Ethel Suico
					TLI	SM4500NH3D	NH3N	6/7/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	6/3/2010	Ethel Suico
SC-700B	SC-700B-WDR-251	J. Aide	4/7/2010	8:00:00 AM	TLI	EPA 120.1	SC	4/8/2010	Tina Acquiat
					TLI	EPA 200.7	B	4/15/2010	Kris Collins
					TLI	EPA 200.7	FE	4/15/2010	Kris Collins

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Second 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-251	J. Aide	4/7/2010	8:00:00 AM	TLI	EPA 200.8	AL	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	AS	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	BA	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	CR	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	CU	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	MN	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	MO	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	NI	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	PB	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	SB	4/12/2010	Romuel Chavez
					TLI	EPA 200.8	ZN	4/12/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	4/8/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	4/8/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	4/8/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	4/8/2010	Giawad Ghenniwa
					FIELD	HACH	PH	4/7/2010	J. Aide
					TLI	SM2130B	TRB	4/8/2010	Gautam Savani
					TLI	SM2540C	TDS	4/8/2010	Tina Acquiat
					TLI	SM4500NH3D	NH3N	4/9/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	4/8/2010	Tina Acquiat
SC-700B	SC-700B-WDR-252	J. Aide	4/14/2010	8:00:00 AM	TLI	EPA 120.1	SC	4/19/2010	Tina Acquiat
					TLI	EPA 200.8	CR	4/19/2010	Romuel Chavez
					TLI	EPA 200.8	MN	4/19/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	4/15/2010	Sonya Bersudsky
					FIELD	HACH	PH	4/14/2010	J. Aide
					TLI	SM2130B	TRB	4/15/2010	Gautam Savani
					TLI	SM2540C	TDS	4/19/2010	Tina Acquiat
SC-700B	SC-700B-WDR-253a	J. Aide	4/19/2010	8:00:00 AM	TLI	EPA 120.1	SC	4/20/2010	Tina Acquiat
					TLI	EPA 200.8	CR	4/22/2010	Romuel Chavez
					TLI	EPA 200.8	MN	4/22/2010	Romuel Chavez
					TLI	EPA 218.6	CR6	4/26/2010	Sonya Bersudsky
					FIELD	HACH	PH	4/19/2010	J. Aide
					TLI	SM2130B	TRB	4/20/2010	Gautam Savani
					TLI	SM2540C	TDS	4/22/2010	Tina Acquiat
SC-700B	SC-700B-WDR-253b	Ryan Phelps	4/23/2010	4:00:00 PM	TLI	EPA 120.1	SC	4/27/2010	Tina Acquiat

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Second 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-253b	Ryan Phelps	4/23/2010	4:00:00 PM	TLI	EPA 200.8	CR	4/28/2010	Daniel Kang
					TLI	EPA 200.8	MN	4/28/2010	Daniel Kang
					TLI	EPA 218.6	CR6	4/26/2010	Sonya Bersudsky
					FIELD	HACH	PH	4/23/2010	Ryan Phelps
					TLI	SM2130B	TRB	4/24/2010	Kim Luck
					TLI	SM2540C	TDS	4/27/2010	Tina Acquiat
SC-700B	SC-700B-WDR-254	Ryan Phelps	4/28/2010	2:56:00 PM	TLI	EPA 120.1	SC	4/29/2010	Tina Acquiat
					TLI	EPA 200.8	CR	4/30/2010	Daniel Kang
					TLI	EPA 200.8	MN	4/30/2010	Daniel Kang
					TLI	EPA 218.6	CR6	5/5/2010	Sonya Bersudsky
					FIELD	HACH	PH	4/29/2010	Ryan Phelps
					TLI	SM2130B	TRB	4/29/2010	Gautam Savani
					TLI	SM2540C	TDS	5/4/2010	Ethel Suico
SC-700B	SC-700B-WDR-255	Ron Phelps	5/4/2010	9:15:00 AM	TLI	EPA 120.1	SC	5/6/2010	Iordan Stavrev
					TLI	EPA 200.7	B	5/12/2010	Kris Collins
					TLI	EPA 200.7	FE	5/12/2010	Kris Collins
					TLI	EPA 200.8	AL	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	AS	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	BA	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	CR	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	CU	5/21/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	MN	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	MO	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	NI	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	PB	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	SB	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 200.8	ZN	5/11/2010	Daniel Kang/Linda Saetern
					TLI	EPA 218.6	CR6	5/5/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	5/5/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	5/5/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	5/5/2010	Giawad Ghenniwa
					FIELD	HACH	PH	5/4/2010	Ron Phelps
					TLI	SM2130B	TRB	5/5/2010	Gautam Savani
					TLI	SM2540C	TDS	5/6/2010	Ethel Suico
					TLI	SM4500NH3D	NH3N	5/10/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	5/5/2010	Ethel Suico

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Second 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-256	Ron Phelps	5/12/2010	8:00:00 AM	TLI	EPA 120.1	SC	5/21/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	5/20/2010	Hope Trinidad
					TLI	EPA 200.8	MN	5/20/2010	Hope Trinidad
					TLI	EPA 218.6	CR6	5/14/2010	Sonya Bersudsky
					FIELD	HACH	PH	5/12/2010	Ron Phelps
					TLI	SM2130B	TRB	5/13/2010	Gautam Savani
					TLI	SM2540C	TDS	5/17/2010	Ethel Suico
SC-700B	SC-700B-WDR-257	Ron Phelps	5/18/2010	8:00:00 AM	TLI	EPA 120.1	SC	5/19/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	5/20/2010	Hope Trinidad
					TLI	EPA 200.8	MN	5/20/2010	Hope Trinidad
					TLI	EPA 218.6	CR6	5/19/2010	Sonya Bersudsky
					FIELD	HACH	PH	5/18/2010	Ron Phelps
					TLI	SM2130B	TRB	5/19/2010	Gautam Savani
					TLI	SM2540C	TDS	5/19/2010	Ethel Suico
SC-700B	SC-700B-WDR-258	Ron Phelps	5/26/2010	8:00:00 AM	TLI	EPA 120.1	SC	5/28/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	5/29/2010	Daniel Kang
					TLI	EPA 200.8	MN	5/29/2010	Daniel Kang
					TLI	EPA 218.6	CR6	5/27/2010	Sonya Bersudsky
					FIELD	HACH	PH	5/26/2010	Ron Phelps
					TLI	SM2130B	TRB	5/27/2010	Gautam Savani
					TLI	SM2540C	TDS	6/1/2010	Ethel Suico
SC-700B	SC-700B-WDR-259	Ron Phelps	6/2/2010	8:00:00 AM	TLI	EPA 120.1	SC	6/4/2010	Iordan Stavrev
					TLI	EPA 200.7	AL	6/10/2010	Daniel Kang
					TLI	EPA 200.7	B	6/8/2010	Daniel Kang
					TLI	EPA 200.7	FE	6/8/2010	Daniel Kang
					TLI	EPA 200.8	AS	6/10/2010	Daniel Kang
					TLI	EPA 200.8	BA	6/8/2010	Daniel Kang
					TLI	EPA 200.8	CR	6/8/2010	Daniel Kang
					TLI	EPA 200.8	CU	6/8/2010	Daniel Kang
					TLI	EPA 200.8	MN	6/8/2010	Daniel Kang
					TLI	EPA 200.8	MO	6/8/2010	Daniel Kang
					TLI	EPA 200.8	NI	6/8/2010	Daniel Kang
					TLI	EPA 200.8	PB	6/8/2010	Daniel Kang
					TLI	EPA 200.8	SB	6/8/2010	Daniel Kang
					TLI	EPA 200.8	ZN	6/8/2010	Daniel Kang

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Second 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-259	Ron Phelps	6/2/2010	8:00:00 AM	TLI	EPA 218.6	CR6	6/4/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	6/3/2010	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	6/3/2010	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	6/3/2010	Giawad Ghenniwa
					FIELD	HACH	PH	6/2/2010	Ron Phelps
					TLI	SM2130B	TRB	6/3/2010	Gautam Savani
					TLI	SM2540C	TDS	6/7/2010	Ethel Suico
					TLI	SM4500NH3D	NH3N	6/7/2010	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	6/3/2010	Ethel Suico
SC-700B	SC-700B-WDR-260	C. Knight	6/9/2010	8:00:00 AM	TLI	EPA 120.1	SC	6/11/2010	Gautam Savani
					TLI	EPA 200.8	CR	6/14/2010	Daniel Kang
					TLI	EPA 200.8	MN	6/14/2010	Daniel Kang
					TLI	EPA 218.6	CR6	6/10/2010	Sonya Bersudsky
					FIELD	HACH	PH	6/9/2010	C. Knight
					TLI	SM2130B	TRB	6/10/2010	Gautam Savani
					TLI	SM2540C	TDS	6/15/2010	Ethel Suico
SC-700B	SC-700B-WDR-261	J. Aide	6/17/2010	8:00:00 AM	TLI	EPA 120.1	SC	6/21/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	6/21/2010	Daniel Kang
					TLI	EPA 200.8	MN	6/21/2010	Daniel Kang
					TLI	EPA 218.6	CR6	6/22/2010	Sonya Bersudsky
					FIELD	HACH	PH	6/17/2010	J. Aide
					TLI	SM2130B	TRB	6/18/2010	Gautam Savani
					TLI	SM2540C	TDS	6/22/2010	Ethel Suico
SC-700B	SC-700B-WDR-262	Ron Phelps	6/23/2010	8:00:00 AM	TLI	EPA 120.1	SC	6/24/2010	Ethel Suico
					TLI	EPA 200.8	CR	6/25/2010	Daniel Kang
					TLI	EPA 200.8	MN	6/25/2010	Daniel Kang
					TLI	EPA 218.6	CR6	6/24/2010	Sonya Bersudsky
					FIELD	HACH	PH	6/23/2010	Ron Phelps
					TLI	SM2130B	TRB	6/24/2010	Gautam Savani
					TLI	SM2540C	TDS	6/24/2010	Kim Luck
SC-700B	SC-700B-WDR-263	J. Aide	6/30/2010	8:00:00 AM	TLI	EPA 120.1	SC	7/1/2010	Iordan Stavrev
					TLI	EPA 200.8	CR	7/2/2010	Daniel Kang
					TLI	EPA 200.8	MN	7/2/2010	Daniel Kang
					TLI	EPA 218.6	CR6	7/1/2010	Sonya Bersudsky
					FIELD	HACH	PH	6/30/2010	J. Aide

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Second 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-263	J. Aide	6/30/2010	8:00:00 AM	TLI	SM2130B	TRB	7/1/2010	Gautam Savani
					TLI	SM2540C	TDS	7/1/2010	Ethel Suico
SC-701	SC-701-WDR-259	Ron Phelps	6/2/2010	2:00:00 PM	TLI	EPA 120.1	SC	6/4/2010	Iordan Stavrev
					TLI	EPA 200.8	AG	6/8/2010	Daniel Kang
					TLI	EPA 200.8	AS	6/10/2010	Daniel Kang
					TLI	EPA 200.8	BA	6/8/2010	Daniel Kang
					TLI	EPA 200.8	BE	6/8/2010	Daniel Kang
					TLI	EPA 200.8	CD	6/8/2010	Daniel Kang
					TLI	EPA 200.8	CO	6/8/2010	Daniel Kang
					TLI	EPA 200.8	CR	6/8/2010	Daniel Kang
					TLI	EPA 200.8	CU	6/8/2010	Daniel Kang
					TLI	EPA 200.8	HG	6/4/2010	Daniel Kang
					TLI	EPA 200.8	MN	6/8/2010	Daniel Kang
					TLI	EPA 200.8	MO	6/8/2010	Daniel Kang
					TLI	EPA 200.8	NI	6/8/2010	Daniel Kang
					TLI	EPA 200.8	PB	6/8/2010	Daniel Kang
					TLI	EPA 200.8	SB	6/8/2010	Daniel Kang
					TLI	EPA 200.8	SE	6/8/2010	Daniel Kang
					TLI	EPA 200.8	TL	6/8/2010	Daniel Kang
					TLI	EPA 200.8	V	6/8/2010	Daniel Kang
					TLI	EPA 200.8	ZN	6/8/2010	Daniel Kang
					TLI	EPA 218.6	CR6	6/4/2010	Sonya Bersudsky
					TLI	EPA 300.0	FL	6/3/2010	Giawad Ghenniwa
					FIELD	HACH	PH	6/2/2010	Ron Phelps
					TLI	SM2540C	TDS	6/7/2010	Ethel Suico
Phase Seperator	SC-Sludge-WDR-259	Ron Phelps	6/2/2010	2:00:00 PM	TLI	EPA 300.0	FL	6/3/2010	Giawad Ghenniwa
					TLI	EPA 6010B	AG	6/25/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	AS	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	BA	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	BE	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	CD	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	CO	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	CR	6/8/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	CU	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	MO	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	NI	6/17/2010	Daniel Kang/Hope Trinidad

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Second 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-259	Ron Phelps	6/2/2010	2:00:00 PM	TLI	EPA 6010B	PB	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	SB	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	SE	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	TL	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	V	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	EPA 6010B	ZN	6/17/2010	Daniel Kang/Hope Trinidad
					TLI	SW 6020A	HG	6/18/2010	Daniel Kang
					TLI	SW 7199	CR6	6/3/2010	Sonya Bersudsky

NOTES:

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

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

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

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

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

Figures

Parcel No. 650-151-06
Fort Mojave Indian Tribe
(Formerly owned by PG&E)

BLM

West Mesa

Center Mesa

East Mesa Injection Area

CW-4

CW-3

CW-2

CW-1

IW-2

IW-3

IW-1

IM-3 Treatment Plant

Historic Route 66

BAT CAVE WASH

BN&SF RAILROAD

INTERSTATE 40

Park Moabi Rd.

Colorado River

MW-20 Bench

TW-02S

TW-03D

TW-02D

MW-20-130

PE-01

500

550

600

66

LEGEND

- IM-3 Injection Well
- Observation Well Cluster
- Compliance Monitoring Well Cluster
- Exploratory Boring
- Groundwater Monitoring Well
- IM Extraction Well
- IM-3 Treatment Facility Pipelines
- IM-3 Effluent Pipeline

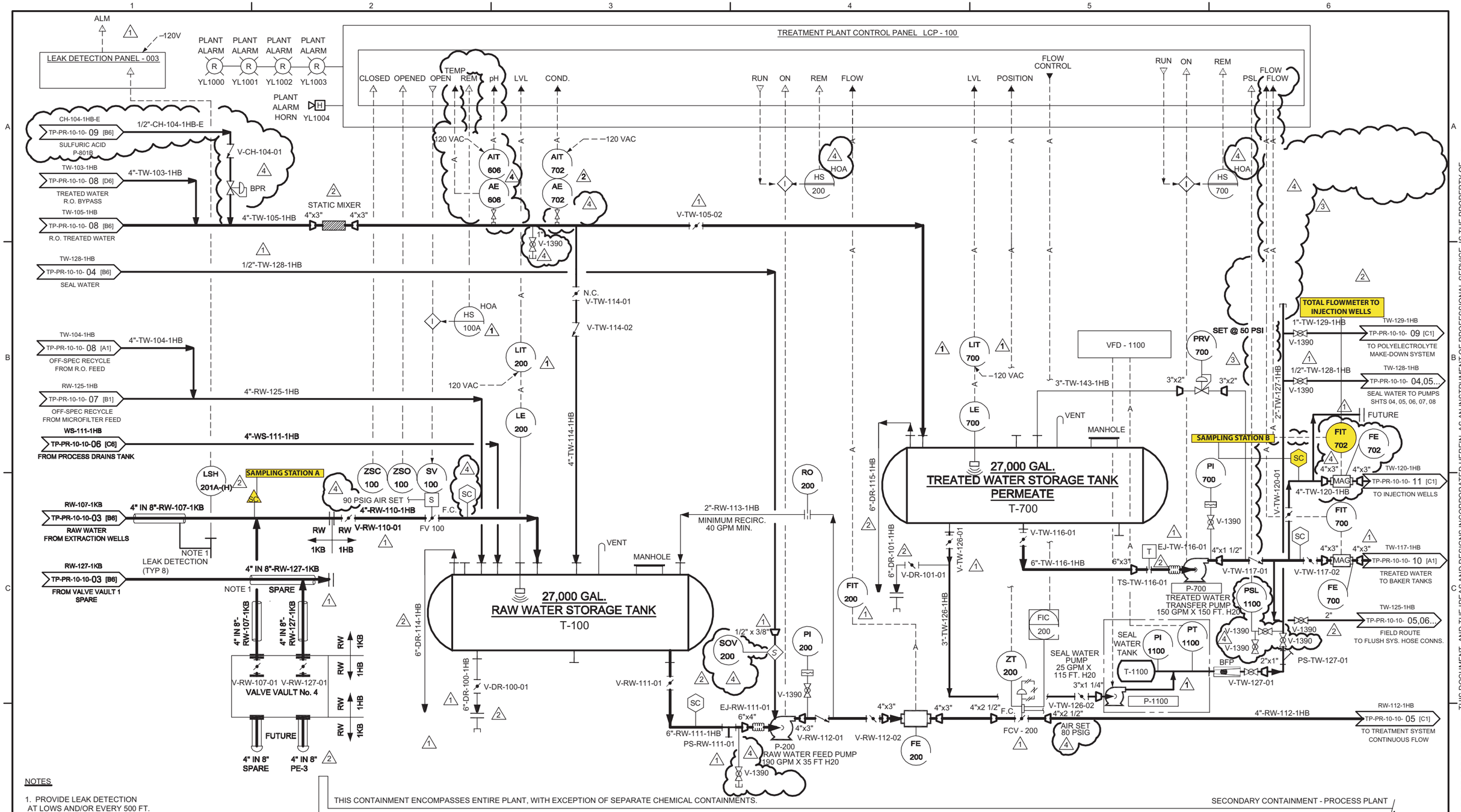
N

0 350 700 Feet

California State Plane NAD83 Zone 5 US Feet

FIGURE 1
IM NO. 3 PROJECT SITE FEATURES
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2009\IM3\IM3_PROJECT_AREA_DEC09.MXD BKAHLER 1/12/2010 09:49:03



NOTES

1. PROVIDE LEAK DETECTION AT LOWS AND/OR EVERY 500 FT.

NO.	DATE	REVISION	BY	CHK
0	07/28/04	FOR INTERNAL REVIEW	EFC	AJ
0	09/03/04	APPROVED FOR CONSTRUCTION	EFC	AJ
1	10/13/04	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ
2	01/23/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ
3	02/14/05	ADDED RECIRC. LINE AND PRV VALVE TO T-700 – APPROVED FOR CONSTRUCTION	EFC	AJ
4	09/21/05	REVISED PER AS-BUILT CONDITIONS	EFC	AJ

REVISION APPROVAL		REV 4	DATE 09/21/05	PRINT DISTRIBUTION
DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED	DATE
CIVIL		ELECTRICAL		STATUS
STRUCTURAL		INST & CONTROL		REV.
MECHANICAL		ARCHITECTURAL		CLIENT
PROCESS		ENVIRONMENTAL		FIELD
PIPING		GEN. ARRANG.		INTRA CO.

STATUS	REV	DATE	SDE	PEM
ISSUED				
PRELIMINARY				
FOR REVIEW AND APPROVAL	D	07/28/04		
APPROVED FOR CONSTRUCTION	0	09/03/04	KLM	TP
REVISED & APPROVED FOR CONSTRUCTION	4	/ /		

RESPONSIBLE ENGINEER: Kenneth L. Martins CH4876 Exp. 6-30-05 PE #

SCALE NONE

PACIFIC GAS & ELECTRIC CO.
TOPOCK COMPRESSOR STATION
INTERIM MEASURE 3
EXPANDED GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

PROJ NO. 315994

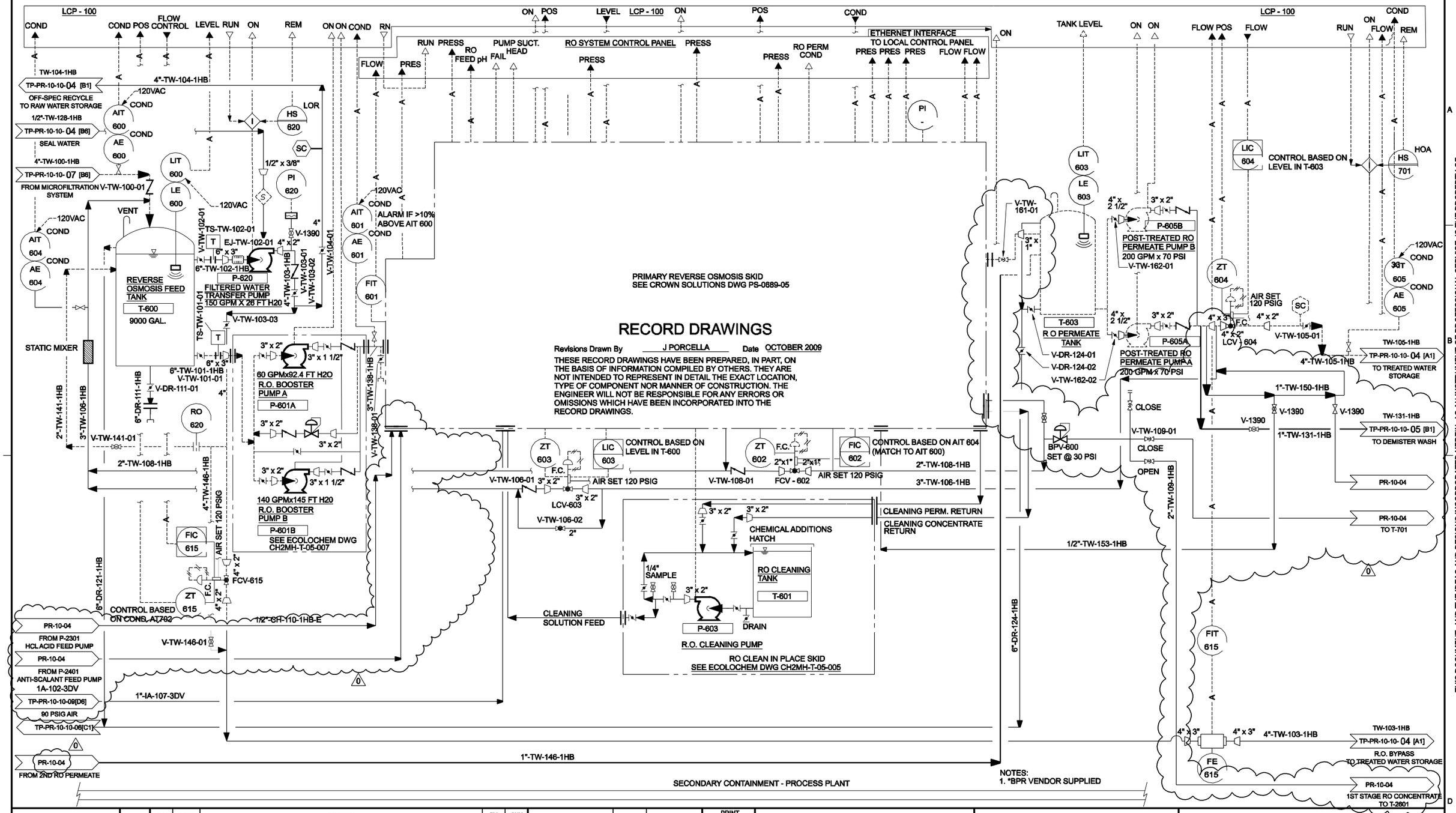
CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 04
STORAGE AREA

DWG. NO. TP-PR-10-10-04 REV. 4

BAR IS ONE INCH ON ORIGINAL DRAWING

FILENAME: tppr101004.dwg PLOT DATE: 21-SEP-2005 PLOT TIME:



**
ORIGINALLY STAMPED AND SIGNED BY:
JOHN PORCELLA
CALIFORNIA PE NO. C70145
ON 04-01-2009
**

RESPONSIBLE ENGINEER: John Porcella C70145 Exp. 9-30-10
PE#

NO.	DATE	REVISION	BY	CHK
A	2/12/09	INTERNAL REVIEW		
B	2/12/09	CLIENT REVIEW		
C	4/01/09	FOR REVIEW AND APPROVAL	JR	JP
0	11/17/09	FINAL RECORD ISSUE	JR	JP

REVISION APPROVAL				REV 0 DATE 10/02/09
DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED	
CIVIL	SJ	ELECTRICAL	FH	
STRUCTURAL		INST & CONTROL	JG	
MECHANICAL	SJ	ARCHITECTURAL		
PROCESS	DF	ENVIRONMENTAL		
PIPING	SJ	GEN. ARRANG.	SJ	

PRINT DISTRIBUTION	
DATE	
STATUS	
REV.	
CLIENT	
FIELD	
INTRA CO.	

STATUS				
ISSUED	REV	DATE	SDE	PEM
PRELIMINARY	A	2/12/09	JP	JP
FOR REVIEW AND APPROVAL	C	4/01/09	JP	JP
APPROVED FOR CONSTRUCTION				
REVISED & APPROVED FOR CONSTRUCTION	0	10/02/09	JP	JP

SCALE NONE

PACIFIC GAS & ELECTRIC CO.
TOPOCK COMPRESSOR STATION
INTERIM MEASURE 3
PLANT PERFORMANCE IMPROVEMENTS

PROJ NO. 362032

CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
REVERSE OSMOSIS SYSTEM
SHEET ONE OF TWO

DWG. NO. PR-10-03 REV. 0

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

FILENAME: PR-10-03.dgn PLOT DATE: 11/19/2009 PLOT TIME: 10:27:54 AM

COND LVL RUN ON FLOW

PR-10-03 — TO SEAL WATER TRUNK LINE

HS 701 HOA

1 1/2" TW-154-1HB

PR-10-03
TO PRIMARY RO FROM P-2301 HCl ACID PUMP

LOCATED IN CHEMICAL STORAGE AREA

1/2" CH-112-1HB

HCl ACID TOTE

HYDRO-CHLORIC ACID (HCl) PUMP SKID SEE CROWN DWG PS-0689-03

FROM P-2302 3/8" CH-113-1HB

LOCATED NEAR EXISTING RO

1/2" CH-114-1HB

SECONDARY RO ANTI-SCALANT CHEMICAL DRUM

ANTISCALANT FEED PUMP SKID SEE CROWN DWG PS-0689-04

PRIMARY RO ANTI-SCALANT CHEMICAL DRUM

1/4" CH-115-1HB FROM P-2402

V-1390 NC

PR-10-03
TO PRIMARY RO FROM P-2401 ANTI-SCALANT FEED PUMP

1A-102-3DV
TP-PR-10-10-09[06]
90 PSIG AIR

1"-1A-108-3DV

120VAC

AIT 701 COND

AE 701 COND

1 1/2" TW-152-1HB
RECYCLE

1ST STAGE RO CONCENTATE
PR-10-03

1 1/2"-TW-148-1HB

2"x1 1/2"

V-1390 NO

2" TW-109-1HB

V-1390 NC

LIT 701

LE 701

120VAC

VENT

SC

PI 701

PR-10-03
FROM PRIMARY RO

CLOSE

2"x1"

OPEN V-1390

RO CONCENTRATE STORAGE TANK 7,200 GAL.
T-701
8000 GAL.

V-DR-112-01

TS-TW-111-01

SEAL WATER

SOV 701

S

1/2"x3/8"

SEAL WATER
TP-PR-10-10-08 [B6]

6"-DR-112-1HB

V-TW-111-01

T 6"x1 1/2"

EJ-TW-111-01

6"-TW-111-1HB P-107

3"x1"

3"x1"

MAG

FIT 701

FE 701

3"x2"

V-TW-112-01

V-TW-112-03

RO CONCENTRATE TRANSFER PUMP 80 GPM X 85 FT H20

TO TRENCH DRAIN

T-2601 SECONDARY RO FEED TANK SEE CROWN DWG PS-0689-06

1 1/2" TW-149-1HB

V-1390 NC

P-2701 SECONDARY RO FEED PUMP SEE CROWN DWG PS-0689-07

1 1/2" TW-151-1HB

SECONDARY REVERSE OSMOSIS SKID
SEE CROWN SOLUTION DWG:
PS-0689-08
(NOTE 3)

1" TW-146-1HB

PERMEATE

PR-10-03
TO T-603 TANK

V-1390

1" TW-147-1HB

TW-112-1RB

TP-PR-10-10 [C1]
RO CONCENTRATE

RECORD DRAWINGS

Revisions Drawn By J PORCELLA Date OCTOBER 2009

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT NOR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

** ORIGINALLY STAMPED AND SIGNED BY: JOHN PORCELLA CALIFORNIA PE NO. C70145 ON 04-01-2009 **

RESPONSIBLE ENGINEER: John Porcella Exp. 9-30-10 C70145 PE #

NO.	DATE	REVISION	BY	CHK
A	2/12/09	INTERNAL REVIEW		
B	2/12/09	CLIENT REVIEW		
C	4/01/09	FOR REVIEW AND APPROVAL	JR	JP
0	11/17/09	FINAL RECORD ISSUE	JR	JP

REVISION APPROVAL		REV 0 DATE 10/02/09		PRINT DISTRIBUTION
DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED	DATE
CIVIL	SJ	ELECTRICAL	FH	STATUS
STRUCTURAL		INST & CONTROL	JG	REV.
MECHANICAL	SJ	ARCHITECTURAL		CLIENT
PROCESS	DF	ENVIRONMENTAL		FIELD
PIPING	SJ	GEN. ARRANG.	SJ	INTRA CO.

STATUS	REV	DATE	SDE	PEM
ISSUED				
PRELIMINARY	A	2/12/09	JP	JP
FOR REVIEW AND APPROVAL	C	4/01/09	JP	JP
APPROVED FOR CONSTRUCTION				
REVISED & APPROVED FOR CONSTRUCTION	0	10/02/09	JP	JP

SCALE NONE

PACIFIC GAS & ELECTRIC CO.
TOPOCK COMPRESSOR STATION
INTERIM MEASURE 3
PLANT PERFORMANCE IMPROVEMENTS

PROJ NO. 362032

CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
REVERSE OSMOSIS SYSTEM
SHEET TWO OF TWO

DWG. NO. PR-10-04 REV. 0

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

FILENAME: PR-10-04.dgn PLOT DATE: 11/19/2009 PLOT TIME: 10:28:26 AM

CONTROL PANEL

PLC

REM ON RUN REM ON RUN HI TORQUE REM ON RUN CLOSE OPEN CLOSE OPEN REM REM OPEN OPEN LAH TURB OPEN REM RUN LVL ON REM REM LT ON RUNOPEN LAH RM OPEN REM LAH LAH

HS 400A LOR · HS 400B LOR · HS 400C LOR · HS 401 HOA · HS 402 LOR · HS 404 HOA

HS 400 HOA · HS 410 HOA · HS 900 LOR

CH-109-1HB-E
TP-PR-10-10- 09 [C6]
POLYELECTROLYTE FEED
1/2"-CH-109-1HB-E
V-CH-109-01

CH-108-1HB-E
TP-PR-10-10- 09 [C6]
POLYELECTROLYTE FEED
1/2"-CH-108-1HB-E
V-CH-108-01

TORQUE NSH 400

RW-121-1HB
TP-PR-10-10- 05 [C6]
FROM CHEM REDUCTION AND COAGULATION SYSTEM IA-104-3DV
4"-RW-121-1HB

TP-PR-10-10- 09 [D6]
90 PSIG AIR
1"-IA-104-3DV

M-400-A · M-400-B · M-400-C

CL-400 CLARIFIER

6"-DR-107-1HB

SEE PARKSON DRAWING 10066701-01

120VAC AIT 400 TURB

1/4" / 1" SLOPE TO PRE-TREATED WATER TANK

6"-RW-122-1HB
RW-122-1HB
TP-PR-10-10- 07 [B1]
MICROFILTRATION SYSTEM

120VAC LIT 402

SV 400 · SV 401 · SV 403 · SV 404 · SV 410

ZSC 400 · ZSO 400 · AE 400 TURB · ZSC 410 · ZSO 410

AIR SET 120 PSIG · F. C.

FV - 400 · FV - 410

4"-WS-102-1HB · 4"-WS-100-1HB

120 PSIG AIR SET · 1/2"

PI 401 · PE 401 · LE 402 · M-402

HS 403 HOA · PI 404 · PE 404

4" x 1" · 2" x 1"

V-WS-103-01 · V-WS-103-02

WS-103-1HB
TP-PR-10-10- 05 [B1]
SLUDGE RECYCLE

P-404
SLUDGE RECYCLE PUMP
20 GPM X 30 FT. H2O

2"-WS-109-1HB

V-WS-109-01

V-WS-104-01

2"-WS-101-1HB · V-WS-101-01 · 4" x 2"

P-401
SLUDGE WITHDRAWAL PUMP
20 GPM X 30 FT. H2O

SLUDGE HOLDING TANK
6000 GAL
T-402

VENT · DECANT

2" V-1790 (TYP 5)

4" (TYP 5) AIR/SIGHT GAP · 4"

PI 403 · PE 403

3% - 5% SOLIDS

2"-WS-105-1HB · V-WS-105-01 · V-WS-108-01 · 4"-WS-108-1HB

2"-WS-107-1HB · V-WS-107-01

P-403
SEPARATOR FEED PUMP
20 GPM X 30 FT. H2O

2"-WS-106-1HB · V-WS-106-01 · 4"-WS-110-1HB

TRUCK FILL FOR OFF-SITE DISPOSAL

TRENCH
TP-PR-10-10- 08 [D6]
R.O. GRAVITY DRAINS

DR-109-1HB
TP-PR-10-10- 07 [C6]
FROM M.F. SYSTEM GRAVITY DRAIN
3"-DR-109-1HB

TRENCH
TP-PR-10-10- 07 [D6]
FROM M.F. SYSTEM PRETREATED WATER TANK

4"-WS-104-1HB

DR-110-1HB
TP-PR-10-10- 07 [C6]
FILTER BACKWASH FROM MICROFILTRATION SYSTEM
4"-DR-110-1HB

TRENCH
TP-PR-10-10- 05 [D6]
GRAVITY DRAIN

TW-128-1HB
TP-PR-10-10- 04 [B6]
SEAL WATER
1/2"-TW-128-1HB

120VAC LIT 900 · LE 900 · 1/2" x 3/8" · VENT

V-WS-110-01 · V-WS-111-02 · V-WS-111-03 · 4"-WS-111-1HB

V-WS-111-01 · PS-WS-111-01 · V-1390 · 1"-DR-106-1HB

V-WS-113-01 · 2"-WS-113-1HB · 4" x 2"

WS-111-1HB
TP-PR-10-10- 04 [B1]
TO RAW WATER STORAGE TANK

LSH 405B · FH-WS-106-01 · LSH 405A

SAMPLING STATION E

UNIT 2 CAKE CAKE · UNIT 1 CAKE CAKE

FH-WS-112-02 · 2"-WS-112-1HB · FH-WS-112-01

LSHH 405

480 VAC · LCP - 405

P-405
PHASE SEPARATOR SUMP PUMP PACKAGE
25 GPM x 25 FT. H2O

PUMPOUT VAULT

PS-405
PHASE SEPARATORS ALTERNATING DURING OPERATION

PROCESS DRAIN TANK
5,000 GAL.
T-900

P-900
PROCESS DRAIN PUMP

V-DR-113-01 · 6"-DR-113-1HB

VERTICAL WET PIT
175 GPM x 37 FT. H2O

LSH 900

T-900A
PROCESS SUMP

NOTE 1

SECONDARY CONTAINMENT - PROCESS PLANT

NOTES:

1. USE PORTABLE SUMP PUMP (OPERATIONS SUPPLIED) FOR PUMP OUT

NO.	DATE	REVISION	BY	CHK
0	07/28/04	FOR INTERNAL REVIEW	EFC	AJ
0	09/03/04	APPROVED FOR CONSTRUCTION	EFC	AJ
1	10/13/04	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ
2	01/23/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ

REVISION APPROVAL		REV 2	DATE 01/23/05
DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED
CIVIL		ELECTRICAL	
STRUCTURAL		INST & CONTROL	
MECHANICAL		ARCHITECTURAL	
PROCESS		ENVIRONMENTAL	
PIPING		GEN. ARRANG.	

PRINT DISTRIBUTION: DATE · STATUS · FIELD · CLIENT · INTRA CO.

RESPONSIBLE ENGINEER: Kenneth L. Martins PE # CH4876 Exp. 6-30-05

STATUS	REV	DATE	SDE	PEM
PRELIMINARY				
FOR REVIEW AND APPROVAL	D	07/28/04		
APPROVED FOR CONSTRUCTION	0	09/03/04	KLM	TP
REVISED & APPROVED FOR CONSTRUCTION	2	01/23/05		

SCALE NONE

PACIFIC GAS & ELECTRIC CO.
TOPOCK COMPRESSOR STATION
INTERIM MEASURE 3
EXPANDED GROUNDWATER EXTRACTION AND TREATMENT SYSTEM
PROJ NO. 315994

CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 06
CLARIFICATION AND SLUDGE REMOVAL

DWG. NO. TP-PR-10-10-06 REV. 2

FILENAME: tppr101006.dwg PLOT DATE: 23-JAN-2005 PLOT TIME:

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

CONTROL PANEL LCP-100

WELL TW-3D CONTROL

WELL TW-2S CONTROL

WELL TW-2D CONTROL

WELL PE-1 CONTROL

LEAK DETECTION PANEL - 003

ALM

120V

LSH LVL RUN ON RM PRESS FLOW

LSHH

HOA

HS 102

HS 100

HS 101

HS 103

HOLD

LSH 002

LSHH 002

FUTURE

4"-RW-140-1HB

V-RW-140-01

VALVE VAULT No. 2

4"-RW-139-1HB

V-RW-139-01

4" IN 8"-RW-141-1KB

4" IN 8"-RW-142-1KB

NOTE 1

3"-RW-138-1HB

V-RW-138-01

3" IN 6"-RW-137-1KB

4"-RW-105-1HB

V-RW-105-05

4" IN 8"-FUTURE

4" IN 8"-RW-135-1KB

LSH 102A

NOTE 1

FI 102

LSH 001

LSHH 001

1" V-1390

4" x 3"

EJ-RW-105-01

4"-RW-105-1HB

Well TW-2S Flowmeter

Well TW-2D Flowmeter

Well PE-1 Flowmeter

FE 100

FIT 100

PIT 100

PE 100

LT 100

VENT

3"x2"

V-RW-105-02

MAG

3"-RW-105-1HB THROTTLING

V-RW-105-01

V-1390

VALVE VAULT No. 1

LT 101

FE 101

FIT 101

PIT 101

PE 101

V-RW-102-02

3"-RW-102-1HB THROTTLING

V-RW-102-01

LT 103

FE 103

FIT 103

PIT 103

PE 103

V-RW-108-02 THROTTLING

V-RW-108-1HB

V-RW-108-01

V-RW-130-02

V-RW-130-01

4"-RW-130-1HB

V-RW-105-06 THROTTLING

V-RW-105-03

V-RW-105-04

4" IN 8" RW-127-1KB SPARE

4" IN 8" RW-127-1KB

TP-PR-10-10-04 [C1]

SPARE TO VALVE VAULT 4

NOTES 1 & 2

4" IN 8" RW-107-1KB

TP-PR-10-10-04 [C1]

TO RAW WATER STORAGE

4" IN 8"-RW-131-1KB

TO BAKER TANKS V-RW-131-01

V-RW-131-01

LSH 100A

LSH 101A

LSH 103A

3" IN 6"-RW-104-1KB

3" IN 6"-RW-101-1KB

4" IN 8"-RW-133-1KB

NOTE 1

Well TW-3D Flowmeter

VENT

LT 102

PI 102

PIT 102

PRV 102

PE 102

FE 102

FIT 102

LSH 102

SET AT 120 PSI

V-1390

3"x2"

3"-RW-134-1HB

V-RW-134-01

MAG

4"x3"

V-RW-134-02

WELL VAULT No. 4

PI 100

LSH 100

3"-RW-103-1HB

V-RW-103-01

V-RW-103-02

WELL VAULT No. 2

PI 101

PRV 101

LSH 101

3"-RW-100-1HB

V-RW-100-01

V-RW-100-02

WELL VAULT No. 1

PI 103

PRV 103

LSH 103

4"x3"

3"-RW-132-1HB

V-RW-132-01

V-RW-132-02

WELL VAULT No. 3

LE 102

P-102

EXTRACTION WELL TW-3D

135 GPM x 248 FT. H20

LE 100

P-100

EXTRACTION WELL TW-2S

40 GPM x 180 FT. H20

LE 101

P-101

EXTRACTION WELL TW-2D

90 GPM x 245 FT. H20

LE 103

P-103

EXTRACTION WELL PE-1

40 GPM x 235 FT. H20

NOTES

1. PROVIDE LEAK DETECTION AT LOWS AND/OR EVERY 500 FT.
2. INSTALL AIR RELEASE VALVES AT HIGH POINTS.

NO.	DATE	REVISION	BY	CHK
8	12/07/05	REMOVED PE-1 HOLDS	JBW	SDH
1	10/13/04	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ
2	01/23/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ
3	03/16/05	DELETED NOTES. APPROVED FOR CONSTRUCTION	EFC	AJ
4	07/20/05	RELIEF VALVE SETTINGS. WELL PE-1 LINE TAGS. HOLDS REMOVED. APPROVED FOR CONSTRUCTION	EFC	AJ
5	09/27/05	FINAL RECORD ISSUE	EFC	AJ
6	10/06/05	REVISED FINAL RECORD – ADDED TW-3D	EFC	AJ
7	10/19/05	REVISED AS NOTED	EFC	AJ

REVISION APPROVAL		REV 8 DATE 12/06/05	
DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED
CIVIL	—	ELECTRICAL	—
STRUCTURAL	—	INST & CONTROL	—
MECHANICAL	AJ	ARCHITECTURAL	—
PROCESS	—	ENVIRONMENTAL	—
PIPING	SDH	GEN. ARRANG.	—

PRINT DISTRIBUTION

DATE	
STATUS	
REV.	
CLIENT	
FIELD	
INTRA CO.	

STATUS	REV	DATE	SDE	PEM
ISSUED				
PRELIMINARY				
FOR REVIEW AND APPROVAL	D	07/28/04		
APPROVED FOR CONSTRUCTION	0	09/03/04	KLM	TP
REVISED & APPROVED FOR CONSTRUCTION	7	12/9/05	for KLM	AJ

SCALE NONE

RESPONSIBLE ENGINEER: Kenneth L. Martins CH4876 Exp. 6-30-06

REGISTERED PROFESSIONAL ENGINEER KENNETH L. MARTINS No. CH4876 Exp. 6-30-06 CIVIL STATE OF CALIFORNIA

PACIFIC GAS & ELECTRIC CO.
TOPOCK COMPRESSOR STATION
INTERIM MEASURE 3
EXPANDED GROUNDWATER EXTRACTION AND TREATMENT SYSTEM

PROJ NO. 315994

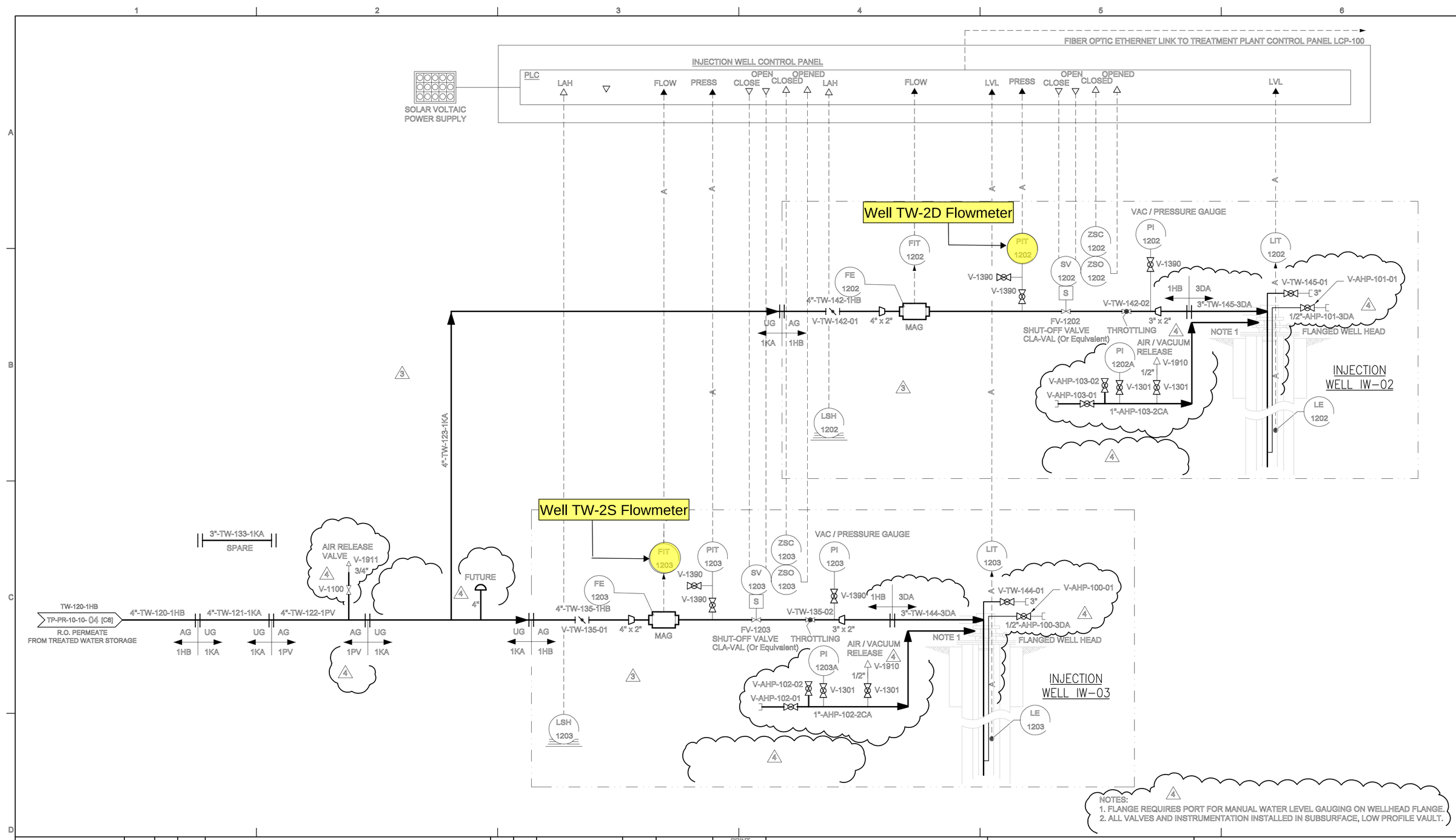
CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 03
EXTRACTION WELLS
PE-1, TW-2D, TW-2S AND TW-3D

DWG. NO. TP-PR-10-10-03 REV. 8

BAR IS ONE INCH
tppr101003.dwg 12/07/2005 01:06:58 PM

FILENAME: tppr101003.dwg PLOT DATE: 19-OCT-2005 PLOT TIME:



NO.	DATE	REVISION	BY	CHK
A	07/28/04	FOR INTERNAL REVIEW	EFC	AJ
0	09/03/04	APPROVED FOR CONSTRUCTION	EFC	AJ
1	10/13/04	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ
2	01/23/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ
3	02/14/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ
4	03/10/05	REMOVED HOLD AND APPROVED FOR CONSTRUCTION	EFC	AJ

REVISION APPROVAL		REV 4	DATE 03/10/05	PRINT DISTRIBUTION	
DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED	DATE	
CIVIL		ELECTRICAL		STATUS	
STRUCTURAL		INST & CONTROL		REV.	
MECHANICAL		ARCHITECTURAL		CLIENT	
PROCESS		ENVIRONMENTAL		FIELD	
PIPING		GEN. ARRANG.		INTRA CO.	

STATUS				
ISSUED	REV	DATE	SDE	PEM
PRELIMINARY				
FOR REVIEW AND APPROVAL	A	07/28/04		
APPROVED FOR CONSTRUCTION	0	09/03/04	KLM	TP
REVISED & APPROVED FOR CONSTRUCTION	4	/ /		

RESPONSIBLE ENGINEER: Kenneth L. Martine CH4876 Exp. 6-30-05 PE #

SCALE NONE

PACIFIC GAS & ELECTRIC CO.
TOPOCK COMPRESSOR STATION
INTERIM MEASURE 3
EXPANDED GROUNDWATER EXTRACTION
AND TREATMENT SYSTEM
PROJ NO. 315994

CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 11
INJECTION WELLS

DWG. NO. TP-PR-10-10-11 REV. 4

FILENAME: tppr101011.dwg PLOT DATE: 10-MAR-2005 PLOT TIME:

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

Appendix A
Semiannual Operations and Maintenance Log, January 1, 2010 through June 30, 2010

APPENDIX A

Semiannual Operations and Maintenance Log, January 1, 2010 through June 30, 2010

Downtime is defined as any periods when all extraction wells are not operating, so that no groundwater is being extracted and piped into IM No. 3 as influent. Periods of planned and unplanned extraction system downtime are summarized here. The times shown are in Pacific Standard Time to be consistent with other data collected at the site.

January 2010

- **January 1, 2010 (planned):** The extraction well system was offline from 12:50 p.m. to 1:02 p.m. for microfilter maintenance. Extraction system downtime was 12 minutes.
- **January 5, 2010 (planned):** The extraction well system was offline from 7:24 p.m. to 10:48 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 24 minutes.
- **January 10, 2010 (planned):** The extraction well system was offline from 6:32 a.m. to 7:40 a.m. for reverse osmosis system maintenance. Extraction system downtime was 1 hour and 8 minutes.
- **January 12, 2010 (planned):** The extraction well system was offline from 12:48 p.m. to 12:52 p.m. while the plant was run in recirculation mode. Extraction system downtime was 4 minutes.
- **January 13, 2010 (planned):** The extraction well system was offline from 12:30 p.m. to 12:32 p.m. and 1:18 p.m. to 1:20 p.m. for critical alarm testing. Extraction system downtime 4 minutes.
- **January 13, 2010 (planned):** The extraction well system was offline from 5:50 p.m. to 6:48 p.m. for microfilter maintenance. Extraction system downtime 58 minutes.
- **January 14, 2010 (planned):** The extraction well system was offline from 12:30 p.m. to 2:38 p.m. for microfilter maintenance. Extraction system downtime was 2 hours and 8 minutes.
- **January 15, 2010 (planned):** The extraction well system was offline from 11:46 a.m. to 12:40 p.m. for microfilter maintenance. Extraction system downtime was 54 minutes.
- **January 19, 2010 (planned):** The extraction well system was offline from 3:22 p.m. to 4:08 p.m. to reduce water level in T-100. Extraction system downtime was 46 minutes.
- **January 19, 2010 (unplanned):** The extraction well system was offline from 9:12 p.m. to 9:20 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 8 minutes.

- **January 20, 2010 (planned):** The extraction well system was offline from 3:00 p.m. to 4:06 p.m. to clean out microfilter strainer filter. Extraction system downtime was 1 hour and 6 minutes.
- **January 21, 2010 (unplanned):** The extraction well system was offline from 4:44 p.m. to 8:30 p.m. due to failure of chemical feed pumps. Extraction system downtime was 3 hours and 46 minutes.
- **January 23, 2010 (planned):** The extraction well system was offline from 10:48 a.m. to 2:38 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 50 minutes.
- **January 25, 2010 (planned):** The extraction well system was offline from 1:38 p.m. to 2:38 p.m. for microfilter maintenance. Extraction system downtime was 1 hour.
- **January 28, 2010 (planned):** The extraction well system was offline from 2:06 p.m. to 3:56 p.m. for microfilter maintenance. Extraction system downtime was 1 hour and 50 minutes.
- **January 29, 2010 (planned):** The extraction well system was offline from 7:06 p.m. to 8:31 p.m. for microfilter maintenance. Extraction system downtime was 1 hour and 25 minutes.

February 2010

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

- **February 17, 2010 (planned):** The extraction well system was offline from 12:26 p.m. to 1:58 p.m. for microfilter maintenance. Extraction system downtime was 1 hour and 32 minutes.
- **February 18, 2010 (unplanned):** The extraction well system was offline from 12:14 p.m. to 12:42 p.m., 12:50 p.m. to 12:56 p.m., and 8:34 p.m. to 8:42 p.m., due to failure of level sensor in T-100. Extraction system downtime was 42 minutes.
- **February 18, 2010 (planned):** The extraction well system was offline from 2:10 p.m. to 2:26 p.m. for microfilter maintenance. Extraction system downtime was 16 minutes.
- **February 22, 2010 (unplanned):** The extraction well system was offline from 8:34 a.m. to 10:20 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 1 hour and 46 minutes.
- **February 22, 2010 (planned):** The extraction well system was offline from 2:44 p.m. to 6:14 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 30 minutes.

March 2010

- **March 1, 2010 (unplanned):** The extraction well system was offline from 10:04 a.m. to 12:26 p.m. due to air compressor failure. Extraction system downtime was 2 hours and 22 minutes.
- **March 2, 2010 (unplanned):** The extraction well system was offline from 12:40 a.m. to 1:42 a.m. and 2:10 a.m. to 6:32 a.m. due to microfilter failure. Extraction system downtime was 5 hours and 24 minutes.
- **March 5, 2010 (planned):** The extraction well system was offline from 11:16 a.m. to 1:32 p.m. and 5:18 p.m. to 6:38 p.m. for microfilter maintenance. Extraction system downtime was 3 hours and 36 minutes.
- **March 10, 2010 (planned):** The extraction well system was offline from 10:42 a.m. to 10:44 a.m., 1:08 p.m. to 1:12 p.m., and 1:30 p.m. to 1:34 p.m. for testing of the pipeline leak detection alarm system. Extraction system downtime was 10 minutes.
- **March 12, 2010 (unplanned):** The extraction well system was offline from 9:40 p.m. to 9:42 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime 2 minutes.
- **March 13, 2010 (planned):** The extraction well system was offline from 6:26 p.m. to 9:24 p.m. for microfilter maintenance. Extraction system downtime was 2 hours and 58 minutes.
- **March 17, 2010 (planned):** The extraction well system was offline from 9:30 p.m. to 10:48 p.m. for a shutdown to generator power training exercise for new employees. Extraction system downtime was 1 hour and 18 minutes.

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

April 2010

- **April 5, 2010 (unplanned):** The extraction well system was offline from 1:50 p.m. to 3:52 p.m. due to high water level in T-100. Extraction system downtime was 2 hours and 2 minutes.
- **April 6 - 7, 2010 (unplanned):** The extraction well system was offline from 10:56 p.m. on April 6 to 12:08 a.m. on April 7 due to high water level in T-100. Extraction system downtime was 1 hour and 12 minutes.
- **April 7, 2010 (planned):** The extraction well system was offline from 8:08 a.m. to 11:24 a.m. for loop reactor maintenance. Extraction system downtime was 3 hours and 16 minutes.
- **April 7, 2010 (unplanned):** The extraction well system was offline from 1:14 p.m. to 1:16 p.m., 1:20 p.m. to 1:22 p.m., 1:30 p.m. to 1:52 p.m., and 2:08 p.m. to 2:10 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime 28 minutes.
- **April 9, 2010 (unplanned):** The extraction well system was offline from 1:26 p.m. to 1:28 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 2 minutes.
- **April 15, 2010 (planned):** The extraction well system was offline from 4:40 a.m. to 5:00 a.m. for plant maintenance. Extraction system downtime was 20 minutes.
- **April 19-23, 2010 (planned):** The extraction well system was offline from 1:14 p.m. on April 19 to 7:26 p.m. on April 22, from 7:46 p.m. on April 22 to 2:11 p.m. on April 23, and from 3:37 p.m. on April 23 to 5:31 p.m. on April 23 for annual plant outage. Extraction system downtime was 4 days 2 hours and 31 minutes.
- **April 28, 2010 (planned):** The extraction well system was offline from 3:41 p.m. to 5:53 p.m. to replace polymer pump and permeate rinse valve on RO. Extraction system downtime was 2 hours and 12 minutes.

- **April 29, 2010 (unplanned):** The extraction well system was offline from 8:38 p.m. to 8:42 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 4 minutes.

May 2010

- **May 4, 2010 (planned):** The extraction well system was offline from 10:58 a.m. to 11:00 a.m., 11:24 a.m. to 11:26 a.m., 11:30 a.m. to 11:32 a.m., 11:36 a.m. to 11:38 a.m., and 11:42 a.m. to 11:44 a.m. for critical alarm testing. Extraction system downtime was 10 minutes.
- **May 17, 2010 (unplanned):** The extraction well system was offline from 10:06 a.m. to 10:10 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 4 minutes.
- **May 19, 2010 (planned):** The extraction well system was offline from 7:28 a.m. to 3:08 p.m. for planned monthly plant maintenance. Extraction system downtime was 7 hours and 40 minutes.

June 2010

- **June 7, 2010 (planned):** The extraction well system was offline from 1:50 p.m. to 6:02 p.m. for microfilter maintenance. Extraction system downtime was 4 hours and 12 minutes.
- **June 8, 2010 (planned):** The extraction well system was offline from 11:30 a.m. to 11:32 a.m., 11:40 a.m. to 11:48 a.m., and 11:58 a.m. to 12:12 p.m. for critical alarm testing and leak detection system testing. Extraction system downtime 24 minutes.
- **June 14, 2010 (unplanned):** The extraction well system was offline from 9:20 a.m. to 10:46 a.m. due to plant shutdown from low flow. Extraction system downtime was 1 hour and 26 minutes.
- **June 15, 2010 (unplanned):** The extraction well system was offline from 1:16 p.m. to 1:20 p.m. and 1:24 p.m. to 2:16 p.m. due to the installation and testing of software update. Extraction system downtime was 56 minutes.
- **June 17, 2010 (unplanned):** The extraction well system was offline from 6:28 a.m. to 7:12 a.m. and 12:24 p.m. to 1:46 p.m. due to plant shutdown from no sludge production. Extraction system downtime was 2 hours and 6 minutes.
- **June 17, 2010 (unplanned):** The extraction well system was offline from 3:04 p.m. to 4:28 p.m. and 8:30 p.m. to 11:22 p.m. due to clarifier failure. Extraction system downtime was 4 hours and 16 minutes.
- **June 18, 2010 (unplanned):** The extraction well system was offline from 2:12 a.m. to 4:56 a.m. and 6:26 a.m. to 7:06 a.m. due to high water level in the raw water storage tank. Extraction system downtime was 3 hours and 24 minutes.
- **June 18, 2010 (unplanned):** The extraction well system was offline from 11:12 a.m. to 11:16 a.m. when City of Needles power utility adjusted power feed to plant. Extraction system downtime was 4 minutes.

- **June 21, 2010 (unplanned):** The extraction well system was offline from 7:16 a.m. to 1:12 p.m. due to polymer system failure. Extraction system downtime was 5 hours and 56 minutes.
- **June 23, 2010 (planned):** The extraction well system was offline from 7:16 a.m. to 5:40 p.m. for monthly scheduled maintenance. Extraction system downtime was 10 hours and 24 minutes.
- **June 27-28, 2010 (unplanned):** The extraction well system was offline from 11:22 p.m. on June 27 to 1:52 a.m. on June 28 when the primary RO system alarmed and shut down the plant. Extraction system downtime was 2 hours and 30 minutes.
- **June 28, 2010 (planned):** The extraction well system was offline from 7:58 a.m. to 8:16 a.m. when City of Needles Power came to the site and adjusted the AMP's electric current feed to the plant. Extraction system downtime was 18 minutes.
- **June 28, 2010 (planned):** The extraction well system was offline from 1:54 p.m. to 3:06 p.m. for microfilter maintenance. Extraction system downtime was 1 hour and 12 minutes.
- **June 29, 2010 (unplanned):** The extraction well system was offline from 12:44 p.m. to 3:38 p.m. due to high water level in the raw water storage tank. Extraction system downtime was 2 hours and 54 minutes.
- **June 30, 2010 (unplanned):** The extraction well system was offline from 8:02 a.m. to 11:36 a.m. and 11:38 a.m. to 1:08 p.m. due to high water level in the raw water storage tank. Extraction system downtime was 5 hours and 4 minutes.

Appendix B
Daily Volumes of Groundwater Treated

January 2010 Operational Data

IM-3 Groundwater Extraction and Treatment System

PG&E Topock Compressor Station, Needles, California

			Extraction Well System					Injection Well System			RO Brine
Month	Day	Year	TW-2S (gallons)	TW-2D (gallons)	TW-3D (gallons)	PE-1 (gallons)	Total (gallons)	IW-02 (gallons)	IW-03 (gallons)	Total (gallons)	(gallons)
January	1	2010	--	--	152,771	38,796	191,568	19	186,511	186,530	3,312
January	2	2010	--	--	155,328	37,948	193,276	19	186,060	186,078	3,705
January	3	2010	--	--	155,128	38,289	193,417	17	189,776	189,793	1,966
January	4	2010	--	--	155,138	38,289	193,427	17	183,474	183,491	3,049
January	5	2010	--	--	132,656	32,988	165,643	11	160,929	160,939	3,991
January	6	2010	--	--	155,065	38,414	193,479	13,148	178,791	191,939	3,447
January	7	2010	--	--	155,181	38,214	193,395	18	191,439	191,458	3,854
January	8	2010	--	--	154,993	38,552	193,545	12,286	180,028	192,314	3,838
January	9	2010	--	--	155,142	38,269	193,411	15	186,124	186,139	3,846
January	10	2010	--	--	147,260	36,582	183,841	14	181,784	181,798	10
January	11	2010	--	--	154,503	39,165	193,668	15	188,713	188,728	6,157
January	12	2010	--	--	147,714	38,843	186,557	15,318	160,025	175,343	2,221
January	13	2010	--	--	145,595	37,212	182,807	3,896	185,922	189,818	3,383
January	14	2010	--	--	140,053	35,803	175,856	12	165,244	165,256	2,523
January	15	2010	--	--	148,153	37,966	186,119	15	182,828	182,843	3,702
January	16	2010	--	--	154,472	39,354	193,826	18	185,351	185,369	4,526
January	17	2010	--	--	154,670	39,101	193,771	13	187,305	187,318	2,792
January	18	2010	--	--	154,468	39,577	194,045	17	192,075	192,092	2,639
January	19	2010	--	--	139,326	38,164	177,489	16	177,281	177,298	3,820
January	20	2010	--	--	142,335	36,915	179,251	16	172,175	172,191	2,359
January	21	2010	--	--	118,830	33,181	152,011	14	151,132	151,146	3,771
January	22	2010	--	--	154,222	39,565	193,788	15	195,546	195,561	3,028
January	23	2010	--	--	127,441	33,074	160,515	18	149,757	149,775	3,729
January	24	2010	--	--	154,491	39,190	193,680	17	191,139	191,156	2,383
January	25	2010	--	--	147,697	37,469	185,166	18	185,374	185,392	4,995
January	26	2010	--	--	154,071	39,859	193,930	17	186,690	186,707	2,764
January	27	2010	--	--	149,849	39,903	189,752	15	181,312	181,326	3,963
January	28	2010	--	--	142,063	36,546	178,609	14	174,002	174,016	3,709
January	29	2010	--	--	145,128	36,941	182,070	18,006	161,670	179,676	8,467
January	30	2010	--	--	154,767	38,972	193,739	11	192,304	192,315	3,131
January	31	2010	--	--	154,745	38,761	193,505	15	183,652	183,667	3,326
Total Monthly Volumes (gal)			**0**	**0**	**4,603,255**	**1,171,901**	**5,775,157**	**63,060**	**5,574,412**	**5,637,472**	**108,406**
Average Pump/Injection Rates (gpm)			**0.0**	**0.0**	**103.1**	**26.3**	**129.4**	**1.4**	**124.9**	**126.3**	**2.4**

NOTES: gal: gallons
gpm: gallons per minute
RO: Reverse Osmosis

a. Extraction wells TW 3D and PE 1 were operated during January 2010 at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW 2D and TW-2S were not operated during January 2010.

b. Effluent was discharged into injection wells IW 02 and IW 03 during January 2010.

c. The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during theJanuary 2010 is approximately 0.51 percent. This percentage difference includes instrument noise in the system, but is within the accuracy of the flow meters. A well is considered to be offline if the daily reported flow is 140 gallons per day or less.

February 2010 Operational Data

IM-3 Groundwater Extraction and Treatment System

PG&E Topock Compressor Station, Needles, California

			Extraction Well System					Injection Well System			RO Brine
Month	Day	Year	TW-2S (gallons)	TW-2D (gallons)	TW-3D (gallons)	PE-1 (gallons)	Total (gallons)	IW-02 (gallons)	IW-03 (gallons)	Total (gallons)	(gallons)
February	1	2010	--	--	147,937	38,033	185,969	10	181,967	181,978	4,498
February	2	2010	--	--	154,353	39,080	193,432	11	183,668	183,679	5,147
February	3	2010	--	--	154,540	38,901	193,440	17,094	171,370	188,465	8,790
February	4	2010	--	--	149,311	38,001	187,312	11,816	174,630	186,445	2,782
February	5	2010	--	--	149,923	37,837	187,761	6,316	179,632	185,948	4,277
February	6	2010	--	--	154,576	38,979	193,555	11	184,526	184,537	4,006
February	7	2010	--	--	154,711	38,911	193,622	18	193,806	193,824	2,779
February	8	2010	--	--	154,375	39,743	194,117	13	183,742	183,755	3,037
February	9	2010	--	--	106,417	27,273	133,690	15	125,409	125,425	3,009
February	10	2010	--	--	138,901	34,720	173,621	15	180,181	180,196	3,063
February	11	2010	--	--	115,189	32,452	147,641	18	154,062	154,079	3,048
February	12	2010	--	--	138,626	38,530	177,156	20	192,684	192,704	2,781
February	13	2010	--	--	155,025	38,653	193,677	7,100	172,647	179,747	5,299
February	14	2010	--	--	143,078	39,990	183,067	15	189,332	189,347	3,432
February	15	2010	--	--	114,595	29,185	143,780	23	143,272	143,295	2,927
February	16	2010	--	--	148,291	38,276	186,568	13	179,096	179,109	3,842
February	17	2010	--	--	144,607	36,256	180,863	16	178,124	178,141	2,618
February	18	2010	--	--	146,031	37,359	183,389	14	177,822	177,836	4,123
February	19	2010	--	--	155,492	38,041	193,533	12	186,555	186,568	3,182
February	20	2010	--	--	155,788	37,616	193,403	11	190,273	190,284	3,447
February	21	2010	--	--	155,504	38,101	193,605	14	183,742	183,756	5,537
February	22	2010	--	--	120,342	29,949	150,290	16	149,571	149,588	3,177
February	23	2010	--	--	154,763	39,156	193,919	15	184,882	184,897	4,095
February	24	2010	--	--	154,967	38,800	193,767	18	188,851	188,870	4,237
February	25	2010	--	--	155,881	38,734	194,616	11	184,353	184,364	3,681
February	26	2010	--	--	156,993	39,758	196,751	16	192,262	192,278	4,700
February	27	2010	--	--	156,402	40,476	196,879	10	191,274	191,284	3,983
February	28	2010	--	--	156,753	40,053	196,805	14	191,428	191,442	2,509
Total Monthly Volumes (gal)			**0**	**0**	**4,093,366**	**1,042,864**	**5,136,230**	**42,677**	**4,989,163**	**5,031,840**	**108,005**
Average Pump/Injection Rates (gpm)			**0.0**	**0.0**	**101.5**	**25.9**	**127.4**	**1.1**	**123.7**	**124.8**	**2.7**

NOTES: gal: gallons
gpm: gallons per minute
RO: Reverse Osmosis

a. Extraction wells TW 3D and PE 1 were operated during February 2010 at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW 2D and TW-2S were not operated during February 2010.

b. Effluent was discharged into injection wells IW 03 during February 2010. IW-02 operated for a short period of time on February 3-5 and February 13th 2010.

c. The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during February 2010 is approximately 0.07 percent. This percentage difference includes instrument noise in the system, but is within the accuracy of the flow meters. A well is considered to be offline if the daily reported flow is 140 gallons per day or less.

March 2010 Operational Data

IM-3 Groundwater Extraction and Treatment System

PG&E Topock Compressor Station, Needles, California

			Extraction Well System					Injection Well System			RO Brine
Month	Day	Year	TW-2S (gallons)	TW-2D (gallons)	TW-3D (gallons)	PE-1 (gallons)	Total (gallons)	IW-02 (gallons)	IW-03 (gallons)	Total (gallons)	(gallons)
March	1	2010	--	--	140,925	35,616	176,541	17	172,614	172,631	4,091
March	2	2010	--	--	117,502	30,924	148,426	13	141,838	141,851	2,765
March	3	2010	--	--	155,056	39,259	194,316	66,244	126,792	193,036	3,411
March	4	2010	--	--	155,948	39,681	195,629	196,028	33	196,061	3,702
March	5	2010	--	--	131,765	33,314	165,079	159,822	38	159,860	3,315
March	6	2010	--	--	157,016	38,083	195,099	184,575	43	184,617	2,958
March	7	2010	--	--	157,393	37,560	194,953	190,992	42	191,034	3,307
March	8	2010	--	--	157,477	37,580	195,057	186,753	38	186,790	5,028
March	9	2010	--	--	157,346	37,681	195,027	187,384	40	187,424	4,600
March	10	2010	--	--	145,622	38,051	183,674	187,558	39	187,597	3,409
March	11	2010	--	--	155,746	40,070	195,816	187,637	39	187,676	3,186
March	12	2010	--	--	155,570	39,887	195,456	196,805	28	196,833	3,177
March	13	2010	--	--	136,996	33,547	170,543	156,015	46	156,060	3,188
March	14	2010	--	--	156,310	39,496	195,806	194,797	33	194,830	3,275
March	15	2010	--	--	156,324	39,518	195,843	191,713	35	191,748	6,096
March	16	2010	--	--	156,334	39,412	195,747	190,026	33	190,059	3,167
March	17	2010	--	--	146,443	38,621	185,064	110,376	77,289	187,665	3,158
March	18	2010	--	--	155,275	38,624	193,899	12	184,074	184,086	3,161
March	19	2010	--	--	156,674	38,961	195,635	13	191,638	191,651	3,037
March	20	2010	--	--	156,661	38,902	195,563	15	185,118	185,133	2,903
March	21	2010	--	--	156,153	39,663	195,817	9	191,344	191,353	5,969
March	22	2010	--	--	155,983	39,942	195,925	12	192,276	192,288	3,104
March	23	2010	--	--	155,663	40,386	196,049	15	190,168	190,182	3,149
March	24	2010	--	--	139,519	35,363	174,882	12	172,246	172,259	3,300
March	25	2010	--	--	156,778	38,570	195,348	13	192,318	192,331	3,137
March	26	2010	--	--	156,665	38,822	195,486	11	189,041	189,052	3,172
March	27	2010	--	--	156,431	39,304	195,735	11	194,615	194,626	3,331
March	28	2010	--	--	156,938	38,729	195,668	17	190,740	190,757	6,267
March	29	2010	--	--	156,567	39,305	195,871	16	189,269	189,284	3,164
March	30	2010	--	--	82,414	21,373	103,787	13	101,394	101,408	3,099
March	31	2010	--	--	121,243	30,884	152,127	14	155,326	155,340	3,310
Total Monthly Volumes (gal)			**0**	**0**	**4,602,738**	**1,157,128**	**5,759,866**	**2,586,937**	**3,038,587**	**5,625,524**	**111,937**
Average Pump/Injection Rates (gpm)			**0.0**	**0.0**	**103.1**	**25.9**	**129.0**	**58.0**	**68.1**	**126.0**	**2.5**

NOTES: gal: gallons gpm: gallons per minute RO: Reverse Osmosis

a. Extraction wells TW 3D and PE 1 were operated during March 2010 at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW 2D and TW-2S were not operated during March 2010.

b. Effluent was discharged into injection wells IW-02 and IW-03. Flow from injection well IW-03 was not recorded by flow meter FIT-1203 on March 25, 2010 through March 31, 2010. The flow to the injection wells during this period was captured by the combined plant effluent flow meter, FIT-700.

c. The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during March 2010 is approximately 0.39 percent. This percentage difference includes instrument noise in the system, but is within the accuracy of the flow meters. A well is considered to be offline if the daily reported flow is 140 gallons per day or less.

April 2010 Operational Data

IM-3 Groundwater Extraction and Treatment System

PG&E Topock Compressor Station, Needles, California

			Extraction Well System					Injection Well System			RO Brine
Month	Day	Year	TW-2S (gallons)	TW-2D (gallons)	TW-3D (gallons)	PE-1 (gallons)	Total (gallons)	IW-02 (gallons)	IW-03 (gallons)	Total (gallons)	(gallons)
April	1	2010	--	--	148,300	39,181	187,481	16	178,975	178,991	3,175
April	2	2010	--	--	156,446	39,153	195,599	9	188,709	188,717	3,166
April	3	2010	--	--	146,148	38,898	185,045	9	184,030	184,038	3,176
April	4	2010	--	--	155,861	39,963	195,825	14	182,641	182,656	3,180
April	5	2010	--	--	142,800	35,899	178,699	12	182,534	182,546	3,044
April	6	2010	--	--	149,613	37,262	186,875	16	183,838	183,854	3,049
April	7	2010	--	--	129,246	33,285	162,531	15	159,537	159,552	4,506
April	8	2010	--	--	139,879	36,030	175,909	79,823	95,728	175,551	4,615
April	9	2010	--	--	154,354	40,157	194,511	190,685	4,179	194,864	6,406
April	10	2010	--	--	154,842	40,604	195,446	188,920	2,734	191,654	2,968
April	11	2010	--	--	155,448	40,540	195,987	185,662	3,059	188,721	5,959
April	12	2010	--	--	155,424	40,587	196,011	186,852	3,065	189,917	3,167
April	13	2010	--	--	155,545	40,424	195,969	187,354	4,331	191,685	3,309
April	14	2010	--	--	155,450	40,470	195,921	190,561	3,227	193,787	6,231
April	15	2010	--	--	152,848	38,980	191,828	192,102	3,088	195,189	3,151
April	16	2010	--	--	156,273	39,158	195,431	190,530	3,092	193,622	3,033
April	17	2010	--	--	155,251	40,603	195,854	188,082	3,142	191,224	3,037
April	18	2010	--	--	155,400	40,310	195,710	188,799	3,055	191,853	4,351
April	19	2010	--	--	85,723	22,255	107,978	112,406	2,283	114,689	3,587
April	20	2010	--	--	2	4	6	7	0	7	188
April	21	2010	--	--	8	4	12	9	10	18	0
April	22	2010	--	--	1,777	583	2,360	11	20	31	0
April	23	2010	--	--	50,334	13,392	63,726	14	46,166	46,180	3,713
April	24	2010	--	--	155,395	40,018	195,413	10	193,624	193,633	22,356
April	25	2010	--	--	155,020	40,360	195,380	22	190,575	190,597	9,148
April	26	2010	--	--	155,168	40,215	195,383	13	186,348	186,361	22,668
April	27	2010	--	--	155,281	40,015	195,296	10	186,388	186,398	10,592
April	28	2010	--	--	140,840	36,226	177,066	3,204	172,570	175,774	6,829
April	29	2010	--	--	155,069	39,696	194,766	1,354	191,684	193,038	4,446
April	30	2010	--	--	155,146	40,521	195,667	10	194,532	194,542	6,778
Total Monthly Volumes (gal)			**0**	**0**	**3,928,894**	**1,014,791**	**4,943,685**	**2,086,529**	**2,753,161**	**4,839,690**	**159,827**
Average Pump/Injection Rates (gpm)			**0.0**	**0.0**	**90.9**	**23.5**	**114.4**	**48.3**	**63.7**	**112.0**	**3.7**

NOTES: gal: gallons gpm: gallons per minute RO: Reverse Osmosis

a. Extraction wells TW 3D and PE 1 were operated during April 2010 at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW 2D and TW-2S were not operated during April 2010.

b. Effluent was discharged into injection wells IW-02 and IW-03. Flow from injection well IW-03 was not recorded by flow meter FIT-1203 on April 1, 2010 through April 23, 2010. The flow to the injection wells during this period was captured by the combined plant effluent flow meter, FIT-700.

c. The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during April 2010 is approximately 1.13 percent. This percentage difference includes instrument noise in the system, but is within the accuracy of the flow meters. A well is considered to be offline if the daily reported flow is 140 gallons per day or less.

May 2010 Operational Data

IM-3 Groundwater Extraction and Treatment System

PG&E Topock Compressor Station, Needles, California

			Extraction Well System					Injection Well System			RO Brine
Month	Day	Year	TW-2S (gallons)	TW-2D (gallons)	TW-3D (gallons)	PE-1 (gallons)	Total (gallons)	IW-02 (gallons)	IW-03 (gallons)	Total (gallons)	(gallons)
May	1	2010	--	--	155,472	40,091	195,563	20	191,796	191,815	6,089
May	2	2010	--	--	155,190	40,541	195,731	9	192,277	192,285	9,079
May	3	2010	--	--	155,243	40,134	195,377	25	189,514	189,539	6,890
May	4	2010	--	--	153,364	39,305	192,668	19	192,198	192,217	11
May	5	2010	--	--	156,515	38,817	195,332	10	189,399	189,409	4,144
May	6	2010	--	--	156,086	39,405	195,492	1,319	192,409	193,728	3,189
May	7	2010	--	--	156,518	38,875	195,393	82,984	108,489	191,472	3,321
May	8	2010	--	--	156,115	39,417	195,532	193,120	68	193,188	3,307
May	9	2010	--	--	156,141	39,416	195,557	190,755	72	190,827	3,473
May	10	2010	--	--	155,744	40,072	195,816	190,757	75	190,832	3,227
May	11	2010	--	--	155,618	40,262	195,880	189,899	88	189,987	3,062
May	12	2010	--	--	155,704	40,193	195,897	189,222	78	189,300	5
May	13	2010	--	--	155,847	39,929	195,776	186,744	75	186,819	3,204
May	14	2010	--	--	155,938	39,820	195,757	190,654	77	190,732	3,192
May	15	2010	--	--	155,915	39,843	195,759	197,568	66	197,634	3,041
May	16	2010	--	--	155,830	39,982	195,811	189,829	81	189,909	4
May	17	2010	--	--	155,522	39,209	194,732	191,718	67	191,785	3,325
May	18	2010	--	--	156,424	38,905	195,328	192,714	61	192,775	1,834
May	19	2010	--	--	105,978	26,522	132,500	117,839	49	117,888	799
May	20	2010	--	--	156,327	38,935	195,261	189,385	2,827	192,213	5,693
May	21	2010	--	--	156,451	38,628	195,079	116,266	80,539	196,804	3,172
May	22	2010	--	--	156,265	38,989	195,254	9	200,224	200,233	3,319
May	23	2010	--	--	155,965	39,467	195,433	18	185,856	185,874	3,184
May	24	2010	--	--	155,709	39,915	195,624	15	192,489	192,504	710
May	25	2010	--	--	155,549	40,046	195,596	10	195,248	195,258	3,171
May	26	2010	--	--	156,153	39,243	195,397	15	195,066	195,080	3,155
May	27	2010	--	--	156,186	39,332	195,518	19	194,176	194,195	3,290
May	28	2010	--	--	155,733	39,968	195,701	11	193,651	193,662	2,915
May	29	2010	--	--	156,159	39,377	195,536	12	190,028	190,041	135
May	30	2010	--	--	156,425	39,147	195,572	11	189,358	189,369	2,519
May	31	2010	--	--	155,998	39,626	195,624	16	194,900	194,916	3,039
Total Monthly Volumes (gal)			**0**	**0**	**4,782,085**	**1,213,411**	**5,995,496**	**2,610,990**	**3,271,300**	**5,882,290**	**95,501**
Average Pump/Injection Rates (gpm)			**0.0**	**0.0**	**107.1**	**27.2**	**134.3**	**58.5**	**73.3**	**131.8**	**2.1**

NOTES: gal: gallons gpm: gallons per minute RO: Reverse Osmosis

a. Extraction wells TW 3D and PE 1 were operated during May 2010 at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW 2D and TW-2S were not operated during May 2010.

b. Effluent was discharged into injection wells IW-02 and IW-03.

c. The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during May 2010 is approximately 0.30 percent. This percentage difference includes instrument noise in the system, but is within the accuracy of the flow meters. A well is considered to be offline if the daily reported flow is 140 gallons per day or less.

June 2010 Operational Data

IM-3 Groundwater Extraction and Treatment System

PG&E Topock Compressor Station, Needles, California

			Extraction Well System					Injection Well System			RO Brine
Month	Day	Year	TW-2S (gallons)	TW-2D (gallons)	TW-3D (gallons)	PE-1 (gallons)	Total (gallons)	IW-02 (gallons)	IW-03 (gallons)	Total (gallons)	(gallons)
June	1	2010	--	--	155,701	40,121	195,822	10	192,593	192,603	3,032
June	2	2010	--	--	156,095	39,651	195,746	1,450	190,651	192,100	3,162
June	3	2010	--	--	156,180	39,467	195,647	12	195,038	195,050	3,033
June	4	2010	--	--	156,199	39,325	195,524	7	190,414	190,421	3,161
June	5	2010	--	--	156,511	38,968	195,479	10	194,027	194,037	5
June	6	2010	--	--	156,493	38,891	195,384	10	188,212	188,222	3,027
June	7	2010	--	--	128,403	32,436	160,839	13	157,294	157,308	3
June	8	2010	--	--	150,956	38,176	189,132	9	188,038	188,048	3,177
June	9	2010	--	--	156,196	39,454	195,650	11	190,156	190,167	2,111
June	10	2010	--	--	155,985	39,834	195,819	11	195,441	195,452	3,626
June	11	2010	--	--	156,021	40,060	196,082	11	190,491	190,503	3,197
June	12	2010	--	--	156,114	40,093	196,208	17	186,311	186,328	3,055
June	13	2010	--	--	156,451	39,571	196,023	14	192,852	192,866	3,186
June	14	2010	--	--	146,828	36,876	183,705	13	180,766	180,779	3,333
June	15	2010	--	--	146,434	36,279	182,713	12	177,863	177,875	653
June	16	2010	--	--	143,067	34,432	177,499	3,376	173,583	176,958	2,234
June	17	2010	--	--	113,746	28,286	142,032	79,365	67,269	146,634	3,215
June	18	2010	--	--	133,388	32,518	165,906	154,719	75	154,794	3,320
June	19	2010	--	--	157,044	38,707	195,751	191,281	51	191,332	3,039
June	20	2010	--	--	157,140	38,648	195,789	189,747	51	189,798	6,377
June	21	2010	--	--	117,344	29,862	147,207	139,423	53	139,475	3,313
June	22	2010	--	--	156,180	39,870	196,051	191,217	55	191,271	3,014
June	23	2010	--	--	87,844	23,020	110,864	112,614	100	112,714	3
June	24	2010	--	--	156,395	39,548	195,943	189,821	49	189,871	2,920
June	25	2010	--	--	156,663	39,235	195,898	185,685	54	185,739	3,060
June	26	2010	--	--	156,461	39,477	195,938	187,468	56	187,524	5,936
June	27	2010	--	--	152,260	38,512	190,771	190,048	43	190,091	2,896
June	28	2010	--	--	133,906	33,051	166,956	163,763	87	163,849	3,180
June	29	2010	--	--	137,664	33,906	171,570	164,170	87	164,257	4
June	30	2010	--	--	122,736	31,425	154,161	157,937	113	158,050	3,061
Total Monthly Volumes (gal)			**0**	**0**	**4,372,406**	**1,099,702**	**5,472,108**	**2,302,243**	**3,051,872**	**5,354,115**	**83,334**
Average Pump/Injection Rates (gpm)			**0.0**	**0.0**	**101.2**	**25.5**	**126.7**	**53.3**	**70.6**	**123.9**	**1.9**

NOTES: gal: gallons gpm: gallons per minute RO: Reverse Osmosis

a. Extraction wells TW 3D and PE 1 were operated during June 2010 at a target pump rate of 135 gpm excluding periods of planned and unplanned downtime. Extraction wells TW 2D and TW-2S were not operated during June 2010.

b. Effluent was discharged into injection wells IW-02 and IW-03.

c. The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during June 2010 is approximately 0.63 percent. This percentage difference includes instrument noise in the system, but is within the accuracy of the flow meters. A well is considered to be offline if the daily reported flow is 140 gallons per day or less.

Appendix C
Flowmeter Calibration Records

Endress+Hauser
People for Process Automation

Flow Calibration with Adjustment

30092171-1385272

WWRA-000923-F
Purchase order number

US-19050353-20 / Endress+Hauser Flowtec
Order N°/Manufacturer

23P50-AL1A1AA022AW
Order code

PROMAG 23 P 2"
Transmitter/Sensor

7700F216000
Serial N°

- FIT-103 PE-1
Tag N°

FCP-6.F
Calibration rig

155.6102 GPM (≙ 100%)
Calibrated full scale

Current 4 - 20 mA
Calibrated output

0.9289
Calibration factor

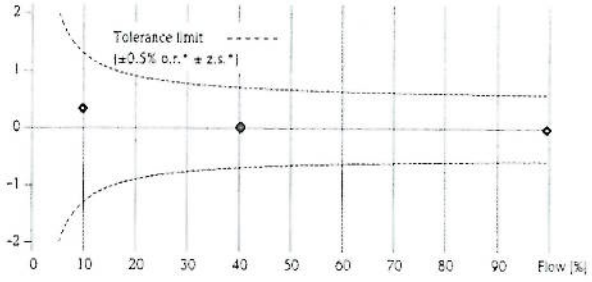
0
Zero point

74.9 °F
Water temperature

Flow [%]	Flow [GPM]	Duration [sec]	V target [US GAL]	V meas. [US GAL]	Δ o.r.* [%]	Outp.** [mA]
10.0	15.5	30.1	7.7642	7.7895	0.33	5.60
40.5	62.9	30.1	31.549	31.556	0.02	10.47
40.5	62.9	30.1	31.546	31.541	-0.02	10.47
99.7	155.1	30.1	77.735	77.718	-0.02	19.95
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

*o.r.: of rate
**Calculated value (4 - 20 mA)

Measured error % o.r.



*z.s.: Zero stability

For detailed data concerning output specifications of the unit under test, see technical informations (TI), chapter Performance characteristics.
The calibration is traceable to the N.I.S.T. through standards certified at preset intervals.

11-30-2006
Date of calibration

Endress+Hauser Flowtec, Division USA
2330 Endress Place
Greenwood, IN 46143

Morris E. Trueblood Jr.
Operator

Certified acc. to
MIL-STD-45662A
ISO 9001, Reg.-N° 030502.2

Endress+Hauser

People for Process Automation

Flow Calibration with Adjustment

30107893-1304706

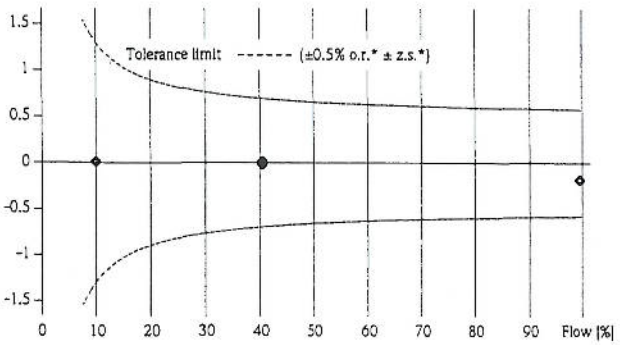
WWRA-002048-F Purchase order number	FCP-6.F Calibration rig
US-19054161-10 / Endress+Hauser Flowtec Order N°/Manufacturer	155.6102 GPM (100%) Calibrated full scale
23P50-AL1A1AA022AW Order code	Current 4 - 20 mA Calibrated output
PROMAG 23 P 2" Transmitter/Sensor	0.9154 Calibration factor
6C037016000 Serial N°	0 Zero point
~~FIT-1202~~ FIT-102 TW-3D Tag N°	76.2 °F Water temperature

Flow [%]	Flow [GPM]	Duration [sec]	V target [US GAL]	V meas. [US GAL]	Δ o.r.* [%]	Outp.** [mA]
9.9	15.5	30.1	7.7531	7.7537	0.01	5.59
40.5	63.0	30.1	31.560	31.554	-0.02	10.47
40.5	63.0	30.1	31.569	31.574	0.01	10.48
99.5	154.8	30.1	77.589	77.448	-0.18	19.89
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

*o.r.: of rate

**Calculated value (4 - 20 mA)

Measured error % o.r.



*z.s.: Zero stability

For detailed data concerning output specifications of the unit under test, see technical informations (TI), chapter Performance characteristics.
The calibration is traceable to the N.I.S.T. through standards certified at preset intervals.

Endress+Hauser Flowtec operates ISO/IEC 17025 accredited calibration facilities in Reinach (CH), Cernay (FR), Greenwood (USA) and Aurangabad (IN).

Tim Swick

09-12-2007
Date of calibration

Tim Swick
Operator

Endress+Hauser Flowtec, Division USA
2330 Endress Place
Greenwood, IN 46143

Certified acc. to
MIL-STD-45662A
ISO 9001, Reg.-N° 030502.2

Flow Calibration with Adjustment

Endress+Hauser
People for Process Automation

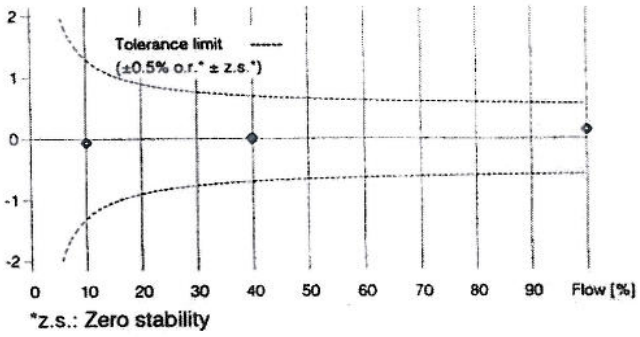
30057866-1275190

41724888 Purchase Order Number	FCP-6.C Calibration rig
USA-49310090-40 / Endress+Hauser Flowtec Order Nº/Manufacturer	155.6102 GPM (≙ 100%) Calibrated full scale
23P50-AL1A1RA022AW Order Code	Current 4 - 20 mA Calibrated output
PROMAG 23 P 2" Transmitter/Sensor	0.9178 Calibration factor
6A021F16000 Serial Nº	0 Zero point
FIT ~~100~~ 101 / TW-20 / installed 7/28/05 Tag Nº	72.9 °F Water temperature

Flow [%]	Flow [GPM]	Duration [sec]	V target [US GAL]	V meas. [US GAL]	Δ o.r.* [%]	Outp.** [mA]
10.0	15.5	30.0	7.7502	7.7457	-0.06	5.59
39.9	62.1	30.0	31.071	31.070	0.00	10.38
39.9	62.1	30.0	31.073	31.078	0.02	10.38
100.2	156.0	30.0	78.041	78.156	0.15	20.06
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

*o.r.: of rate
**Calculated value (4 - 20 mA)

Measured error % o.r.



*z.s.: Zero stability

For detailed data concerning output specifications of the unit under test, see technical informations (TI)

The calibration is traceable to the N.I.S.T. through standards certified at preset intervals.

11-29-2004
Date of calibration

Endress+Hauser
2350 Endress Place
Greenwood, IN 46143

Tim Swick
Operator

Certified acc. to
MIL-STD-45662A
ISO 9001, Reg.-Nº 030502.2

Flow Calibration with Adjustment

Endress+Hauser
People for Process Automation

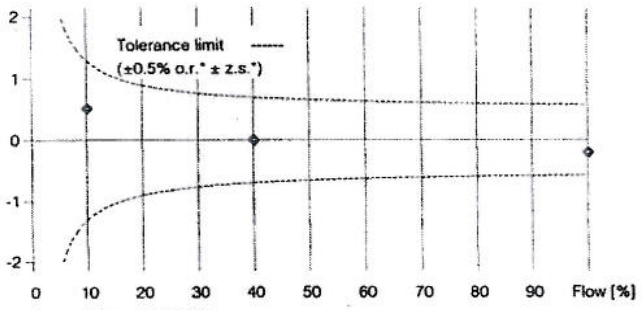
30057870-1275191

41724888 Purchase Order Number	FCP-6.C Calibration rig
USA-49310090-40 / Endress+Hauser Flowtec Order Nº/Manufacturer	155.6102 GPM (≙ 100%) Calibrated full scale
23P50-AL1A1RA022AW Order Code	Current 4 - 20 mA Calibrated output
PROMAG 23 P 2" Transmitter/Sensor	0.9207 Calibration factor
6A022016000 Serial Nº	0 Zero point
FIT~~101~~ 100 / TW-25 / installed 7/28/05 Tag Nº	74.1 °F Water temperature

Flow [%]	Flow [GPM]	Duration [sec]	V target [US GAL]	V meas. [US GAL]	Δ o.r.* [%]	Outp.** [mA]
10.0	15.6	30.0	7.7910	7.8318	0.52	5.61
40.0	62.3	30.0	31.157	31.160	0.01	10.40
40.1	62.4	30.0	31.229	31.229	0.00	10.42
100.2	155.9	30.0	78.017	77.856	-0.21	20.00
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

*o.r.: of rate
**Calculated value (4 - 20 mA)

Measured error % o.r.



*z.s.: Zero stability

For detailed data concerning output specifications of the unit under test, see technical informations (TI)

The calibration is traceable to the N.I.S.T. through standards certified at preset intervals.

Tim Swick

11-29-2004
Date of calibration

Tim Swick
Operator

Endress+Hauser
2350 Endress Place
Greenwood, IN 46143

Certified acc. to
MIL-STD-45662A
ISO 9001, Reg.-Nº 030502.2

Endress+Hauser
People for Process Automation

Flow Calibration with Adjustment

20138407-1304709

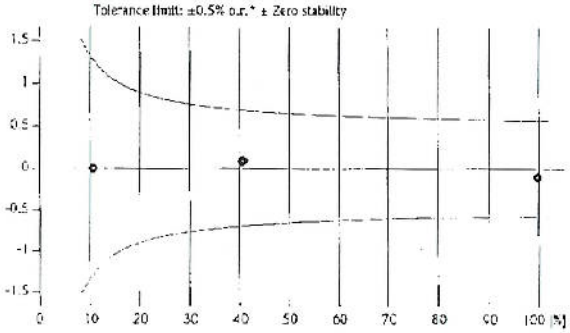
WWRA-004329-F Purchase order number	FCP-6.C Calibration rig
US-19061458-10 / Endress+Hauser Flowtec Order N°/Manufacturer	155.6102 GPM (≙ 100%) Calibrated full scale
23P50-AL1A1AA022AW Order code	Current 4 - 20 mA Calibrated output
PROMAG 23 P 2" Transmitter/Sensor	0.9146 Calibration factor
6C037316000 Serial N°	0 Zero point
~~FIT-1205~~ FIT-1202 IW-02 Tag N°	76.2 °F Water temperature

Flow [%]	Flow [GPM]	Duration [s]	V target [US GAL]	V meas [US GAL]	Δ o.r.* [%]	Outp.** [mA]
10.0	15.5	30.1	7.7933	7.7939	0.01	5.60
40.2	62.5	30.1	31.394	31.422	0.09	10.43
40.2	62.5	30.1	31.416	31.448	0.10	10.44
99.8	155.3	30.1	78.006	77.928	-0.10	19.95
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

*o.r. = of rate

**Calculated value (4 - 20 mA)

Measured error % o.r.



For detailed data concerning output specifications of the unit under test, see technical informations (TI), chapter Performance characteristics.

The calibration is traceable to the N.I.S.T. through standards certified at preset intervals.

Endress+Hauser Flowtec operates ISO/IEC 17025 accredited calibration facilities in Reinach (CH), Cernay (FR), Greenwood (USA), Aurangabad (IN) and Suzhou (CN).

02-26-2009
Date of calibration

Endress+Hauser Flowtec, Division USA
2330 Endress Place
Greenwood, IN 46143

William Darnell
Operator

Certified acc. to
MIL-STD-45662A
ISO 9001, Reg.-N° 030502.2

4

Endress+Hauser

People for Process Automation

Flow Calibration with Adjustment

30145126-1304708

WWRA-004952-F Purchase order number	FCP-6.F Calibration rig
US-19063158-10 / Endress+Hauser Flowtec Order N°/Manufacturer	155.6102 us.gal/min (≙ 100%) Calibrated full scale
23P50-AL1A1AA022AW Order code	Current 4 - 20 mA Calibrated output
PROMAG 23 P 2" Transmitter/Sensor	0.9258 Calibration factor
6C037216000 Serial N°	20 Zero point
FIT-1204 (AR) 1203 Tag N°	79.1 °F Water temperature

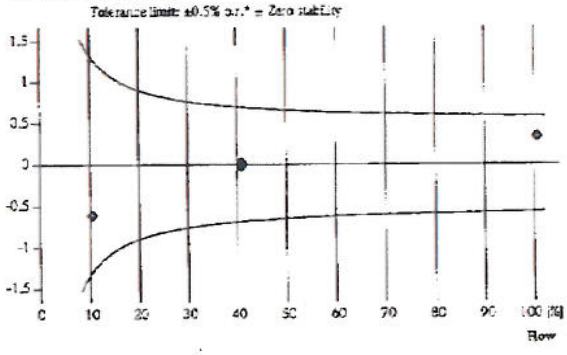
Flow [%]	Flow [us.gal/min]	Duration [s]	V target [us.gal.]	V meas. [us.gal.]	Δ o.r.* [%]	Outp.** [mA]
9.9	15.4	30.2	7.7605	7.7127	-0.62	5.58
40.5	63.0	30.2	31.702	31.696	-0.02	10.48
40.5	63.0	30.2	31.687	31.694	0.02	10.48
100.6	156.5	30.2	78.761	79.022	0.33	20.14
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

*o.r. = of rate

**Calculated value (4 - 20 mA)

Measured error % o.r.

Tolerance limit: ±0.5% o.r.* = Zero stability



For detailed data concerning output specifications of the unit under test, see technical informations (TI), chapter Performance characteristics.

The calibration is traceable to the N.I.S.T. through standards certified at preset intervals.

Endress+Hauser Flowtec operates ISO/IEC 17025 accredited calibration facilities in Reinach (CH), Cernay (FR), Greenwood (USA), Aurangabad (IN) and Suzhou (CN).

07-06-2009
Date of calibration

Endress+Hauser Flowtec, Division USA
2330 Endress Place
Greenwood, IN 46143

Taylor Shepard
Operator

Certified acc. to
MIL-STD-45662A
ISO 9001, Reg.-N° 030502.2

Endress+Hauser
People for Process Automation

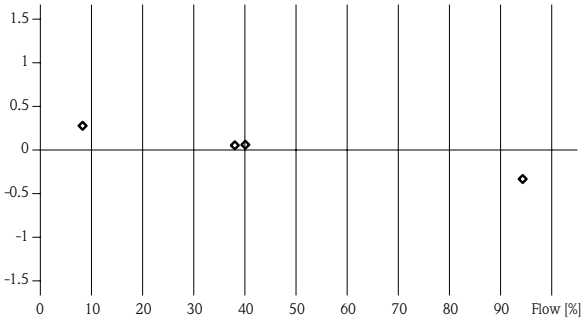
Flow Calibration with Adjustment

30057895-1275195

41724888	FCP-20 MEDIUM
Purchase order number	Calibration rig
US-49310090-60 / Endress+Hauser Flowtec	398.3621 GPM (≙ 100%)
Order N°/Manufacturer	Calibrated full scale
23P80-AL1A1RA022AW	Current 4 - 20 mA
Order code	Calibrated output
PROMAG 23 P 3"	1.1430
Transmitter/Sensor	Calibration factor
6A022416000	0
Serial N°	Zero point
FIT-700	73.1 °F
Tag N°	Water temperature

Flow [%]	Flow [GPM]	Duration [sec]	V target [US GAL]	V meas. [US GAL]	Δ o.r.* [%]
8.2	32.7	118.7	64.737	64.920	0.28
38.0	151.4	61.1	154.130	154.217	0.06
40.1	159.6	61.2	162.718	162.822	0.06
94.3	375.8	62.5	391.212	389.911	-0.33
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-
-	-	-	-	-	-

*o.r.: of rate



Please note: This replacement document was established electronically, the most important data are extracted from the original document.

11-29-2004	Tim Swick
Date of calibration	Operator
Endress+Hauser Flowtec, Division USA 2330 Endress Place Greenwood, IN 46143	Certified acc. to MIL-STD-45662A ISO 9001, Reg.-N° 030502.2

Endress+Hauser

People for Process Automation

Flow Calibration with Adjustment

3006031-1304707

41729921
Purchase order number

US-49311914-10 / Endress+Hauser Flowtec
Order N°/Manufacturer

23P50-AL1A1AA022AW
Order code

PROMAG 23 P 2"
Transmitter/Sensor

6C037116000
Serial N°

~~FIT-1203~~ FIT-701 RO Concentrate
Tag N°

FCP-20 SMALL
Calibration rig

155.6102 GPM (≙ 100%)
Calibrated full scale

Current 4 - 20 mA
Calibrated output

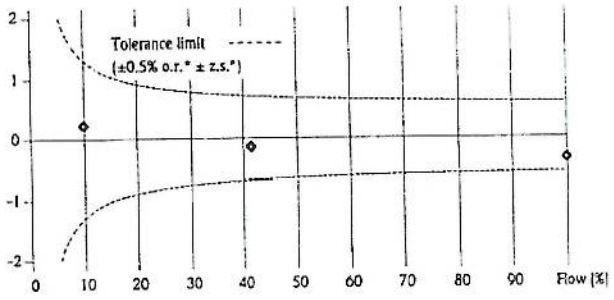
0.9152
Calibration factor

0
Zero point

72.2 °F
Water temperature

Flow [%]	Flow [GPM]	Duration [sec]	V target [US GAL]	V meas. [US GAL]	Δ o.r.* [%]	Outp.** [mA]
10.0	15.5	61.2	15.818	15.853	0.22	5.60
41.6	64.7	61.2	66.050	65.948	-0.15	10.64
41.6	64.8	61.3	66.120	66.024	-0.14	10.65
100.1	155.8	61.2	158.973	158.403	-0.36	19.96
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

Measured error % o.r.



*o.r.: of rate
**Calculated value (4 - 20 mA)

*z.s.: Zero stability

For detailed data concerning output specifications of the unit under test, see technical informations (TI), chapter Performance characteristics.
The calibration is traceable to the N.I.S.T. through standards certified at preset intervals.

Jim Baase

01-31-2005
Date of calibration

Jim Baase
Operator

Endress+Hauser Flowtec, Division USA
2330 Endress Place
Greenwood, IN 46143

Certified acc. to
MIL-STD-45662A
ISO 9001, Reg.-N° 030502.2

Appendix D
Second Quarter 2010
Laboratory Analytical Reports

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

April 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 1M3PLANT-WDR-251 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 988683

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-251 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 April 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-251 and the associated matrix spike for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

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. Iyer
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

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14201 FRANKLIN AVENUE
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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.: 988683
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010

ANALYST LIST

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

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

Laboratory No.: 988683
Date Received: April 7, 2010

Attention: Shawn Duffy

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

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 120.1 EC	SM 2540C TDS	SM 2130B Turbidity	EPA 218.6 Hexavalent Chromium	SM 4500-NH3 D Ammonia
			µmhos/cm	mg/L	NTU	µg/L	mg/L
988683-1	SC-700B-WDR-251	08:00	7260	4270	ND	0.29	ND
988683-2	SC-100B-WDR-251	08:00	8010	4600	ND	928	ND

Lab I.D.	Sample I.D.	Sample Time	EPA 300.0 Fluoride	EPA 300.0 Sulfate	EPA 300.0 Nitrate as N	SM 4500-NO2 B Nitrite as N
			mg/L	mg/L	mg/L	mg/L
988683-1	SC-700B-WDR-251	08:00	1.82	512	2.87	ND
988683-2	SC-100B-WDR-251	08:00	2.54	569	3.16	ND

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.

005

TRUESDAIL LABORATORIES, INC.

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

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

Laboratory No.: 988683
Date Received: April 7, 2010

Analytical Results Summary

METALS ANALYSIS: **Total Metal Analyses as Requested**

Lab I.D.	Sample ID	Time Coll.	Aluminum EPA 200.8 04/12/10 µg/L	Antimony EPA 200.8 04/12/10 µg/L	Arsenic EPA 200.8 04/12/10 µg/L	Barium EPA 200.8 04/12/10 µg/L	Chromium EPA 200.8 12/19/08 µg/L	Copper EPA 200.8 04/12/10 µg/L	Lead EPA 200.8 04/12/10 µg/L
		Date of Analysis:							
988683-1	SC-700B-WDR-251	08:00	ND	ND	ND	11.3	ND	ND	ND
988683-2	SC-100B-WDR-251	08:00	ND	ND	3.82	26.7	1040	ND	ND

Lab I.D.	Sample ID	Time Coll.	Manganese EPA 200.8 04/12/10 µg/L	Molybdenum EPA 200.8 04/12/10 µg/L	Nickel EPA 200.8 04/12/10 µg/L	Zinc EPA 200.8 04/12/10 µg/L
		Date of Analysis:				
988683-1	SC-700B-WDR-251	08:00	ND	18.6	ND	ND
988683-2	SC-100B-WDR-251	08:00	ND	24.7	ND	ND

Lab I.D.	Sample ID	Time Coll.	Boron EPA 200.7 04/15/10 µg/L	Iron EPA 200.7 04/15/10 µg/L
		Date of Analysis:		
988683-1	SC-700B-WDR-251	08:00	982	ND
988683-2	SC-100B-WDR-251	08:00	1010	ND

NOTES:

ND: Not detected, or below limit of detection

006

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REPORT

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

Laboratory No.: 988683

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

Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 8, 2010
Analytical Batch: 04EC10C

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
988683-1	SC-700B-WDR-251	µmhos/cm	EPA 120.1	1.00	2.00	7260
988683-2	SC-100B-WDR-251	µmhos/cm	EPA 120.1	1.00	2.00	8010

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988683-2	8010	8030	0.25%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	705	706	99.9%	90% - 110%	Yes
CVS#1	992	1000	99.2%	90% - 110%	Yes
CVS#2	993	1000	99.3%	90% - 110%	Yes
LCS	706	706	100%	90% - 110%	Yes
LCSD	706	706	100%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

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TUSTIN, CALIFORNIA 92780-7008
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www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988683
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 8, 2010
Analytical Batch: 04TDS10D

Investigation: Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
988683-1	SC-700B-WDR-251	mg/L	SM 2540C	250	4270
988683-2	SC-100B-WDR-251	mg/L	SM 2540C	250	4600

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988682-2	5110	5010	0.99%	≤ 5%	Yes

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

ND: Below the reporting limit (Not Detected).
RL: Reporting Limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

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

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

Laboratory No.: 988683
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 8, 2010
Analytical Batch: 04TUC10E

Investigation: **Turbidity by Method SM 2130B**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
988683-1	SC-700B-WDR-251	08:00	NTU	1.00	0.100	ND
988683-2	SC-100B-WDR-251	08:00	NTU	1.00	0.100	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988679-12	0.810	0.812	0.25%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	---	<0.100	Yes
LCS	7.81	8.00	97.6%	90% - 110%	Yes
LCS	7.75	8.00	96.9%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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www.truesdail.com

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 04CrH10B

Laboratory No.: 988683
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 8, 2010
Analytical Batch: 04CrH10B

Investigation: **Hexavalent Chromium by IC Using Method EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988683-1	SC-700B-WDR-251	08:00	10:28	µg/L	1.05	0.20	0.29
988683-2	SC-100B-WDR-251	08:00	10:38	µg/L	105	21.0	928

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988682-1	13.7	13.6	0.73%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988683-1	0.29	1.06	1.00	1.06	1.26	1.35	91.5%	90-110%	Yes
MS	988683-2	928	105	10.0	1050	1960	1978	98.3%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	—	<0.200	Yes
MRCCS	5.38	5.00	108%	90% - 110%	Yes
MRCVS#1	9.64	10.0	96.4%	95% - 105%	Yes
MRCVS#2	10.0	10.0	100%	95% - 105%	Yes
LCS	5.05	5.00	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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TUSTIN, CALIFORNIA 92780-7008
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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988663
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 9, 2010
Analytical Batch: 04NH3-E10A

Investigation: Ammonia as N by Method SM 4500-NH3 D

Analytical Results Ammonia as N

TLI I.D.	Field I.D.	Sample Time	Method	Units	DF	RL	Results
988683-1	SC-700B-WDR-251	08:00	SM 4500-NH3 D	mg/L	1.00	0.500	ND
988683-2	SC-100B-WDR-251	08:00	SM 4500-NH3 D	mg/L	1.00	0.500	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988683-2	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988683-2	0.00	1.00	6.00	6.00	5.73	6.00	95.5%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.500	---	<0.500	Yes
MRCCS	5.85	6.00	97.5%	90% - 110%	Yes
MRCVS#1	5.67	6.00	94.5%	90% - 110%	Yes
LCS	10.1	10.0	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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REPORT

Client: E2 Consulting Engineers, Inc.
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Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988683
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 8, 2010
Analytical Batch: 04AN10F

Investigation: **Fluoride by Ion Chromatography using EPA 300.0**

Analytical Results Fluoride

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988683-1	SC-700B-WDR-251	08:00	15:07	mg/L	5.00	0.500	1.82
988683-2	SC-100B-WDR-251	08:00	15:18	mg/L	5.00	0.500	2.54

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988676	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988676	0.00	1.00	2.00	2.00	2.00	2.00	100%	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	4.16	4.00	104%	90% - 110%	Yes
MRCVS#1	3.12	3.00	104%	90% - 110%	Yes
LCS	4.14	4.00	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988683
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 8, 2010
Analytical Batch: 04AN10F

Investigation: **Sulfate by Method EPA 300.0**

Analytical Results Sulfate

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988683-1	SC-700B-WDR-251	08:00	15:30	mg/L	25.0	12.5	512
988683-2	SC-100B-WDR-251	08:00	15:41	mg/L	25.0	12.5	569

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988676	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988676	0.00	1.00	2.00	2.00	2.02	2.00	101%	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	20.2	20.0	101%	90% - 110%	Yes
MRCVS#1	15.2	15.0	101%	90% - 110%	Yes
MRCVS#2	15.1	15.0	101%	90% - 110%	Yes
LCS	20.2	20.0	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor

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REPORT

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155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988683
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 8, 2010
Analytical Batch: 04AN10F

Inveetigation: **Nitrate as N by Ion Chromatography using EPA 300.0**

Analytical Results Nitrate as N

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988683-1	SC-700B-WDR-251	08:00	15:07	mg/L	5.00	1.00	2.87
988683-2	SC-100B-WDR-251	08:00	15:18	mg/L	5.00	1.00	3.16

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988676	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988676	0.00	1.00	2.00	2.00	2.12	2.00	106%	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	3.99	4.00	99.8%	90% - 110%	Yes
MRCVS#1	2.98	3.00	99.3%	90% - 110%	Yes
LCS	3.99	4.00	99.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988683
Date: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Prep/ Analyzed: April 8, 2010
Analytical Batch: 04NO210C

Investigation: **Nitrite as N by Method SM 4500-NO2-B**

Analytical Results for Nitrite as N

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988683-1	SC-700B-WDR-251	08:00	13:52	mg/L	1.00	0.0050	ND
988683-2	SC-100B-WDR-251	08:00	13:53	mg/L	1.00	0.0050	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988683-2	ND	ND	0.00%	< 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988683-2	0.00	1.00	0.0200	0.0200	0.0199	0.0200	99.5%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.0050	---	<0.0050	Yes
MRCCS	0.0287	0.0270	106%	90% - 110%	Yes
MRCVS#1	0.0202	0.0200	101%	90% - 110%	Yes
LCS	0.0462	0.0450	103%	90% - 110%	Yes

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REPORT

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

Attention: Shawn Duffy

Samples: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Investigation: Total Metal Analyses as Requested

Laboratory No.: 988663
Reported: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010
Analyzed: See Below

Analytical Results

SAMPLE ID: SC-700B-WDR-251 **Time Collected:** 08:00 **LAB ID:** 988663-1

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	µg/L	50.0	041210A	04/12/10	11:21
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	041210A	04/12/10	11:21
Arsenic	EPA 200.8	ND	5.00	µg/L	1.00	041210A	04/12/10	11:21
Barium	EPA 200.8	11.3	5.00	µg/L	10.0	041210A	04/12/10	11:21
Chromium	EPA 200.8	ND	5.00	µg/L	1.00	041210A	04/12/10	11:21
Copper	EPA 200.8	ND	5.00	µg/L	5.00	041210A	04/12/10	11:21
Lead	EPA 200.8	ND	5.00	µg/L	10.0	041210A	04/12/10	11:21
Manganese	EPA 200.8	ND	5.00	µg/L	10.0	041210A	04/12/10	11:21
Molybdenum	EPA 200.8	18.6	5.00	µg/L	10.0	041210A	04/12/10	11:21
Nickel	EPA 200.8	ND	5.00	µg/L	10.0	041210A	04/12/10	11:21
Zinc	EPA 200.8	ND	1.00	µg/L	10.0	041210A	04/12/10	11:21
Boron	EPA 200.7	982	1.00	µg/L	200	041510A-Th	04/15/10	12:51
Iron	EPA 200.7	ND	1.00	µg/L	20.0	041510A-Th	04/15/10	12:51

SAMPLE ID: SC-100B-WDR-251 **Time Collected:** 08:00 **LAB ID:** 988683-2

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	µg/L	50.0	041210A	04/12/10	11:48
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	041210A	04/12/10	11:48
Arsenic	EPA 200.8	3.82	5.00	µg/L	1.00	041210A	04/12/10	11:48
Barium	EPA 200.8	26.7	5.00	µg/L	10.0	041210A	04/12/10	11:48
Chromium	EPA 200.8	1040	5.00	µg/L	1.00	041210A	04/12/10	11:48
Copper	EPA 200.8	ND	5.00	µg/L	5.00	041210A	04/12/10	11:48
Lead	EPA 200.8	ND	5.00	µg/L	10.0	041210A	04/12/10	11:48
Manganese	EPA 200.8	ND	5.00	µg/L	10.0	041210A	04/12/10	11:48
Molybdenum	EPA 200.8	24.7	5.00	µg/L	10.0	041210A	04/12/10	11:48
Nickel	EPA 200.8	ND	5.00	µg/L	10.0	041210A	04/12/10	11:48
Zinc	EPA 200.8	ND	1.00	µg/L	10.0	041210A	04/12/10	11:48
Boron	EPA 200.7	1010	1.00	µg/L	200	041510A-Th	04/15/10	13:17
Iron	EPA 200.7	ND	1.00	µg/L	20.0	041510A-Th	04/15/10	13:17

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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155 Grand Ave. Suite 1000
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Attention: Shawn Duffy
Samples: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988683
Reported: April 20, 2010
Collected: April 7, 2010
Received: April 7, 2010

Quality Control/Quality Assurance Report

				BLANK		MRCCS				MRCVS			
Parameter	Method	Batch	Units	Blank	RL	Observed Value	TRUE Value	% Rec	Control Limits	Observed Value	TRUE Value	% Rec	Control Limits %
Aluminum	EPA 200.8	041210A	µg/L	ND	50.0	52.2	50.0	104%	90-110%	52.8	50.0	106%	90-110%
Antimony	EPA 200.8	041210A	µg/L	ND	10.0	53.1	50.0	106%	90-110%	51.1	50.0	102%	90-110%
Arsenic	EPA 200.8	041210A	µg/L	ND	0.200	52.2	50.0	104%	90-110%	50.6	50.0	101%	90-110%
Barium	EPA 200.8	041210A	µg/L	ND	10.0	52.4	50.0	105%	90-110%	52.2	50.0	104%	90-110%
Chromium	EPA 200.8	041210A	µg/L	ND	1.00	52.0	50.0	104%	90-110%	51.8	50.0	104%	90-110%
Copper	EPA 200.8	041210A	µg/L	ND	5.00	51.6	50.0	103%	90-110%	52.2	50.0	104%	90-110%
Lead	EPA 200.8	041210A	µg/L	ND	10.0	52.2	50.0	104%	90-110%	51.2	50.0	102%	90-110%
Manganese	EPA 200.8	041210A	µg/L	ND	10.0	52.4	50.0	105%	90-110%	52.1	50.0	104%	90-110%
Molybdenum	EPA 200.8	041210A	µg/L	ND	10.0	54.4	50.0	109%	90-110%	52.7	50.0	105%	90-110%
Nickel	EPA 200.8	041210A	µg/L	ND	10.0	51.8	50.0	104%	90-110%	51.9	50.0	104%	90-110%
Zinc	EPA 200.8	041210A	µg/L	ND	10.0	47.3	50.0	94.6%	90-110%	53.4	50.0	107%	90-110%
Boron	EPA 200.7	041510A-Th	µg/L	ND	200	4810	5000	96.2%	95-105%	4790	5000	95.8%	90-110%
Iron	EPA 200.7	041510A-Th	µg/L	ND	20.0	4890	5000	97.8%	95-105%	4840	5000	96.8%	90-110%

INTERFERENCE CHECK STANDARD

Parameter	Method	Units	ICS Obs.	ICS Theo.	% Rec.	Control Limits
Aluminum	EPA 200.8	µg/L	53.2	50.0	106%	80-120%
Arsenic	EPA 200.8	µg/L	51.6	50.0	103%	80-120%
Chromium	EPA 200.8	µg/L	52.2	50.0	104%	80-120%
Copper	EPA 200.8	µg/L	52.5	50.0	105%	80-120%
Manganese	EPA 200.8	µg/L	52.1	50.0	104%	80-120%
Nickel	EPA 200.8	µg/L	51.5	50.0	103%	80-120%
Zinc	EPA 200.8	µg/L	52.8	50.0	106%	80-120%
Iron	EPA 200.7	µg/L	1880	2000	94.0%	80-120%

LABORATORY CONTROL SAMPLES / **SAMPLE DUPLICATES**

Parameter	Method	Units	LCS Obs.	LCS Theo.	% Rec.	Control Limits	SAMPLE ID	SAMPLE RESULT	DUP RESULT	% RPD	Precision Control Limits %
Aluminum	EPA 200.8	µg/L	52.2	50.0	104%	90-110%	988683-1	ND	ND	0.00%	≤20
Antimony	EPA 200.8	µg/L	52.9	50.0	106%	90-110%	988683-1	ND	ND	0.00%	≤20
Arsenic	EPA 200.8	µg/L	51.9	50.0	104%	90-110%	988683-1	ND	ND	0.00%	≤20
Barium	EPA 200.8	µg/L	52.5	50.0	105%	90-110%	988683-1	11.3	10.8	4.52%	≤20
Chromium	EPA 200.8	µg/L	52.3	50.0	105%	90-110%	988683-1	ND	ND	0.00%	≤20
Copper	EPA 200.8	µg/L	52.0	50.0	104%	90-110%	988683-1	ND	ND	0.00%	≤20
Lead	EPA 200.8	µg/L	52.2	50.0	104%	90-110%	988683-1	ND	ND	0.00%	≤20
Manganese	EPA 200.8	µg/L	52.0	50.0	104%	90-110%	988683-1	ND	ND	0.00%	≤20
Molybdenum	EPA 200.8	µg/L	53.1	50.0	106%	90-110%	988683-1	18.6	18.8	1.07%	≤20
Nickel	EPA 200.8	µg/L	52.4	50.0	105%	90-110%	988683-1	ND	ND	0.00%	≤20
Zinc	EPA 200.8	µg/L	47.9	50.0	95.8%	90-110%	988683-1	ND	ND	0.00%	≤20
Boron	EPA 200.7	µg/L	4860	5000	97.2%	90-110%	988683-1	982	950	3.31%	≤20
Iron	EPA 200.7	µg/L	4980	5000	99.6%	90-110%	988683-1	ND	ND	0.00%	≤20

MATRIX SPIKE

Sample ID	Parameter	Method	Units	Sample Result	DF	Spike Level	Total Amt. of Spike	Theo. Value	MS Obs.	% Rec.	Accuracy Control Limits %
988683-1	Aluminum	EPA 200.8	µg/L	0.00	5.00	50.0	250	250	250	100%	75-125%
988683-1	Antimony	EPA 200.8	µg/L	0.00	5.00	50.0	250	250	265	106%	75-125%
988683-1	Arsenic	EPA 200.8	µg/L	0.00	5.00	50.0	250	250	263	105%	75-125%
988683-1	Barium	EPA 200.8	µg/L	11.3	5.00	50.0	250	261	273	105%	75-125%
988683-1	Chromium	EPA 200.8	µg/L	0.00	5.00	50.0	250	250	258	103%	75-125%
988683-1	Copper	EPA 200.8	µg/L	0.00	5.00	50.0	250	250	248	99.2%	75-125%
988683-1	Lead	EPA 200.8	µg/L	0.00	5.00	50.0	250	250	250	100%	75-125%
988683-1	Manganese	EPA 200.8	µg/L	1.25	5.00	50.0	250	251	254	101%	75-125%
988683-1	Molybdenum	EPA 200.8	µg/L	18.6	5.00	50.0	250	269	298	112%	75-125%
988683-1	Nickel	EPA 200.8	µg/L	0.00	5.00	50.0	250	250	246	98.4%	75-125%
988683-1	Zinc	EPA 200.8	µg/L	0.00	5.00	50.0	250	250	236	94.4%	75-125%
988683-1	Boron	EPA 200.7	µg/L	982	1.00	2000	2000	2982	2830	92.4%	75-125%
988683-1	Iron	EPA 200.7	µg/L	0.00	1.00	2000	2000	2000	1800	90.0%	75-125%

ND: Not detected, or below limit of detection.

DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

021

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-251] 988683

COC Number

TURNAROUND TIME 10 Days

DATE 04/07/10 PAGE 1 OF 1

COMPANY	CH2M HILL Æ2
PROJECT NAME	PG&E Topock IM3
PHONE	530-229-3303 FAX 530-339-3303
ADDRESS	155 Grand Ave Ste 1000, Oakland, CA 94612
P.O. NUMBER	392895.AA.DM
SAMPLERS (SIGNATURE	

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr(VI) (218.6) Lab Filtered	Title 22 Metals List (200.7, 200.8, 245.1)	EC (120.1)	TDS (2540 c)	Turb (2130)	Total Metals (200.7) See List Below	Ammonia (4500-NH3)	Anions (300.0) F	Anions (300.0) F, NO3, NO2, SO4	TOC (5310 C)	Total Metals (200.7) Cr	NUMBER OF CONTAINERS	COMMENTS
1	SC-700B-WDR-251	04/07/10	0800		X		X	X	X	X	X		X			4	
-2	SC-100B-WDR-251	04/07/10	0810		X		X	X	X	X	X		X			4	pH-2
	ANALYSIS	pH	EC	Cr6	TOTAL		TOTAL										
SC-700B	0808	7.0	7.49	0.001	.002		76.1										
SC-100B	0812	7.3	8.35	1.245			76.2										

ALERT !!
Level III QC

For Sample Cond
See Form Attac

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	A. Ott	CH2M	4/7/10 1530
Signature (Received)	Felipe R	THE	4/7/10 1830
Signature (Relinquished)	Felipe R	THE	4/7/10 2102
Signature (Received)	Linda	TLI	APR 07 2010 21:02
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, Mo, Ni, Fe, Zn

070

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: CH2M HILL **Lab #** 988683

Date Delivered: 4 / 7 /10 **Time:** 21:02 **By:** ☐Mail ☑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	☑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)? 4 °C.	☑Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☑Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☐N/A
9.	Does the number of samples received agree with COC?	☑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	☐N/A
12.	Were samples pH checked? pH = See C-O-C	☑Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☑Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ RUSH ☑ Std	☑Yes	☐No	☐N/A

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☑Other WATER

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Rafael Davila

\\MATRIX\serv\Discrpt.FormBlank.doc

TRUESDAIL LABORATORIES, INC.
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April 26, 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-252 PROJECT, GROUNDWATER MONITORING, TLI NO.: 988820

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-252 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 April 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.

The straight run for sample SC-700B-WDR-252 and the associated matrix spike for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium 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. Iyer
Quality Assurance/Quality Control Officer

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 988820
Date: April 26, 2010
Collected: April 14, 2010
Received: April 14, 2010

ANALYST LIST

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

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

Laboratory No.: 988820
Date Received: April 14, 2010

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

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 200.8 *Chromium Total* µg/L	EPA 218.6 *Chromium Hexavalent* µg/L	SM 2130B *Turbidity* NTU	EPA 120.1 *EC* µmhos/cm	SM 2540C *TDS* mg/L	EPA 200.8 *Manganese Total* µg/L
988820	SC-700B-WDR-252	08:00	1.09	0.27	ND	7010	4060	ND

ND: Non Detected (below reporting limit)

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

005

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REPORT

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

Laboratory No.: 988820

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 041910A

Date: April 26, 2010
Collected: April 14, 2010
Received: April 14, 2010
Prep/ Analyzed: April 19, 2010
Analytical Batch: 041910A

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

Analytical Results Total Chromium

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
988820	SC-700B-WDR-252	µg/L	EPA 200.8	10:53	5.00	1.00	1.09

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988820	1.09	1.00	8.61%	≤20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988820	1.09	5.00	50.0	250	248	251	98.8%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	51.7	50.0	103%	90% - 110%	Yes
MRCVS#1	50.9	50.0	102%	90% - 110%	Yes
ICS	51.4	50.0	103%	80% - 120%	Yes
LCS	51.3	50.0	103%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 988820

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 041910A

Date: April 26, 2010
Collected: April 14, 2010
Received: April 14, 2010
Prep/ Analyzed: April 19, 2010
Analytical Batch: 041910A

Investigation: **Total Manganese by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8**

Analytical Results Total Manganese

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
988820	SC-700B-WDR-252	µg/L	EPA 200.8	10:53	5.00	10.0	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988820	ND	ND	0.00%	≤20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988820	0.00	5.00	50.0	250	230	250	92.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0	---	<10.0	Yes
MRCCS	47.7	50.0	95.4%	90% - 110%	Yes
MRCVS#1	48.9	50.0	97.8%	90% - 110%	Yes
ICS	48.5	50.0	97.0%	80% - 120%	Yes
LCS	46.8	50.0	93.6%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
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Analytical Services

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REPORT

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

Laboratory No.: 988820

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Date: April 26, 2010
Collected: April 14, 2010
Received: April 14, 2010
Prep/ Analyzed: April 15, 2010
Analytical Batch: 04CrH10F

Investigation: **Hexavalent Chromium by EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988820	SC-700B-WDR-252	08:00	08:13	µg/L	1.05	0.20	0.27

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988698-4	30.3	30.2	0.33%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988820	0.27	1.06	1.00	1.06	1.28	1.33	95.3%	90 - 110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	4.84	5.00	96.8%	90% - 110%	Yes
MRCVS#1	9.85	10.0	98.5%	95% - 105%	Yes
MRCVS#2	10.2	10.0	102%	95% - 105%	Yes
MRCVS#3	10.4	10.0	104%	95% - 105%	Yes
MRCVS#4	10.2	10.0	102%	95% - 105%	Yes
MRCVS#5	9.96	10.0	99.6%	95% - 105%	Yes
MRCVS#6	10.4	10.0	104%	95% - 105%	Yes
LCS	5.41	5.00	108%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
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for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988820
Date: April 26, 2010
Collected: April 14, 2010
Received: April 14, 2010
Prep/ Analyzed: April 15, 2010
Analytical Batch: 04TUC10L

Investigation: **Turbidity by Method SM 2130B**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
988820	SC-700B-WDR-252	08:00	NTU	1.00	0.100	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988817-27	ND	ND	0.00%	≤ 20%	Yes

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

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988820
Date: April 26, 2010
Collected: April 14, 2010
Received: April 14, 2010
Prep/ Analyzed: April 19, 2010
Analytical Batch: 04EC10H

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
988820	SC-700B-WDR-252	µmhos/cm	EPA 120.1	1.00	2.00	7010

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988820	7010	7020	0.14%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	704	706	99.7%	90% - 110%	Yes
CVS#1	991	1000	99.1%	90% - 110%	Yes
LCS	704	706	99.7%	90% - 110%	Yes
LCSD	704	706	99.7%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988820
Date: April 26, 2010
Collected: April 14, 2010
Received: April 14, 2010
Prep/ Analyzed: April 19, 2010
Analytical Batch: 04TDS10F

Investigation: **Total Dissolved Solids by SM 2540C**

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
988820	SC-700B-WDR-252	mg/L	SM 2540C	250	4060

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988820	4060	4080	0.25%	≤ 5%	Yes

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

ND: Below the reporting limit (Not Detected).
RL: Reporting Limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

988820

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-252]

COC Number
TURNAROUND TIME 10 Days
DATE 04/14/10 PAGE 1 OF 1

COMPANY E2
PROJECT NAME PG&E Topock
PHONE (530) 229-3303 FAX (530) 339-3303
ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612
P.O. NUMBER 392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE)

Rec'd 04/14/10
s 988820

SAMPLE ID.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-7008-WDR-252	04/14/10	0800	Water	X	X	X	X	X	3	pH = 6
									3	TOTAL NUMBER OF CONTAINERS

Analysis pH EC Cr6 TOTAL TEMP
0812 7.3 7.33 .001 .003 76.8

ALERT !!
Level III QC

For Sample Condition:
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Matt	OMI	4/14/10 15:15
Signature (Received) Bonifacio Dayag	B. DAYAG	TLI	4-14-10 15:15
Signature (Relinquished) Bonifacio Dayag	B. DAYAG	TLI	4-14-10 2030
Signature (Received) L. Stuebenrauch	Linda	TLI	4/14/10 20:30
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS
RECEIVED COOL ☐ WARM ☐ °F
CUSTODY SEALED YES ☐ NO ☐
SPECIAL REQUIREMENTS:

042

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 988820

Date Delivered: 4/14/10 **Time:** 20:30 **By:** ☐Mail ☑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	☑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)? 4 °C	☑Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☑Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☐N/A
9.	Does the number of samples received agree with COC?	☑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	☐N/A
12.	Were samples pH checked? pH = See C.O.C	☑Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☑Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ RUSH ☑Std	☑Yes	☐No	☐N/A

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☑Other WATER

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Rafael Davila

\\MATRIX\data\Discrp.FormBlank.doc

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14201 FRANKLIN AVENUE
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(714) 730-6239 · FAX (714) 730-6462
www.truesdail.com

April 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-253A PROJECT, GROUNDWATER MONITORING, TLI NO.: 988874

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-253a 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 April 19, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for sample SC-700B-WDR-253a 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.

for, Mona Nassimi
Manager, Analytical Services

K.R.P. Iyer
Quality Assurance/Quality Control Officer

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 988874
Date: April 28, 2010
Collected: April 19, 2010
Received: April 19, 2010

ANALYST LIST

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

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

Laboratory No.: 988874
Date Received: April 19, 2010
Revision 1

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

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 200.8 *Chromium Total* µg/L	EPA 218.6 *Chromium Hexavalent* µg/L	SM 2130B *Turbidity* NTU	EPA 120.1 *EC* µmhos/cm	SM 2540C *TDS* mg/L	EPA 200.8 *Manganese Total* µg/L
988874	SC-700B-WDR-253a	08:00	ND	0.39	ND	7300	4290	ND

ND: Non Detected (below reporting limit)

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

005

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REPORT

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

Laboratory No.: 988874

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 042210A

Date: April 28, 2010
Collected: April 19, 2010
Received: April 19, 2010
Prep/ Analyzed: April 22, 2010
Analytical Batch: 042210A

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

Analytical Results Total Chromium

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
988874	SC-700B-WDR-253a	µg/L	EPA 200.8	11:22	5.00	1.00	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988874	ND	ND	0.00%	≤20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988874	0.00	5.00	50.0	250	239	250	95.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	51.3	50.0	103%	90% - 110%	Yes
MRCVS#1	51.7	50.0	103%	90% - 110%	Yes
ICS	56.1	50.0	112%	80% - 120%	Yes
LCS	50.4	50.0	101%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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

REPORT

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

Laboratory No.: 988874

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 042210A

Date: April 28, 2010
Collected: April 19, 2010
Received: April 19, 2010
Prep/ Analyzed: April 22, 2010
Analytical Batch: 042210A

Investigation: **Total Manganese by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8**

Analytical Results Total Manganese

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
988874	SC-700B-WDR-253a	µg/L	EPA 200.8	11:22	5.00	10.0	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988874	ND	ND	0.00%	≤20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988874	0.00	5.00	50.0	250	241	250	96.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0	---	<10.0	Yes
MRCCS	51.8	50.0	104%	90% - 110%	Yes
MRCVS#1	52.9	50.0	106%	90% - 110%	Yes
ICS	56.5	50.0	113%	80% - 120%	Yes
LCS	52.0	50.0	104%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 988874

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Date: May 11, 2010
Collected: April 19, 2010
Received: April 19, 2010
Prep/ Analyzed: April 26, 2010
Analytical Batch: 04CrH10G
Revision 1

Investigation: **Hexavalent Chromium by EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988874	SC-700B-WDR-253a	08:00	12:28	µg/L	1.05	0.20	0.39

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988969	3.22	3.41	5.73%	< 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988874	0.39	1.06	1.00	1.06	1.48	1.45	103%	90 - 110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.16	5.00	103%	90% - 110%	Yes
MRCVS#1	9.89	10.0	98.9%	95% - 105%	Yes
MRCVS#2	10.4	10.0	104%	95% - 105%	Yes
LCS	5.14	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988874
Date: April 28, 2010
Collected: April 19, 2010
Received: April 19, 2010
Prep/ Analyzed: April 20, 2010
Analytical Batch: 04TUC10N

Investigation: **Turbidity by Method SM 2130B**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
988874	SC-700B-WDR-253a	08:00	NTU	1.00	0.100	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988874	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	---	<0.100	Yes
LCS	7.70	8.00	96.3%	90% - 110%	Yes
LCS	7.73	8.00	96.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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(714) 730-6239 · FAX (714) 730-6462
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REPORT

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

Laboratory No.: 988874

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Date: April 28, 2010
Collected: April 19, 2010
Received: April 19, 2010
Prep/ Analyzed: April 20, 2010
Analytical Batch: 04EC10I

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Fisld I.D.	Units	Method	DF	RL	Results
988874	SC-700B-WDR-253a	µmhos/cm	EPA 120.1	1.00	2.00	7300

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988874	7300	7320	0.27%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	703	706	99.6%	90% - 110%	Yes
CVS#1	992	1000	99.2%	90% - 110%	Yes
LCS	704	706	99.7%	90% - 110%	Yes
LCSD	704	706	99.7%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988874
Date: April 28, 2010
Collected: April 19, 2010
Received: April 19, 2010
Prep/ Analyzed: April 22, 2010
Analytical Batch: 04TDS10G

Investigation: **Total Dissolved Solids by SM 2540C**

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
988874	SC-700B-WDR-253a	mg/L	SM 2540C	250	4290

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988874	4290	4200	1.06%	≤ 5%	Yes

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

ND: Below the reporting limit (Not Detected).
RL: Reporting Limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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-253a]

988874

COC Number

TURNAROUND TIME 10 Days

DATE 04/19/10 PAGE 1 OF 1

COMPANY	E2
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612
P.O. NUMBER	392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE	

Rec'd 04/19/10
LTC 988874

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-253a	04/19/10	0800	Water	x	x	x	x		x							3	pH = 7
																3	TOTAL NUMBER OF CONTAINERS

Analysis pH EC Cr6 TOTAL TEMP

0805 7.2 7.70 -001 -003 79.5

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	J. Hibbs	ONT	4/19/10 1530
Signature (Received)	Hibbs	TLI	4-19-10 1540
Signature (Relinquished)	Hibbs	TLI	4-19-10 2100
Signature (Received) L. Shabbenbrink	Linda	TLI	4/19/10 21:00
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 988874

Date Delivered: 04/19/10 **Time:** 21:00 **By:** ☐Mail ☒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	☒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)? 4.2°C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc.)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒Yes	☐No	☐N/A
10.	Did sample labels correspond with the client IDs?	☒Yes	☐No	☐N/A
11.	Did sample labels indicate proper preservation? Preserved (if yes) by: ☐**Truesdail** ☐Client	☐Yes	☐No	☒N/A
12.	Were samples pH checked? pH = See C.O.C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒ Std	☒Yes	☐No	☐N/A

ALERT II Level III QC

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: L. Stubenrauch

\\MATRIX\cstv\Discrp.FormBlank.doc

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April 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-253B PROJECT, GROUNDWATER MONITORING, TLI NO.: 988969

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-253b 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 April 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.

fo Mona Nassimi
Manager, Analytical Services

K.R.P. Iyer
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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TUSTIN, CALIFORNIA 92780-7008
(714) 730-6239 · FAX (714) 730-6462
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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 988969
Date: April 30, 2010
Collected: April 23, 2010
Received: April 23, 2010

ANALYST LIST

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

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

Laboratory No.: 988969
Date Received: April 23, 2010

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

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 200.8 *Chromium Total* µg/L	EPA 218.6 *Chromium Hexavalent* µg/L	SM 2130B *Turbidity* NTU	EPA 120.1 *EC* µmhos/cm	SM 2540C *TDS* mg/L	EPA 200.8 *Manganese Total* µg/L
988969	SC-700B-WDR-253b	16:00	3.54	3.22	ND	6380	3780	ND

ND: Non Detected (below reporting limit)

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

005

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REPORT

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

Laboratory No.: 988969

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 042810A

Date: April 30, 2010
Collected: April 23, 2010
Received: April 23, 2010
Prep/ Analyzed: April 28, 2010
Analytical Batch: 042810A

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

Analytical Results Total Chromium

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
988969	SC-700B-WDR-253b	µg/L	EPA 200.8	16:31	5.00	1.00	3.54

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988969-1	3.54	3.54	0.00%	≤20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988969-1	3.54	5.00	50.0	250	235	254	92.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	47.4	50.0	94.8%	90% - 110%	Yes
MRCVS#1	47.3	50.0	94.6%	90% - 110%	Yes
ICS	46.8	50.0	93.6%	80% - 120%	Yes
LCS	48.1	50.0	96.2%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for. Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Laboratory No.: 988969

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 042810A

Date: April 30, 2010
Collected: April 23, 2010
Received: April 23, 2010
Prep/ Analyzed: April 28, 2010
Analytical Batch: 042810A

Investigation: **Total Manganese by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8**

Analytical Results Total Manganese

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
988969	SC-700B-WDR-253b	µg/L	EPA 200.8	16:31	5.00	10.0	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988969	ND	ND	0.00%	≤20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988969	3.32	5.00	50.0	250	253	253	99.9%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0	---	<10.0	Yes
MRCCS	51.2	50.0	102%	90% - 110%	Yes
MRCVS#1	51.4	50.0	103%	90% - 110%	Yes
ICS	50.9	50.0	102%	80% - 120%	Yes
LCS	51.5	50.0	103%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 988969

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Date: April 30, 2010
Collected: April 23, 2010
Received: April 23, 2010
Prep/ Analyzed: April 26, 2010
Analytical Batch: 04CrH10G

Investigation: **Hexavalent Chromium by EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
988969	SC-700B-WDR-253b	16:00	15:07	µg/L	5.25	1.05	3.22

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988969	3.22	3.41	5.73%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	988969	3.22	5.25	1.00	5.25	8.80	8.47	106%	90 - 110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.16	5.00	103%	90% - 110%	Yes
MRCVS#1	9.89	10.0	98.9%	95% - 105%	Yes
MRCVS#2	10.4	10.0	104%	95% - 105%	Yes
LCS	5.14	5.00	103%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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TUSTIN, CALIFORNIA 92780-7008
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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988969
Date: April 30, 2010
Collected: April 23, 2010
Received: April 23, 2010
Prep/ Analyzed: April 24, 2010
Analytical Batch: 04TUC10R

Investigation: **Turbidity by Method SM 2130B**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
988969	SC-700B-WDR-253b	16:00	NTU	1.00	0.100	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988969	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	---	<0.100	Yes
LCS	7.50	8.00	93.8%	90% - 110%	Yes
LCS	7.50	8.00	93.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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

REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988969
Date: April 30, 2010
Collected: April 23, 2010
Received: April 23, 2010
Prep/ Analyzed: April 27, 2010
Analytical Batch: 04EC10K

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
988969	SC-700B-WDR-253b	µmhos/cm	EPA 120.1	1.00	2.00	6380

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	988969	6380	6390	0.16%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	706	706	100%	90% - 110%	Yes
CVS#1	991	1000	99.1%	90% - 110%	Yes
LCS	706	706	100%	90% - 110%	Yes
LCSD	706	706	100%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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

REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 988969
Date: April 30, 2010
Collected: April 23, 2010
Received: April 23, 2010
Prep/ Analyzed: April 27, 2010
Analytical Batch: 04TDS10H

Investigation: **Total Dissolved Solids by SM 2540C**

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
988969	SC-700B-WDR-253b	mg/L	SM 2540C	125	3780

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	988969	3780	3750	0.40%	≤ 5%	Yes

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

ND: Below the reporting limit (Not Detected).
RL: Reporting Limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

Rec'd 04/26/10
s18a 988969

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

988969

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-253b]

COC Number
TURNAROUND TIME 10 Days
DATE 04/23/10 PAGE 1 OF 1

COMPANY	E2
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612
P.O. NUMBER	392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE)	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-253b	04/23/10	16:00	Water	x	x	x	x	x	3	PH-7
									TOTAL NUMBER OF CONTAINERS	

Analysis	pH	Ec	Cr6	Total	Temp.
15:45	7.2	6.58	.002	.004	77.0 F°

For Sample Conditions See Form Attached

ALERT !! Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished		Ryan Phelps	OMI	4-23-10 16:30
Received	Rafael Davila	Rafael	T.L.I	4-23-10 16:30
Relinquished	Rafael Davila	Rafael	T.L.I	4-23-10 22:00
Received	Rafael Davila	Rafael	T.L.I	4-23-10 22:00
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 98896 9

Date Delivered: 4/23/10 **Time:** 22:00 **By:** ☐Mail ☑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	☑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)? 4°C.	☑Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☑Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☐N/A
9.	Does the number of samples received agree with COC?	☑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	☐N/A
12.	Were samples pH checked? pH = See C-O-C	☑Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☑Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☑ Std	☑Yes	☐No	☐N/A

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☑Other WATER

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Rafael Davila

\\MATRIX\env\Discrp.FormBlank.doc

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May 11, 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-254 PROJECT, GROUNDWATER MONITORING, TLI NO.: 989030

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-254 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 April 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 straight run for sample SC-700B-WDR-254 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.

The sample date and time for the sample SC-700B-WDR-254, was reviewed, due to the discrepancy between the chain of custody and the container. The sample date and time on the container was 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.

for Mona Nassimi
Manager, Analytical Services

K.R.P. Iyer
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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(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.: 989030
Date: May 11, 2010
Collected: April 28, 2010
Received: April 28, 2010

ANALYST LIST

[illegible]	[illegible]	[illegible]
EPA 120.1	Specific Conductivity	Tina Acquiat
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

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

Laboratory No.: 989030
Date Received: April 28, 2010

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

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	EPA 200.8 *Chromium Total* µg/L	EPA 218.6 *Chromium Hexavalent* µg/L	SM 2130B *Turbidity* NTU	EPA 120.1 *EC* µmhos/cm	SM 2540C *TDS* mg/L	EPA 200.8 *Manganese Total* µg/L
989030	SC-700B-WDR-254	08:00	ND	0.31	ND	7070	4120	13.7

ND: Non Detected (below reporting limit)

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

005

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 043010A

Laboratory No.: 989030

Date: May 11, 2010
Collected: April 28, 2010
Received: April 28, 2010
Prep/ Analyzed: April 30, 2010
Analytical Batch: 043010A

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

Analytical Results Total Chromium

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
989030	SC-700B-WDR-254	µg/L	EPA 200.8	15:35	5.00	1.00	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	989030	ND	ND	0.00%	≤20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	989030	0.00	5.00	50.0	250	219	250	87.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	45.6	50.0	91.2%	90% - 110%	Yes
MRCVS#1	45.4	50.0	90.8%	90% - 110%	Yes
ICS	45.1	50.0	90.2%	80% - 120%	Yes
LCS	45.7	50.0	91.4%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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

REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 043010A

Laboratory No.: 989030

Date: May 11, 2010
Collected: April 28, 2010
Received: April 28, 2010
Prep/ Analyzed: April 30, 2010
Analytical Batch: 043010A

Investigation: **Total Manganese by Inductively Coupled Argon Plasma Mass Spectrometer using EPA 200.8**

Analytical Results Total Manganese

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
989030	SC-700B-WDR-254	µg/L	EPA 200.8	15:35	5.00	10.0	13.7

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	989030	13.7	13.6	0.73%	≤20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	989030	13.7	5.00	50.0	250	258	264	97.7%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<10.0	---	<10.0	Yes
MRCCS	50.0	50.0	100%	90% - 110%	Yes
MRCVS#1	51.0	50.0	102%	90% - 110%	Yes
ICS	50.2	50.0	100%	80% - 120%	Yes
LCS	50.0	50.0	100%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Laboratory No.: 989030

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Date: May 11, 2010
Collected: April 28, 2010
Received: April 28, 2010
Prep/ Analyzed: May 5, 2010
Analytical Batch: 05CrH10A

Investigation: **Hexavalent Chromium by EPA 218.6**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
989030	SC-700B-WDR-254	08:00	09:00	µg/L	1.05	0.20	0.31

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	989100-2	838	898	6.91%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	989030	0.31	1.06	1.00	1.06	1.38	1.37	101%	90 - 110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	4.94	5.00	98.8%	90% - 110%	Yes
MRCVS#1	9.63	10.0	96.3%	95% - 105%	Yes
MRCVS#2	9.55	10.0	95.5%	95% - 105%	Yes
MRCVS#3	9.62	10.0	96.2%	95% - 105%	Yes
MRCVS#4	9.76	10.0	97.6%	95% - 105%	Yes
LCS	5.30	5.00	106%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 989030
Date: May 11, 2010
Collected: April 28, 2010
Received: April 28, 2010
Prep/ Analyzed: April 29, 2010
Analytical Batch: 04TUC10U

Inveetigation: **Turbidity by Method SM 2130B**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
989030	SC-700B-WDR-254	08:00	NTU	1.00	0.100	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	989030	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	---	<0.100	Yes
LCS	8.03	8.00	100%	90% - 110%	Yes
LCS	7.90	8.00	98.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 989030
Date: May 11, 2010
Collected: April 28, 2010
Received: April 28, 2010
Prep/ Analyzed: April 29, 2010
Analytical Batch: 04EC10L

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
989030	SC-700B-WDR-254	µmhos/cm	EPA 120.1	1.00	2.00	7070

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	989030	7070	7090	0.28%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	705	706	100%	90% - 110%	Yes
CVS#1	993	1000	99.3%	90% - 110%	Yes
LCS	705	706	100%	90% - 110%	Yes
LCSD	705	706	100%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 989030
Date: May 11, 2010
Collected: April 28, 2010
Received: April 28, 2010
Prep/ Analyzed: May 4, 2010
Analytical Batch: 05TDS10A

Investigation: **Total Dissolved Solids by SM 2540C**

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
989030	SC-700B-WDR-254	mg/L	SM 2540C	250	4120

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	989030	4120	4100	0.24%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	---	<25.0	Yes
LCS	474	500	94.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
RL: Reporting Limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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-254] 989030

COC Number
TURNAROUND TIME 10 Days
DATE 04/29/10 PAGE 1 OF 1

COMPANY	E2
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612
P.O. NUMBER	392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE)	

Rec'd 04/28/10
LOG 989030

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-254	04/29/10	14:56	Water	x	x	x	x	x	3	pH = 7
									3	TOTAL NUMBER OF CONTAINERS

Analysis Time - 8:06

pH 7.4
EC 7.35
Cr6 .001
TOTAL .003
TEMP - 80.4

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Ryan Phelps	OMI	4-28-10 14:54
Signature (Received) Bonifacio Dayog	B. DAYAG	TLI	4-28-10 1500
Signature (Relinquished) Bonifacio Dayog	B. DAYAG	TLI	4-28-10 2015
Signature (Received) L. Shakunina	Luda	TLI	4/28/10 2015
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS
RECEIVED COOL ☐ WARM ☐ °F
CUSTODY SEALED YES ☐ NO ☐
SPECIAL REQUIREMENTS:

020

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E 2 **Lab #** 989030

Date Delivered: 04/28/10 **Time:** 10:15 **By:** ☐Mail ☒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	☒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 acceptabte?	☒Yes	☐No	☐N/A
6.	Were samples received in a chilled condition? Temperature (if yes)? 3.8° C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbtes, 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?	☐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	☒N/A
12.	Were samples pH checked? pH = see C.O.C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒ Std	☒Yes	☐No	☐N/A

ALERT !! Level III QC

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: L. Shabinaw

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

May 26, 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-255 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 989100

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-255 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 May 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 straight run for sample SC-700B-WDR-255 and the associated matrix spike for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

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. Iyer
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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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.: 989100
Date: May 26, 2010
Collected: May 4, 2010
Received: May 4, 2010

ANALYST LIST

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

TRUESDAIL LABORATORIES, INC.
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Established 1931
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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612

Attention: Shawn Duffy

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

Laboratory No.: 989100
Date Received: May 4, 2010

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989100-001	SC-700B-WDR-255	E120.1	NONE	5/4/10	9:15	EC	7210	umhos/cm	2.00
989100-001	SC-700B-WDR-255	E200.7	NONE	5/4/10	9:15	BORON	1000	ug/L	200
989100-001	SC-700B-WDR-255	E200.7	NONE	5/4/10	9:15	Iron	ND	ug/L	20.0
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Aluminum	ND	ug/L	50.0
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Antimony	ND	ug/L	10.0
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Arsenic	ND	ug/L	1.00
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Barium	ND	ug/L	10.0
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Chromium	1.05	ug/L	1.00
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Copper	ND	ug/L	5.00
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Lead	ND	ug/L	10.0
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Manganese	ND	ug/L	10.0
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Molybdenum	18.5	ug/L	10.0
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Nickel	ND	ug/L	10.0
989100-001	SC-700B-WDR-255	E200.8	NONE	5/4/10	9:15	Zinc	21.5	ug/L	10.0
989100-001	SC-700B-WDR-255	E218.6	LABFLT	5/4/10	9:15	Chromium, hexavalent	0.77	ug/L	0.20
989100-001	SC-700B-WDR-255	E300	NONE	5/4/10	9:15	Fluoride	2.09	mg/L	0.500
989100-001	SC-700B-WDR-255	E300	NONE	5/4/10	9:15	Nitrate as N	2.88	mg/L	1.00
989100-001	SC-700B-WDR-255	E300	NONE	5/4/10	9:15	Sulfate	515	mg/L	25.0
989100-001	SC-700B-WDR-255	SM2130B	NONE	5/4/10	9:15	Turbidity	ND	NTU	0.100
989100-001	SC-700B-WDR-255	SM2540C	NONE	5/4/10	9:15	Total Dissolved Solids	4140	mg/L	250
989100-001	SC-700B-WDR-255	SM4500NH3D	NONE	5/4/10	9:15	Ammonia-N	ND	mg/L	0.500
989100-001	SC-700B-WDR-255	SM4500NO2B	NONE	5/4/10	9:15	Nitrite as N	ND	mg/L	0.500

005

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989100-002	SC-100B-WDR-255	E120.1	NONE	5/4/10	9:15	EC	7990	umhos/cm	2.00
989100-002	SC-100B-WDR-255	E200.7	NONE	5/4/10	9:15	BORON	1040	ug/L	200
989100-002	SC-100B-WDR-255	E200.7	NONE	5/4/10	9:15	Iron	ND	ug/L	20.0
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Aluminum	ND	ug/L	50.0
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Antimony	ND	ug/L	10.0
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Arsenic	3.45	ug/L	1.00
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Barium	25.1	ug/L	10.0
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Chromium	995	ug/L	1.00
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Copper	ND	ug/L	5.00
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Lead	ND	ug/L	10.0
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Manganese	10.4	ug/L	10.0
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Molybdenum	19.9	ug/L	10.0
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Nickel	ND	ug/L	10.0
989100-002	SC-100B-WDR-255	E200.8	NONE	5/4/10	9:15	Zinc	ND	ug/L	10.0
989100-002	SC-100B-WDR-255	E218.6	LABFLT	5/4/10	9:15	Chromium, hexavalent	838	ug/L	21.0
989100-002	SC-100B-WDR-255	E300	NONE	5/4/10	9:15	Fluoride	2.68	mg/L	0.500
989100-002	SC-100B-WDR-255	E300	NONE	5/4/10	9:15	Nitrate as N	3.12	mg/L	1.00
989100-002	SC-100B-WDR-255	E300	NONE	5/4/10	9:15	Sulfate	570	mg/L	50.0
989100-002	SC-100B-WDR-255	SM2130B	NONE	5/4/10	9:15	Turbidity	ND	NTU	0.100
989100-002	SC-100B-WDR-255	SM2540C	NONE	5/4/10	9:15	Total Dissolved Solids	4570	mg/L	250
989100-002	SC-100B-WDR-255	SM4500NH3D	NONE	5/4/10	9:15	Ammonia-N	ND	mg/L	0.500
989100-002	SC-100B-WDR-255	SM4500NO2B	NONE	5/4/10	9:15	Nitrite as N	ND	mg/L	0.500

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.

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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. 989100

Printed 5/26/10

Samples Received on 5/4/10 9:00:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-255	989100-001	05/04/2010 09:15	Water
SC-100B-WDR-255	989100-002	05/04/2010 09:15	Water

Anions By I.C. - EPA 300.0 Batch 05AN10C

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Fluoride	mg/L	05/05/2010 11:13	5.00		0.50	2.09
Nitrate as Nitrogen	mg/L	05/05/2010 11:13	5.00		1.00	2.88
Sulfate	mg/L	05/05/2010 11:59	50.0		25.0	515.
989100-002 Fluoride	mg/L	05/05/2010 11:25	5.00		0.50	2.68
Nitrate as Nitrogen	mg/L	05/05/2010 11:25	5.00		1.00	3.12
Sulfate	mg/L	05/05/2010 12:10	100		50.0	570.

Method Blank

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 = 989100-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Fluoride	mg/L	5.00	2.67	2.68	0.374	0 - 20
Nitrate as Nitrogen	mg/L	5.00	3.08	3.12	1.29	0 - 20
Sulfate	mg/L	100	569.	570.	0.176	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	4.12	4.00	103.	90 - 110
Nitrate as Nitrogen	mg/L	1.00	4.00	4.00	100.	90 - 110
Sulfate	mg/L	1.00	20.1	20.0	100	90 - 110

Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Matrix Spike — Lab ID = 989100-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Fluoride	mg/L	5.00	22.5	22.7(20.0)	99.1	75 - 85
Nitrate as Nitrogen	mg/L	5.00	23.1	23.1(20.0)	99.9	75 - 85
Sulfate	mg/L	100	1020	1070(500)	90.0	75 - 85

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	4.12	4.00	103.	90 - 110
Nitrate as Nitrogen	mg/L	1.00	4.00	4.00	100.	90 - 110
Sulfate	mg/L	1.00	20.1	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
Nitrate as Nitrogen	mg/L	1.00	3.00	3.00	100.	90 - 110
Sulfate	mg/L	1.00	15.1	15.0	101	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	5.00	2.98	3.00	99.3	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrate as Nitrogen	mg/L	5.00	2.99	3.00	99.7	90 - 110

Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Nitrite SM 4500-NO2 B Batch 05NO210B

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Nitrite as Nitrogen	mg/L	05/05/2010 16:50	1.00		0.500	ND
989100-002 Nitrite as Nitrogen	mg/L	05/05/2010 16:54	1.00		0.500	ND

Method Blank

Parameter	Unit	DF	Result
Nitrite as Nitrogen	mg/L	1.00	ND

Duplicate — Lab ID = 989100-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0471	0.0450	105	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0472	0.0450	105	90 - 110

Matrix Spike — Lab ID = 989100-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0188	0.0200(0.0200	94.0	75 - 125

Matrix Spike Duplicate — Lab ID = 989100-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0194	0.0200(0.0200	97.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0266	0.0270	98.5	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0202	0.0200	101.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0204	0.0200	102.	90 - 110

Specific Conductivity - EPA 120.1 Batch 05EC10C 5/6/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Specific Conductivity	umhos/cm	05/06/2010	1.00		2.00	7210
989100-002 Specific Conductivity	umhos/cm	05/06/2010	1.00		2.00	7990

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989101-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	8700	8680	0.230	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	707.	706.	100	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	702.	706.	99.4	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	702.	706.	99.4	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	980.	1000	98.0	90 - 110

Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Chrome VI by EPA 218.6 Batch 05CrH10A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Chromium, Hexavalent	ug/L	05/05/2010 09:10	1.05		0.20	0.77
989100-002 Chromium, Hexavalent	ug/L	05/05/2010 09:20	105		21.0	838.

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 989100-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	105	898.	838.	6.91	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.30	5.00	106.	90 - 110

Matrix Spike — Lab ID = 989030-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.38	1.37(1.06)	101	90 - 110

Matrix Spike — Lab ID = 989100-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	105	1930	1890(1050)	104.	90 - 110

Matrix Spike — Lab ID = 989100-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.88	1.83(1.06)	105	90 - 110

Matrix Spike — Lab ID = 989102-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	6.33	6.11(5.25)	104	90 - 110

Matrix Spike — Lab ID = 989102-006

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	10.5	181.	176(105)	104	90 - 110

Matrix Spike — Lab ID = 989102-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.03	5.25(5.25)	95.8	90 - 110

Matrix Spike — Lab ID = 989101-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.09	28.5	28.0(15.0)	103	90 - 110

Matrix Spike — Lab ID = 989102-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.00	5.25(5.25)	95.2	90 - 110
MRCCS - Secondary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.94	5.00	98.8	90 - 110
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.62	10.0	96.2	95 - 105
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.76	10.0	97.6	95 - 105
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.63	10.0	96.3	95 - 105
MRCVS - Primary						
Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.55	10.0	95.5	95 - 105

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Metals by EPA 200.7, Total

Batch 051210A-Th

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Boron	ug/L	05/12/2010 10:15	1.00		200.	1000
Iron	ug/L	05/12/2010 10:15	1.00		20.0	ND
989100-002 Boron	ug/L	05/12/2010 10:57	1.00		200.	1040
Iron	ug/L	05/12/2010 10:57	1.00		20.0	ND

Method Blank

Parameter	Unit	DF	Result
Boron	ug/L	1.00	ND
Iron	ug/L	1.00	ND

Duplicate

Lab ID = 989100-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Boron	ug/L	1.00	1020	1000	1.98	0 - 20
Iron	ug/L	1.00	ND	0	0	0 - 20

Calibration Blank

Parameter	Unit	DF	Result
Boron	ug/L	1.00	ND
Iron	ug/L	1.00	ND

Calibration Blank

Parameter	Unit	DF	Result
Boron	ug/L	1.00	ND
Iron	ug/L	1.00	ND

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	5430	5000	109	90 - 110
Iron	ug/L	1.00	4980	5000	99.6	90 - 110

Matrix Spike

Lab ID = 989100-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Boron	ug/L	1.00	3040	3000(2000)	102.	75 - 125
Iron	ug/L	1.00	1970	2000(2000)	98.5	75 - 125

Matrix Spike Duplicate

Lab ID = 989100-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Boron	ug/L	1.00	3070	3000(2000)	104	75 - 125
Iron	ug/L	1.00	1980	2000(2000)	99.0	75 - 125

Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	5250	5000	105.	95 - 105
Iron	ug/L	1.00	4820	5000	96.4	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	5300	5000	106.	90 - 110
Iron	ug/L	1.00	5290	5000	106	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	4880	5000	97.6	90 - 110
Iron	ug/L	1.00	4840	5000	96.8	90 - 110

Metals by EPA 200.8, Total Batch 051110A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Aluminum	ug/L	05/11/2010 14:29	5.00		50.0	ND
Antimony	ug/L	05/11/2010 14:29	5.00		10.0	ND
Arsenic	ug/L	05/11/2010 14:29	5.00		1.00	ND
Barium	ug/L	05/11/2010 14:29	5.00		10.0	ND
Chromium	ug/L	05/11/2010 14:29	5.00		1.00	1.05
Lead	ug/L	05/11/2010 14:29	5.00		10.0	ND
Manganese	ug/L	05/11/2010 14:29	5.00		10.0	ND
Molybdenum	ug/L	05/11/2010 14:29	5.00		10.0	18.5
Nickel	ug/L	05/11/2010 14:29	5.00		10.0	ND
Zinc	ug/L	05/11/2010 14:29	5.00		10.0	21.5
989100-002 Aluminum	ug/L	05/11/2010 14:36	5.00		50.0	ND
Antimony	ug/L	05/11/2010 14:36	5.00		10.0	ND
Arsenic	ug/L	05/11/2010 14:36	5.00		1.00	3.45
Barium	ug/L	05/11/2010 14:36	5.00		10.0	25.1
Chromium	ug/L	05/11/2010 14:36	5.00		1.00	995.
Lead	ug/L	05/11/2010 14:36	5.00		10.0	ND
Manganese	ug/L	05/11/2010 14:36	5.00		10.0	10.4
Molybdenum	ug/L	05/11/2010 14:36	5.00		10.0	19.9
Nickel	ug/L	05/11/2010 14:36	5.00		10.0	ND
Zinc	ug/L	05/11/2010 14:36	5.00		10.0	ND

Method Blank

Parameter	Unit	DF	Result
Aluminum	ug/L	1.00	ND
Antimony	ug/L	1.00	ND
Arsenic	ug/L	1.00	ND
Barium	ug/L	1.00	ND
Chromium	ug/L	1.00	ND
Lead	ug/L	1.00	ND
Manganese	ug/L	1.00	ND
Molybdenum	ug/L	1.00	ND
Nickel	ug/L	1.00	ND
Zinc	ug/L	1.00	ND

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	50.6	50.0	101	90 - 110
Antimony	ug/L	1.00	47.5	50.0	95.0	90 - 110
Arsenic	ug/L	1.00	48.0	50.0	96.0	90 - 110
Barium	ug/L	1.00	47.7	50.0	95.4	90 - 110
Chromium	ug/L	1.00	47.8	50.0	95.6	90 - 110
Lead	ug/L	1.00	47.9	50.0	95.8	90 - 110
Manganese	ug/L	1.00	50.4	50.0	101	90 - 110
Molybdenum	ug/L	1.00	49.6	50.0	99.2	90 - 110
Nickel	ug/L	1.00	47.9	50.0	95.8	90 - 110
Zinc	ug/L	1.00	46.4	50.0	92.8	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	48.9	50.0	97.8	90 - 110
Antimony	ug/L	1.00	48.7	50.0	97.4	90 - 110
Arsenic	ug/L	1.00	47.9	50.0	95.8	90 - 110
Barium	ug/L	1.00	48.1	50.0	96.2	90 - 110
Chromium	ug/L	1.00	47.3	50.0	94.6	90 - 110
Lead	ug/L	1.00	47.8	50.0	95.6	90 - 110
Manganese	ug/L	1.00	50.4	50.0	101	90 - 110
Molybdenum	ug/L	1.00	52.4	50.0	105	90 - 110
Nickel	ug/L	1.00	47.4	50.0	94.8	90 - 110
Zinc	ug/L	1.00	45.9	50.0	91.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	52.0	50.0	104.	90 - 110
Antimony	ug/L	1.00	47.7	50.0	95.4	90 - 110
Arsenic	ug/L	1.00	47.6	50.0	95.2	90 - 110
Barium	ug/L	1.00	48.2	50.0	96.4	90 - 110
Chromium	ug/L	1.00	46.6	50.0	93.2	90 - 110
Lead	ug/L	1.00	48.4	50.0	96.8	90 - 110
Manganese	ug/L	1.00	50.8	50.0	102	90 - 110
Molybdenum	ug/L	1.00	49.4	50.0	98.8	90 - 110
Nickel	ug/L	1.00	46.3	50.0	92.6	90 - 110
Zinc	ug/L	1.00	45.8	50.0	91.6	90 - 110

Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	50.8	50.0	102	90 - 110
Antimony	ug/L	1.00	46.5	50.0	93.0	90 - 110
Arsenic	ug/L	1.00	47.9	50.0	95.8	90 - 110
Barium	ug/L	1.00	47.5	50.0	95.0	90 - 110
Chromium	ug/L	1.00	47.6	50.0	95.2	90 - 110
Lead	ug/L	1.00	48.0	50.0	96.0	90 - 110
Manganese	ug/L	1.00	51.0	50.0	102.	90 - 110
Molybdenum	ug/L	1.00	47.7	50.0	95.4	90 - 110
Nickel	ug/L	1.00	47.6	50.0	95.2	90 - 110
Zinc	ug/L	1.00	46.3	50.0	92.6	90 - 110

Metals by EPA 200.8, Total Batch 052110A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Copper	ug/L	05/21/2010 12:18	5.00		5.00	ND
989100-002 Copper	ug/L	05/21/2010 12:25	5.00		5.00	ND

Method Blank

Parameter	Unit	DF	Result
Copper	ug/L	1.00	ND

Duplicate — Lab ID = 989399-022

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Copper	ug/L	5.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Copper	ug/L	1.00	45.0	50.0	90.0	90 - 110

Matrix Spike — Lab ID = 989399-022

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Copper	ug/L	5.00	212.	250.(250)	84.8	75 - 125

Matrix Spike Duplicate — Lab ID = 989399-022

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Copper	ug/L	5.00	210.	250.(250)	84.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Copper	ug/L	1.00	46.3	50.0	92.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Copper	ug/L	1.00	46.4	50.0	92.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Copper	ug/L	1.00	46.6	50.0	93.2	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Copper	ug/L	1.00	45.6	50.0	91.2	90 - 110

Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Total Dissolved Solids by SM 2540 C Batch 05TDS10B 5/6/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Total Dissolved Solids	mg/L	05/06/2010	100		250.	4140
989100-002 Total Dissolved Solids	mg/L	05/06/2010	100		250.	4570

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	10.0	ND

Duplicate — Lab ID = 989100-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	100	4140	4140	0	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	10.0	494.	500.	98.8	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	10.0	492.	500.	98.4	90 - 110

Ammonia Nitrogen by SM4500-NH3D Batch 05NH3-E10A 5/10/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Ammonia as N	mg/L	05/10/2010	1.00		0.500	ND
989100-002 Ammonia as N	mg/L	05/10/2010	1.00		0.500	ND

Method Blank

Parameter	Unit	DF	Result
Ammonia as N	mg/L	1.00	ND

Duplicate — Lab ID = 989100-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Ammonia as N	mg/L	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	10.4	10.0	104.	90 - 110

Matrix Spike — Lab ID = 989100-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	6.08	6.00(6.00)	101	90 - 110

Matrix Spike Duplicate — Lab ID = 989100-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	5.92	6.00(6.00)	98.7	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	5.90	6.00	98.3	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	6.01	6.00	100	90 - 110

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Printed 5/26/10

Turbidity by SM 2130 B Batch 05TUC10D 5/5/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989100-001 Turbidity	NTU	05/05/2010	1.00		0.100	ND
989100-002 Turbidity	NTU	05/05/2010	1.00		0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate — Lab ID = 989095-003

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.97	8.00	99.6	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.90	8.00	98.8	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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-255] 989100

COC Number

TURNAROUND TIME 10 Days

DATE 05/04/10 PAGE 1 OF 1

COMPANY	CH2M HILL /E2
PROJECT NAME	PG&E Topock IM3
PHONE	530-229-3303 FAX 530-339-3303
ADDRESS	155 Grand Ave Ste 1000, Oakland, CA 94612
P.O. NUMBER	392895.AA.DM
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr(VI) (218.6) Lab Filtered	Title 22 Metals List (200.7, 200.8, 245.1)	EC (120.1)	TDS (2540 c)	Turb (2130)	Total Metals (200.7) See List Below	Ammonia (4500-NH3)	Anions (300.0) F	Anions (300.0) F, NO3, NO2, SO4	TOC (5310 C)	Total Metals (200.7) Cr	NUMBER OF CONTAINERS	COMMENTS
1 SC-700B-WDR-255	05/04/10	915		X		X	X	X	X	X		X			4	pH=2
2 SC-100B-WDR-255	05/04/10	915		X		X	X	X	X	X		X			4	pH=2

ALERT !! Level III QC

For Sample Conditions See Form Attached

	TESTED	pH	EC	Cr6	TOTAL	TEMP
SC-700B	920	7.1	7.56	.001	.003	18.4
SC-100B	925	7.4	8.26	1.17		17.9

8 TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Ron Puskar	OMI	5-4-10 1540
Signature (Received)	Hipolito	TLI	5-4-10 15:40
Signature (Relinquished)	Hipolito	TLI	5-4-10 21:00
Signature (Received) L. Shabunina	Ludy	TLI	MAY 04 2010 21:00
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, Mo, Ni, Fe, Zn

090

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 989100

Date Delivered: 05/04/10 **Time:** 11:00 **By:** ☐Mail ☒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	☒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)? 4 °C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒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	☐N/A
12.	Were samples pH checked? pH = See C.O.C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒ Std	☒Yes	☐No	☐N/A

ALERT !!
Level III QC

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: L. Shabunina

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

May 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-256 PROJECT, GROUNDWATER MONITORING, TLI NO.: 989270

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-256 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 May 12, 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 and the associated matrix spike for sample SC-700B-WDR-256 for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium 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. Iyer
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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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.: 989270
Date: May 28, 2010
Collected: May 12, 2010
Received: May 12, 2010

ANALYST LIST

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

TRUESDAIL LABORATORIES, INC.
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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Laboratory No.: 989270
Date Received: May 12, 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	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989270-001	SC-700B-WDR-2	E120.1	NONE	5/12/10	8:00	EC	7560	umhos/cm	2.00
989270-001	SC-700B-WDR-2	E200.8	NONE	5/12/10	8:00	Chromium	ND	ug/L	1.0
989270-001	SC-700B-WDR-2	E200.8	NONE	5/12/10	8:00	Manganese	ND	ug/L	10.0
989270-001	SC-700B-WDR-2	E218.6	LABFLT	5/12/10	8:00	Chromium, hexavalent	0.68	ug/L	0.20
989270-001	SC-700B-WDR-2	SM2130B	NONE	5/12/10	8:00	Turbidity	ND	NTU	0.100
989270-001	SC-700B-WDR-2	SM2540C	NONE	5/12/10	8:00	Total Dissolved Solids	4380	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.

TRUESDAIL LABORATORIES, INC.

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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. 989270

Printed 6/10/10

Samples Received on 5/12/10 10:15:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-256	989270-001	05/12/2010 08:00	Water

Specific Conductivity - EPA 120.1 Batch 05EC10J 5/21/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989270-001 Specific Conductivity	umhos/cm	05/21/2010	1.00	0.038	2.00	7560

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7550	7560	0.132	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	705.	706.	99.9	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	704.	706.	99.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	981.	1000	98.1	90 - 110

Chrome VI by EPA 218.6 Batch 05CrH10G

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989270-001 Chromium, Hexavalent	ug/L	05/14/2010 12:24	1.05	0.019	0.20	0.68

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 989247-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	25.2	24.6	2.41	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.16	5.00	103	90 - 110

Matrix Spike — Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.83	1.74(1.06)	108	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.06	5.00	101	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.75	10.0	97.5	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.3	10.0	103.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.1	10.0	101.	95 - 105

Metals by EPA 200.8, Total

Batch 052010A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989270-001 Chromium	ug/L	05/20/2010 14:01	5.00	0.075	1.0	ND
Manganese	ug/L	05/20/2010 14:01	5.00	0.06	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND

Duplicate

Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance 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	Acceptance Range
Chromium	ug/L	1.00	45.7	50.0	91.4	90 - 110
Manganese	ug/L	1.00	50.5	50.0	101.	90 - 110

Matrix Spike

Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	225.	250.(250)	90.0	75 - 125
Manganese	ug/L	5.00	245.	250.(250)	98.0	75 - 125

Matrix Spike Duplicate

Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	217.	250.(250)	86.8	75 - 125
Manganese	ug/L	5.00	244.	250.(250)	97.6	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	45.5	50.0	91.0	90 - 110
Manganese	ug/L	1.00	50.9	50.0	102	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.3	50.0	92.6	90 - 110
Manganese	ug/L	1.00	52.6	50.0	105	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.6	50.0	93.2	90 - 110
Manganese	ug/L	1.00	53.3	50.0	107	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.3	50.0	92.6	90 - 110
Manganese	ug/L	1.00	50.3	50.0	101	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	44.9	50.0	89.8	80 - 120
Manganese	ug/L	1.00	51.3	50.0	103	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.7	50.0	95.4	80 - 120
Manganese	ug/L	1.00	52.3	50.0	105	80 - 120

Total Dissolved Solids by SM 2540 C

Batch 05TDS10E — 5/17/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989270-001 Total Dissolved Solids	mg/L	05/17/2010	1.00	0.434	250.	4380

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate — Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	4450	4380	1.59	0 - 5

Duplicate — Lab ID = 989275-003

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	599.	598.	0.167	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	492.	500.	98.4	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	492.	500.	98.4	90 - 110

Turbidity by SM 2130 B

Batch 05TUC10J — 5/13/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989270-001 Turbidity	NTU	05/13/2010	1.00	0.014	0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate — Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.63	8.00	95.4	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.73	8.00	96.6	90 - 110

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Rec'd 05/12/10

989270

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

CHAIN OF CUSTODY RECORD

989270

[IM3Plant-WDR-256]

COC Number

TURNAROUND TIME 10 Days

DATE 05/12/10 PAGE 1 OF 1

COMPANY	E2
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612
P.O. NUMBER	392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)		Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-256	05/12/10	900	Water	X	X	X	X		X								3	PH-7
																	3	TOTAL NUMBER OF CONTAINERS

TEMP - 77.1
PH - 6.9 AT 8:06
EC - 7.73
Cr - .002
TOTAL - .004

ALERT !!
Level III QC

For Sample Condition
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished		Roy Phelps	AMI	5-12-10 15:30
Received	Rafael Davila	Rafael	T.L.I	5-12-10 15:30
Relinquished	Rafael Davila	Rafael	T.L.I	5-12-10 22:15
Received	Rafael Davila	Rafael	T.L.I	5-12-10 22:15
Relinquished				
Received				

030

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: E 2 Lab # 989270

Date Delivered: 5/12/10 Time: 22:15 By: ☐Mail ☑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	☑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)? 4°C	☑Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☑Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☐N/A
9.	Does the number of samples received agree with COC?	☑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	☑N/A
12.	Were samples pH checked? pH = See C-O-C	☐Yes	☐No	☑N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☑Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☑ Std	☑Yes	☐No	☐N/A

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☑Other WATER

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Rafael 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

May 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-257 PROJECT, GROUNDWATER MONITORING, TLI NO.: 989379

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-257 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 May 18, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run and the associated matrix spike for sample SC-700B-WDR-257 for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium 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. Iyer

K.R.P. Iyer
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 989379
Date: June 16, 2010
Collected: May 18, 2010
Received: May 18, 2010

ANALYST LIST

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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

Laboratory No.: 989379
Date Received: May 18, 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	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989379-001	SC-700B-WDR-257	E120.1	NONE	5/18/10	8:00	EC	7580	umhos/cm	2.00
989379-001	SC-700B-WDR-257	E200.8	NONE	5/18/10	8:00	Chromium	ND	ug/L	1.0
989379-001	SC-700B-WDR-257	E200.8	NONE	5/18/10	8:00	Manganese	ND	ug/L	10.0
989379-001	SC-700B-WDR-257	E218.6	LABFLT	5/18/10	8:00	Chromium, hexavalent	0.64	ug/L	0.20
989379-001	SC-700B-WDR-257	SM2130B	NONE	5/18/10	8:00	Turbidity	ND	NTU	0.100
989379-001	SC-700B-WDR-257	SM2540C	NONE	5/18/10	8:00	Total Dissolved Solids	4330	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.

005

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

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TUSTIN, CALIFORNIA 92780-7008
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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 600
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. 989379

Printed 6/16/10

Samples Received on 5/18/10 9:00:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-257	989379-001	05/18/2010 08:00	Water

Specific Conductivity - EPA 120.1 Batch 05EC10I 5/19/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989379-001 Specific Conductivity	umhos/cm	05/19/2010	1.00	0.038	2.00	7580

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989379-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7570	7580	0.132	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	702.	706.	99.4	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	703.	706.	99.6	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	702.	706.	99.4	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	984.	1000	98.4	90 - 110

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Chrome VI by EPA 218.6

Batch 05CrH10K

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989379-001 Chromium, Hexavalent	ug/L	05/19/2010 09:23	1.05	0.019	0.20	0.64

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 989249-003

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	15.7	15.7	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.03	5.00	101	90 - 110

Matrix Spike — Lab ID = 989379-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.67	1.70(1.06)	97.2	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.23	5.00	105	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.92	10.0	99.2	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.79	10.0	97.9	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.84	10.0	98.4	95 - 105

Metals by EPA 200.8, Total Batch 052010A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989379-001 Chromium	ug/L	05/20/2010 18:00	5.00	0.075	1.0	ND
Manganese	ug/L	05/20/2010 18:00	5.00	0.06	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND

Duplicate — Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance 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	Acceptance Range
Chromium	ug/L	1.00	45.7	50.0	91.4	90 - 110
Manganese	ug/L	1.00	50.5	50.0	101.	90 - 110

Matrix Spike — Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	225.	250.(250)	90.0	75 - 125
Manganese	ug/L	5.00	245.	250.(250)	98.0	75 - 125

Matrix Spike Duplicate — Lab ID = 989270-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	217.	250.(250)	86.8	75 - 125
Manganese	ug/L	5.00	244.	250.(250)	97.6	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	45.5	50.0	91.0	90 - 110
Manganese	ug/L	1.00	50.9	50.0	102	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.3	50.0	92.6	90 - 110
Manganese	ug/L	1.00	52.6	50.0	105	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.6	50.0	93.2	90 - 110
Manganese	ug/L	1.00	53.3	50.0	107	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.3	50.0	92.6	90 - 110
Manganese	ug/L	1.00	50.3	50.0	101	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	44.9	50.0	89.8	80 - 120
Manganese	ug/L	1.00	51.3	50.0	103	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.7	50.0	95.4	80 - 120
Manganese	ug/L	1.00	52.3	50.0	105	80 - 120

Total Dissolved Solids by SM 2540 C

Batch 05TDS10H — 5/19/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989379-001 Total Dissolved Solids	mg/L	05/19/2010	1.00	0.434	250.	4330

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate — Lab ID = 989379-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	4340	4330	0.231	0 - 5

Lab Control Sample

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: 392895.AA.DM

Printed 6/16/10

Turbidity by SM 2130 B

Batch 05TUC10M — 5/19/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989379-001 Turbidity	NTU	05/19/2010	1.00	0.014	0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate — Lab ID = 989379-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.94	8.00	99.2	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	8.01	8.00	100	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

Rec'd 05/18/10
SDG 989379

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-257] 989379

COC Number
TURNAROUND TIME 10 Days
DATE 05/18/10 PAGE 1 OF 1

COMPANY E2
PROJECT NAME PG&E Topock
PHONE (530) 229-3303 FAX (530) 339-3303
ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612
P.O. NUMBER 392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-257	05/18/10	800	Water	x	x	x	x		x							3	pH = 6
																3	TOTAL NUMBER OF CONTAINERS

pH - 7.0 TIME 805
EC - 7.81
Temp - 78.9
Cr - .001
TOTAL - .003

For Sample Conditions See Form Attached

ALERT !! Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Ron Phelps	OMC	5-18-10 1540
Signature (Received)	Hipolito	TLI	5-18-10 15:40
Signature (Relinquished)	Hipolito	TLI	5-18-10 21:00
Signature (Received)	Shabnam Nia	TLI	5/18/10 21:00
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS
RECEIVED COOL ☐ WARM ☐ °F
CUSTODY SEALED YES ☐ NO ☐
SPECIAL REQUIREMENTS:

032

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 989379

Date Delivered: 05/18/10 **Time:** 21:00 **By:** ☐Mail ☑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	☒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)? 4 °C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒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	☒N/A
12.	Were samples pH checked? pH = see C.O.C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒ Std	☒Yes	☐No	☐N/A

ALERT !! Level III QC

15. ***Sample Matrix:*** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: L. Sturbuning

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June 8, 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-258 PROJECT, GROUNDWATER MONITORING, TLI NO.: 989498

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-258 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 May 26, 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 and the associated matrix spike for sample SC-700B-WDR-257 for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium 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. Iyer
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: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 989498
Date: June 8, 2010
Collected: May 26, 2010
Received: May 26, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Iordan Stavrev
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

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

Laboratory No.: 989498
Date Received: May 26, 2010
Revision 1

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	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989498-001	SC-700B-WDR-2	E120.1	NONE	5/26/10	8:00	EC	7380	umhos/cm	2.00
989498-001	SC-700B-WDR-2	E200.8	NONE	5/26/10	8:00	Chromium	1.3	ug/L	1.0
989498-001	SC-700B-WDR-2	E200.8	NONE	5/26/10	8:00	Manganese	ND	ug/L	10.0
989498-001	SC-700B-WDR-2	E218.6	LABFLT	5/26/10	8:00	Chromium, hexavalent	0.55	ug/L	0.20
989498-001	SC-700B-WDR-2	SM2130B	NONE	5/26/10	8:00	Turbidity	ND	NTU	0.100
989498-001	SC-700B-WDR-2	SM2540C	NONE	5/26/10	8:00	Total Dissolved Solids	4440	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: 392895.AA.DM
Project Number: 392895.AA.DM

Laboratory No. 989498

Printed 6/16/10

Samples Received on 5/26/10 9:30:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-258	989498-001	05/26/2010 08:00	Water

Specific Conductivity - EPA 120.1 Batch 05EC10L 5/28/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989498-001 Specific Conductivity	umhos/cm	05/28/2010	1.00	0.038	2.00	7380

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989501-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	3250	3210	1.24	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	703.	706.	99.6	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	702.	706.	99.4	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	703.	706.	99.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	978.	1000	97.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	979.	1000	97.9	90 - 110

Chrome VI by EPA 218.6 Batch 05CrH10W

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989498-001 Chromium, Hexavalent	ug/L	05/27/2010 07:51	1.05	0.019	0.20	0.55

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 989439-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	105	942.	896.	5.01	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.30	5.00	106.	90 - 110

Matrix Spike — Lab ID = 989498-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.56	1.61(1.06)	95.3	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.00	5.00	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.2	10.0	102.	95 - 105

Client: E2 Consulting Engineers, Inc. Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Metals by EPA 200.8, Total

Batch 052910A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989498-001 Chromium	ug/L	05/29/2010 17:20	5.00	0.075	1.0	1.3
Manganese	ug/L	05/29/2010 17:20	5.00	0.06	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND

Duplicate

Lab ID = 989498-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium	ug/L	5.00	1.09	1.29	16.8	0 - 20
Manganese	ug/L	5.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.1	50.0	100	90 - 110
Manganese	ug/L	1.00	54.1	50.0	108	90 - 110

Matrix Spike

Lab ID = 989498-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	248.	251(250)	98.7	75 - 125
Manganese	ug/L	5.00	251.	250.(250)	100	75 - 125

Matrix Spike Duplicate

Lab ID = 989498-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	257.	251(250)	102	75 - 125
Manganese	ug/L	5.00	273.	250.(250)	109	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.4	50.0	98.8	90 - 110
Manganese	ug/L	1.00	53.3	50.0	107	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.7	50.0	99.4	90 - 110
Manganese	ug/L	1.00	53.9	50.0	108	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.9	50.0	99.8	90 - 110
Manganese	ug/L	1.00	53.8	50.0	108	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.2	50.0	94.4	90 - 110
Manganese	ug/L	1.00	52.3	50.0	105	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.5	50.0	97.0	80 - 120
Manganese	ug/L	1.00	52.4	50.0	105	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	43.0	50.0	86.0	80 - 120
Manganese	ug/L	1.00	47.4	50.0	94.8	80 - 120

Total Dissolved Solids by SM 2540 C Batch 06TDS10A 6/3/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989498-001 Total Dissolved Solids	mg/L	06/01/2010	1.00	0.434	250.	4440

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate Lab ID = 989498-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	4550	4440	2.45	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	486.	500.	97.2	90 - 110

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Turbidity by SM 2130 B

Batch 05TUC10R

5/27/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989498-001 Turbidity	NTU	05/27/2010	1.00	0.014	0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate

Lab ID = 989498-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.90	8.00	98.8	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.85	8.00	98.1	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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

CHAIN OF CUSTODY RECORD

989498

[IM3Plant-WDR-258]

COC Number

TURNAROUND TIME 10 Days

DATE 05/26/10 PAGE 1 OF 1

COMPANY	E2
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612
P.O. NUMBER	392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-258	05/26/10	0800	Water	x	x	x	x	x	3	pH = 7
									3	TOTAL NUMBER OF CONTAINERS

	ANALYSIS	RESULTS
pH	806	7.1
EC		1.62
Cr 6		.001
TOTAL		.003
TEMP		79.3

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished	[signature]	Thor Bakey	OMI	5-26-10 1530
Received	Rafael Davila	Rafael	T.L.F	5-26-10 15:30
Relinquished	Rafael Davila	Rafael	T.L.F	5-26-10 21:30
Received	Shabunina	Luda	TLI	5/26/10 21:30
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

032

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E 2 **Lab #** 989498

Date Delivered: 05/26/10 **Time:** 21:30 **By:** ☐Mail ☐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	☒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)? 4 °C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒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	☒N/A
12.	Were samples pH checked? pH = See C.O.C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒ Std	☒Yes	☐No	☐N/A

ALERT !! Level III QC

ALERT !! Level III QC

15. ***Sample Matrix:*** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Studge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdall** Log-In/Receiving: L. Shabunina

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June 21, 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-259 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 989585

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-259 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 June 2, 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 Organic Carbon analysis was requested on the chain of custody for sample SC-100B-WDR-259 but no sample container was received. When Mr. Shawn Duffy was notified, the analysis was cancelled by him.

The straight run for sample SC-700B-WDR-259 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.

for Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

K.R.P. Iyer
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: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 989585
Date: June 21, 2010
Collected: June 2, 2010
Received: June 2, 2010

ANALYST LIST

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

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

Attention: Shawn Duffy

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

Laboratory No.: 989585
Date Received: June 2, 2010

Analytical Results Summary

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989585-001	SC-700B-WDR-259	E120.1	NONE	6/2/10	8:00	EC	7300	umhos/cm	2.00
989585-001	SC-700B-WOR-259	E200.7	NONE	6/2/10	8:00	Aluminum	ND	ug/L	50.0
989585-001	SC-700B-WDR-259	E200.7	NONE	6/2/10	8:00	Boron	871	ug/L	200
989585-001	SC-700B-WDR-259	E200.7	NONE	6/2/10	8:00	Iron	ND	ug/L	20.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Antimony	ND	ug/L	10.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Arsenic	ND	ug/L	1.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Barium	11.7	ug/L	10.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Chromium	1.1	ug/L	1.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Copper	ND	ug/L	5.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Lead	ND	ug/L	10.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Manganese	ND	ug/L	10.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Molybdenum	17.7	ug/L	10.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Nickel	ND	ug/L	10.0
989585-001	SC-700B-WDR-259	E200.8	NONE	6/2/10	8:00	Zinc	ND	ug/L	10.0
989585-001	SC-700B-WDR-259	E218.6	LABFLT	6/2/10	8:00	Chromium, hexavalent	0.49	ug/L	0.20
989585-001	SC-700B-WDR-259	E300	NONE	6/2/10	8:00	Fluoride	2.06	mg/L	0.500
989585-001	SC-700B-WDR-259	E300	NONE	6/2/10	8:00	Nitrate as N	3.04	mg/L	1.00
989585-001	SC-700B-WDR-259	E300	NONE	6/2/10	8:00	Sulfate	522	mg/L	50.0
989585-001	SC-700B-WDR-259	SM2130B	NONE	6/2/10	8:00	Turbidity	ND	NTU	0.100
989585-001	SC-700B-WDR-259	SM2540C	NONE	6/2/10	8:00	Total Dissolved Solids	4650	mg/L	250
989585-001	SC-700B-WDR-259	SM4500NH3D	NONE	6/2/10	8:00	Ammonia-N	ND	mg/L	0.500
989585-001	SC-700B-WDR-259	SM4500NO2B	NONE	6/2/10	8:00	Nitrite as N	ND	mg/L	0.500

005

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989585-002	SC-100B-WDR-259	E120.1	NONE	6/2/10	8:00	EC	7970	umhos/cm	2.00
989585-002	SC-100B-WDR-259	E200.7	NONE	6/2/10	8:00	Aluminum	ND	ug/L	50.0
989585-002	SC-100B-WDR-259	E200.7	NONE	6/2/10	8:00	Boron	951	ug/L	200
989585-002	SC-100B-WDR-259	E200.7	NONE	6/2/10	8:00	Iron	ND	ug/L	20.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Antimony	ND	ug/L	10.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Arsenic	4.4	ug/L	1.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Barium	26.7	ug/L	10.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Chromium	993	ug/L	1.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Copper	ND	ug/L	5.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Lead	ND	ug/L	10.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Manganese	10.6	ug/L	10.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Molybdenum	23.6	ug/L	10.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Nickel	ND	ug/L	10.0
989585-002	SC-100B-WDR-259	E200.8	NONE	6/2/10	8:00	Zinc	ND	ug/L	10.0
989585-002	SC-100B-WDR-259	E218.6	LABFLT	6/2/10	8:00	Chromium, hexavalent	1030	ug/L	21.0
989585-002	SC-100B-WDR-259	E300	NONE	6/2/10	8:00	Fluoride	2.67	mg/L	0.500
989585-002	SC-100B-WDR-259	E300	NONE	6/2/10	8:00	Nitrate as N	3.67	mg/L	1.00
989585-002	SC-100B-WDR-259	E300	NONE	6/2/10	8:00	Sulfate	548	mg/L	12.5
989585-002	SC-100B-WDR-259	SM2130B	NONE	6/2/10	8:00	Turbidity	ND	NTU	0.100
989585-002	SC-100B-WDR-259	SM2540C	NONE	6/2/10	8:00	Total Dissolved Solids	4950	mg/L	250
989585-002	SC-100B-WDR-259	SM4500NH3D	NONE	6/2/10	8:00	Ammonia-N	ND	mg/L	0.500
989585-002	SC-100B-WDR-259	SM4500NO2B	NONE	6/2/10	8:00	Nitrite as N	ND	mg/L	0.500

Lab Sample ID	Field ID	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989585-003	SC-701-WDR-259	E120.1	NONE	6/2/10	14:00	EC	58600	umhos/cm	2.00
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Antimony	ND	ug/L	10.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Arsenic	1.6	ug/L	1.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Barium	113	ug/L	10.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Beryllium	ND	ug/L	1.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Cadmium	ND	ug/L	3.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Chromium	9.1	ug/L	1.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Cobalt	ND	ug/L	5.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Copper	5.3	ug/L	5.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Lead	ND	ug/L	10.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Manganese	15.1	ug/L	10.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Mercury	ND	ug/L	4.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Molybdenum	183	ug/L	10.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Nickel	ND	ug/L	10.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Selenium	36.5	ug/L	10.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Silver	ND	ug/L	5.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Thallium	ND	ug/L	1.0
989585-003	SC-701-WOR-259	E200.8	NONE	6/2/10	14:00	Vanadium	ND	ug/L	5.0
989585-003	SC-701-WDR-259	E200.8	NONE	6/2/10	14:00	Zinc	13.3	ug/L	10.0
989585-003	SC-701-WDR-259	E218.6	LABFLT	6/2/10	14:00	Chromium, hexavalent	6.8	ug/L	5.2
989585-003	SC-701-WOR-259	E300	NONE	6/2/10	14:00	Fluoride	19.7	mg/L	0.500
989585-003	SC-701-WDR-259	SM2540C	NONE	6/2/10	14:00	Total Dissolved Solids	33100	mg/L	1250

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.

007

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 600
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. 989585

Printed 6/21/10

Samples Received on 6/2/10 9:30:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-259	989585-001	06/02/2010 08:00	Water
SC-100B-WDR-259	989585-002	06/02/2010 08:00	Water
SC-701-WDR-259	989585-003	06/02/2010 14:00	Water

Anions By I.C. - EPA 300.0 Batch 06AN10D

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Fluoride	mg/L	06/03/2010 10:13	5.00	0.0600	0.500	2.06
Nitrate as Nitrogen	mg/L	06/03/2010 10:13	5.00	0.0950	1.00	3.04
Sulfate	mg/L	06/03/2010 11:10	100	4.00	50.0	522.
989585-002 Fluoride	mg/L	06/03/2010 10:25	5.00	0.0600	0.500	2.67
Nitrate as Nitrogen	mg/L	06/03/2010 10:25	5.00	0.0950	1.00	3.67
Sulfate	mg/L	06/03/2010 12:07	25.0	1.00	12.5	548.
989585-003 Fluoride	mg/L	06/03/2010 10:36	5.00	0.0600	0.500	19.7

Method Blank

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 = 989585-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Fluoride	mg/L	5.00	2.11	2.06	2.40	0 - 20
Nitrate as Nitrogen	mg/L	5.00	3.02	3.04	0.660	0 - 20
Sulfate	mg/L	100	510.	522.	2.33	0 - 20

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	4.09	4.00	102	90 - 110
Nitrate as Nitrogen	mg/L	1.00	4.00	4.00	100.	90 - 110
Sulfate	mg/L	1.00	20.1	20.0	100	90 - 110

Matrix Spike — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Fluoride	mg/L	5.00	21.3	22.1(20.0)	96.2	85 - 115
Nitrate as Nitrogen	mg/L	5.00	22.8	23.0(20.0)	98.8	85 - 115
Sulfate	mg/L	100	1020	1020(500)	99.6	85 - 115

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	4.10	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	20.1	20.0	100	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	3.06	3.00	102.	90 - 110
Sulfate	mg/L	1.00	15.4	15.0	103	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Fluoride	mg/L	1.00	3.05	3.00	102	90 - 110
Nitrate as Nitrogen	mg/L	1.00	3.02	3.00	101	90 - 110
Sulfate	mg/L	1.00	15.3	15.0	102.	90 - 110

Nitrite SM 4500-NO2 B Batch 06NO210C

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Nitrite as Nitrogen	mg/L	06/03/2010 11:35	1.00	0.000200	0.500	ND
989585-002 Nitrite as Nitrogen	mg/L	06/03/2010 11:36	1.00	0.000200	0.500	ND

Method Blank

Parameter	Unit	DF	Result
Nitrite as Nitrogen	mg/L	1.00	ND

Duplicate — Lab ID = 989585-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0475	0.0450	106	90 - 110

Matrix Spike — Lab ID = 989585-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0224	0.0200(0.0200	112.	75 - 125

Matrix Spike Duplicate — Lab ID = 989585-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0222	0.0200(0.0200	111.	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0286	0.0270	106	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Nitrite as Nitrogen	mg/L	1.00	0.0203	0.0200	102	90 - 110

Specific Conductivity - EPA 120.1

Batch 06EC10A — 6/4/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Specific Conductivity	umhos/cm	06/04/2010	1.00	0.0380	2.00	7300
989585-002 Specific Conductivity	umhos/cm	06/04/2010	1.00	0.0380	2.00	7970
989585-003 Specific Conductivity	umhos/cm	06/04/2010	1.00	0.0380	2.00	58600

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989585-003

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	58800	58600	0.341	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	701.	706.	99.3	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	699.	706.	99.0	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	706.	706.	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	999.	1000	99.9	90 - 110

Chrome VI by EPA 218.6 Batch 06CrH10B

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Chromium, Hexavalent	ug/L	06/04/2010 11:25	1.05	0.0190	0.20	0.49
989585-002 Chromium, Hexavalent	ug/L	06/04/2010 11:36	105	2.00	21.0	1030
989585-003 Chromium, Hexavalent	ug/L	06/04/2010 14:12	26.2	0.498	5.2	6.8

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 989584-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	14.0	14.0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.02	5.00	100	90 - 110

Matrix Spike — Lab ID = 989584-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.09	30.5	30.4(16.4)	101	90 - 110

Matrix Spike — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.55	1.55(1.06)	100.	90 - 110

Matrix Spike — Lab ID = 989585-002

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	105	2080	2080(1050)	100.	90 - 110

Matrix Spike — Lab ID = 989585-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	26.2	32.0	33.0(26.2)	96.2	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.90	5.00	98.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.5	10.0	105.	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

Metals by EPA 200.7, Total

Batch 060810A-Th

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Boron	ug/L	06/08/2010 19:39	1.00	2.00	200.	871.
Iron	ug/L	06/08/2010 19:39	1.00	4.00	20.0	ND
989585-002 Boron	ug/L	06/08/2010 19:56	1.00	2.00	200.	951.
Iron	ug/L	06/08/2010 19:56	1.00	4.00	20.0	ND

Method Blank

Parameter	Unit	DF	Result
Boron	ug/L	1.00	ND
Iron	ug/L	1.00	ND

Duplicate

Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Boron	ug/L	1.00	901.	871.	3.39	0 - 20
Iron	ug/L	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	4820	5000	96.4	90 - 110
Iron	ug/L	1.00	5190	5000	104	90 - 110

Matrix Spike

Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Boron	ug/L	1.00	2820	2870(2000)	97.4	75 - 125
Iron	ug/L	1.00	1980	2000(2000)	99.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	4770	5000	95.4	90 - 110
Iron	ug/L	1.00	5090	5000	102	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	4570	5000	91.4	90 - 110
Iron	ug/L	1.00	4860	5000	97.2	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	4640	5000	92.8	90 - 110
Iron	ug/L	1.00	4990	5000	99.8	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	ND	0		
Iron	ug/L	1.00	1870	2000	93.5	80 - 120

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	ND	0		
Iron	ug/L	1.00	1900	2000	95.0	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	ND	0		
Iron	ug/L	1.00	1920	2000	96.0	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Boron	ug/L	1.00	ND	0		
Iron	ug/L	1.00	1910	2000	95.5	80 - 120

Metals by EPA 200.7, Total Batch 061010A-Th

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Aluminum	ug/L	06/10/2010 21:52	1.00	2.84	50.0	ND
989585-002 Aluminum	ug/L	06/10/2010 22:14	1.00	2.84	50.0	ND

Method Blank

Parameter	Unit	DF	Result
Aluminum	ug/L	1.00	ND

Duplicate — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Aluminum	ug/L	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	4830	5000	96.6	90 - 110

Matrix Spike — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Aluminum	ug/L	1.00	1600	2000(2000)	80.0	75 - 125

Matrix Spike Duplicate — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Aluminum	ug/L	1.00	1660	2000(2000)	83.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	4740	5000	94.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	4530	5000	90.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	4870	5000	97.4	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	1720	2000	86.0	80 - 120

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	1930	2000	96.5	80 - 120

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	1740	2000	87.0	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Aluminum	ug/L	1.00	1820	2000	91.0	80 - 120

Metals by EPA 200.8, Total Batch 060410A-Hg

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-003 Mercury	ug/L	06/04/2010 16:53	20.0	0.500	4.0	ND

Method Blank

Parameter	Unit	DF	Result
Mercury	ug/L	1.00	ND

Duplicate — Lab ID = 989585-003

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Mercury	ug/L	20.0	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	1.97	2.00	98.5	90 - 110

Matrix Spike — Lab ID = 989585-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Mercury	ug/L	20.0	37.0	40.0(40.0)	92.5	75 - 125

Matrix Spike Duplicate — Lab ID = 989585-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Mercury	ug/L	20.0	37.4	40.0(40.0)	93.5	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	2.00	2.00	100.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	1.92	2.00	96.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	1.92	2.00	96.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	1.95	2.00	97.5	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	1.82	2.00	91.0	80 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	1.87	2.00	93.5	80 - 110

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	1.91	2.00	95.5	80 - 110

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Mercury	ug/L	1.00	1.90	2.00	95.0	80 - 110

Metals by EPA 200.8, Total Batch 060810A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Antimony	ug/L	06/08/2010 15:54	5.00	0.495	10.0	ND
Barium	ug/L	06/08/2010 15:54	5.00	0.210	10.0	11.7
Chromium	ug/L	06/08/2010 15:54	5.00	0.0750	1.0	1.1
Copper	ug/L	06/08/2010 15:54	5.00	0.520	5.0	ND
Lead	ug/L	06/08/2010 15:54	5.00	0.0750	10.0	ND
Manganese	ug/L	06/08/2010 15:54	5.00	0.0600	10.0	ND
Molybdenum	ug/L	06/08/2010 15:54	5.00	0.725	10.0	17.7
Nickel	ug/L	06/08/2010 15:54	5.00	0.205	10.0	ND
Zinc	ug/L	06/08/2010 15:54	5.00	1.32	10.0	ND
989585-002 Antimony	ug/L	06/08/2010 16:21	5.00	0.495	10.0	ND
Barium	ug/L	06/08/2010 16:21	5.00	0.210	10.0	26.7
Chromium	ug/L	06/08/2010 16:21	5.00	0.0750	1.0	993.
Copper	ug/L	06/08/2010 16:21	5.00	0.520	5.0	ND
Lead	ug/L	06/08/2010 16:21	5.00	0.0750	10.0	ND
Manganese	ug/L	06/08/2010 16:21	5.00	0.0600	10.0	10.6
Molybdenum	ug/L	06/08/2010 16:21	5.00	0.725	10.0	23.6
Nickel	ug/L	06/08/2010 16:21	5.00	0.205	10.0	ND
Zinc	ug/L	06/08/2010 16:21	5.00	1.32	10.0	ND
989585-003 Antimony	ug/L	06/08/2010 16:28	5.00	0.495	10.0	ND
Barium	ug/L	06/08/2010 16:28	5.00	0.210	10.0	113.
Beryllium	ug/L	06/08/2010 16:28	5.00	0.150	1.0	ND
Cadmium	ug/L	06/08/2010 16:28	5.00	0.0600	3.0	ND
Chromium	ug/L	06/08/2010 16:28	5.00	0.0750	1.0	9.1
Cobalt	ug/L	06/08/2010 16:28	5.00	0.0750	5.0	ND
Copper	ug/L	06/08/2010 16:28	5.00	0.520	5.0	5.3
Lead	ug/L	06/08/2010 16:28	5.00	0.0750	10.0	ND
Manganese	ug/L	06/08/2010 16:28	5.00	0.0600	10.0	15.1
Molybdenum	ug/L	06/08/2010 16:28	5.00	0.725	10.0	183.
Nickel	ug/L	06/08/2010 16:28	5.00	0.205	10.0	ND
Selenium	ug/L	06/08/2010 16:28	5.00	0.245	10.0	36.5
Silver	ug/L	06/08/2010 16:28	5.00	0.190	5.0	ND
Thallium	ug/L	06/08/2010 16:28	5.00	0.0850	1.0	ND
Vanadium	ug/L	06/08/2010 16:28	5.00	0.0600	5.0	ND
Zinc	ug/L	06/08/2010 16:28	5.00	1.32	10.0	13.3

Method Blank

Parameter	Unit	DF	Result
Antimony	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
Cobalt	ug/L	1.00	ND
Copper	ug/L	1.00	ND
Lead	ug/L	1.00	ND
Manganese	ug/L	1.00	ND
Molybdenum	ug/L	1.00	ND
Nickel	ug/L	1.00	ND
Selenium	ug/L	1.00	ND
Silver	ug/L	1.00	ND
Thallium	ug/L	1.00	ND
Vanadium	ug/L	1.00	ND
Zinc	ug/L	1.00	ND

Duplicate

Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Antimony	ug/L	5.00	ND	0	0	0 - 20
Barium	ug/L	5.00	11.4	11.7	2.60	0 - 20
Beryllium	ug/L	5.00	ND	0	0	0 - 20
Cadmium	ug/L	5.00	ND	0	0	0 - 20
Chromium	ug/L	5.00	1.00	1.10	9.52	0 - 20
Cobalt	ug/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	ND	0	0	0 - 20
Molybdenum	ug/L	5.00	17.6	17.7	0.567	0 - 20
Nickel	ug/L	5.00	ND	0	0	0 - 20
Selenium	ug/L	5.00	ND	0	0	0 - 20
Silver	ug/L	5.00	ND	0	0	0 - 20
Thallium	ug/L	5.00	ND	0	0	0 - 20
Vanadium	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	49.8	50.0	99.6	90 - 110
Barium	ug/L	1.00	49.6	50.0	99.2	90 - 110
Beryllium	ug/L	1.00	49.7	50.0	99.4	90 - 110
Cadmium	ug/L	1.00	49.0	50.0	98.0	90 - 110
Chromium	ug/L	1.00	48.7	50.0	97.4	90 - 110
Cobalt	ug/L	1.00	52.5	50.0	105.	90 - 110
Copper	ug/L	1.00	49.3	50.0	98.6	90 - 110
Lead	ug/L	1.00	49.6	50.0	99.2	90 - 110
Manganese	ug/L	1.00	52.4	50.0	105	90 - 110
Molybdenum	ug/L	1.00	48.3	50.0	96.6	90 - 110
Nickel	ug/L	1.00	50.2	50.0	100	90 - 110
Selenium	ug/L	1.00	49.5	50.0	99.0	90 - 110
Silver	ug/L	1.00	49.2	50.0	98.4	90 - 110
Thallium	ug/L	1.00	49.8	50.0	99.6	90 - 110
Vanadium	ug/L	1.00	48.3	50.0	96.6	90 - 110
Zinc	ug/L	1.00	49.4	50.0	98.8	90 - 110

Matrix Spike — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Antimony	ug/L	5.00	256.	250.(250)	102	75 - 125
Barium	ug/L	5.00	261.	262(250)	99.7	75 - 125
Beryllium	ug/L	5.00	255.	250.(250)	102.	75 - 125
Cadmium	ug/L	5.00	235.	250.(250)	94.0	75 - 125
Chromium	ug/L	5.00	244.	251(250)	97.2	75 - 125
Cobalt	ug/L	5.00	242.	250.(250)	96.8	75 - 125
Copper	ug/L	5.00	238.	250.(250)	95.2	75 - 125
Lead	ug/L	5.00	232.	250.(250)	92.8	75 - 125
Manganese	ug/L	5.00	260.	250.(250)	104.	75 - 125
Molybdenum	ug/L	5.00	260.	268(250)	96.9	75 - 125
Nickel	ug/L	5.00	240.	250.(250)	96.0	75 - 125
Selenium	ug/L	5.00	255.	250.(250)	102.	75 - 125
Silver	ug/L	5.00	219.	250.(250)	87.6	75 - 125
Thallium	ug/L	5.00	234.	250.(250)	93.6	75 - 125
Vanadium	ug/L	5.00	254.	250.(250)	102	75 - 125
Zinc	ug/L	5.00	246.	250.(250)	98.4	75 - 125

Matrix Spike Duplicate

Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Antimony	ug/L	5.00	258.	250.(250)	103	75 - 125
Barium	ug/L	5.00	262.	262(250)	100	75 - 125
Beryllium	ug/L	5.00	260.	250.(250)	104.	75 - 125
Cadmium	ug/L	5.00	238.	250.(250)	95.2	75 - 125
Chromium	ug/L	5.00	243.	251(250)	96.8	75 - 125
Cobalt	ug/L	5.00	254.	250.(250)	102	75 - 125
Copper	ug/L	5.00	237.	250.(250)	94.8	75 - 125
Lead	ug/L	5.00	231.	250.(250)	92.4	75 - 125
Manganese	ug/L	5.00	259.	250.(250)	104	75 - 125
Molybdenum	ug/L	5.00	265.	268(250)	98.9	75 - 125
Nickel	ug/L	5.00	238.	250.(250)	95.2	75 - 125
Selenium	ug/L	5.00	254.	250.(250)	102	75 - 125
Silver	ug/L	5.00	221.	250.(250)	88.4	75 - 125
Thallium	ug/L	5.00	231.	250.(250)	92.4	75 - 125
Vanadium	ug/L	5.00	253.	250.(250)	101	75 - 125
Zinc	ug/L	5.00	247.	250.(250)	98.8	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1.00	51.8	50.0	104	90 - 110
Barium	ug/L	1.00	51.1	50.0	102	90 - 110
Beryllium	ug/L	1.00	51.7	50.0	103	90 - 110
Cadmium	ug/L	1.00	50.8	50.0	102	90 - 110
Chromium	ug/L	1.00	49.9	50.0	99.8	90 - 110
Cobalt	ug/L	1.00	53.6	50.0	107	90 - 110
Copper	ug/L	1.00	50.2	50.0	100	90 - 110
Lead	ug/L	1.00	51.1	50.0	102	90 - 110
Manganese	ug/L	1.00	53.9	50.0	108	90 - 110
Molybdenum	ug/L	1.00	50.6	50.0	101	90 - 110
Nickel	ug/L	1.00	51.0	50.0	102.	90 - 110
Selenium	ug/L	1.00	51.8	50.0	104	90 - 110
Silver	ug/L	1.00	50.9	50.0	102	90 - 110
Thallium	ug/L	1.00	51.4	50.0	103	90 - 110
Vanadium	ug/L	1.00	49.7	50.0	99.4	90 - 110
Zinc	ug/L	1.00	51.3	50.0	103	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1.00	50.6	50.0	101	90 - 110
Barium	ug/L	1.00	50.5	50.0	101.	90 - 110
Beryllium	ug/L	1.00	46.1	50.0	92.2	90 - 110
Cadmium	ug/L	1.00	48.5	50.0	97.0	90 - 110
Chromium	ug/L	1.00	48.5	50.0	97.0	90 - 110
Cobalt	ug/L	1.00	49.6	50.0	99.2	90 - 110
Copper	ug/L	1.00	48.6	50.0	97.2	90 - 110
Lead	ug/L	1.00	48.2	50.0	96.4	90 - 110
Manganese	ug/L	1.00	52.9	50.0	106	90 - 110
Molybdenum	ug/L	1.00	48.1	50.0	96.2	90 - 110
Nickel	ug/L	1.00	49.3	50.0	98.6	90 - 110
Selenium	ug/L	1.00	47.7	50.0	95.4	90 - 110
Silver	ug/L	1.00	49.0	50.0	98.0	90 - 110
Thallium	ug/L	1.00	48.7	50.0	97.4	90 - 110
Vanadium	ug/L	1.00	48.6	50.0	97.2	90 - 110
Zinc	ug/L	1.00	49.7	50.0	99.4	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1.00	ND	0		
Barium	ug/L	1.00	ND	0		
Beryllium	ug/L	1.00	ND	0		
Cadmium	ug/L	1.00	ND	0		
Chromium	ug/L	1.00	ND	0		
Cobalt	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		
Molybdenum	ug/L	1.00	ND	0		
Nickel	ug/L	1.00	ND	0		
Selenium	ug/L	1.00	ND	0		
Silver	ug/L	1.00	ND	0		
Thallium	ug/L	1.00	ND	0		
Vanadium	ug/L	1.00	ND	0		
Zinc	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1.00	ND	0		
Barium	ug/L	1.00	ND	0		
Beryllium	ug/L	1.00	ND	0		
Cadmium	ug/L	1.00	ND	0		
Chromium	ug/L	1.00	ND	0		
Cobalt	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		
Molybdenum	ug/L	1.00	ND	0		
Nickel	ug/L	1.00	ND	0		
Selenium	ug/L	1.00	ND	0		
Silver	ug/L	1.00	ND	0		
Thallium	ug/L	1.00	ND	0		
Vanadium	ug/L	1.00	ND	0		
Zinc	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1.00	ND	0		80 - 120
Barium	ug/L	1.00	ND	0		80 - 120
Beryllium	ug/L	1.00	ND	0		80 - 120
Cadmium	ug/L	1.00	49.1	50.0	98.2	80 - 120
Chromium	ug/L	1.00	50.3	50.0	101	80 - 120
Cobalt	ug/L	1.00	51.8	50.0	104	80 - 120
Copper	ug/L	1.00	50.9	50.0	102	80 - 120
Lead	ug/L	1.00	ND	0		80 - 120
Manganese	ug/L	1.00	54.9	50.0	110	80 - 120
Molybdenum	ug/L	1.00	ND	0		80 - 120
Nickel	ug/L	1.00	51.6	50.0	103	80 - 120
Selenium	ug/L	1.00	ND	0		80 - 120
Silver	ug/L	1.00	49.9	50.0	99.8	80 - 120
Thallium	ug/L	1.00	ND	0		80 - 120
Vanadium	ug/L	1.00	ND	0		80 - 120
Zinc	ug/L	1.00	51.4	50.0	103	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Antimony	ug/L	1.00	ND	0		80 - 120
Barium	ug/L	1.00	ND	0		80 - 120
Beryllium	ug/L	1.00	ND	0		80 - 120
Cadmium	ug/L	1.00	51.1	50.0	102	80 - 120
Chromium	ug/L	1.00	50.8	50.0	102	80 - 120
Cobalt	ug/L	1.00	54.2	50.0	108	80 - 120
Copper	ug/L	1.00	51.8	50.0	104	80 - 120
Lead	ug/L	1.00	ND	0		80 - 120
Manganese	ug/L	1.00	55.1	50.0	110	80 - 120
Molybdenum	ug/L	1.00	ND	0		80 - 120
Nickel	ug/L	1.00	52.2	50.0	104	80 - 120
Selenium	ug/L	1.00	ND	0		80 - 120
Silver	ug/L	1.00	51.8	50.0	104	80 - 120
Thallium	ug/L	1.00	ND	0		80 - 120
Vanadium	ug/L	1.00	ND	0		80 - 120
Zinc	ug/L	1.00	52.2	50.0	104	80 - 120

Metals by EPA 200.8, Total

Batch 061010A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Arsenic	ug/L	06/10/2010 19:11	5.00	0.140	1.0	ND
989585-002 Arsenic	ug/L	06/10/2010 19:11	5.00	0.140	1.0	4.4
989585-003 Arsenic	ug/L	06/10/2010 19:11	5.00	0.140	1.0	1.6

Method Blank

Parameter	Unit	DF	Result
Arsenic	ug/L	1.00	ND

Duplicate — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Arsenic	ug/L	5.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	52.3	50.0	105	90 - 110

Matrix Spike — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Arsenic	ug/L	5.00	258.	250.(250)	103	75 - 125

Matrix Spike Duplicate — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Arsenic	ug/L	5.00	263.	250.(250)	105	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	51.5	50.0	103.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	55.0	50.0	110.	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	54.1	50.0	108	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	52.6	50.0	105	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	53.0	50.0	106.	80 - 110

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Arsenic	ug/L	1.00	50.2	50.0	100	80 - 110

Total Dissolved Solids by SM 2540 C Batch 06TDS10B 6/7/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Total Dissolved Solids	mg/L	06/07/2010	1.00	0.434	250.	4650
989585-002 Total Dissolved Solids	mg/L	06/07/2010	1.00	0.434	250.	4950
989585-003 Total Dissolved Solids	mg/L	06/07/2010	1.00	0.434	1250	33100

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate Lab ID = 989584-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	3570	3450	3.42	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	498.	500.	99.6	90 - 110

Ammonia Nitrogen by SM4500-NH3D Batch 06NH-E10B 6/7/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Ammonia as N	mg/L	06/07/2010	1.00	0.00200	0.500	ND
989585-002 Ammonia as N	mg/L	06/07/2010	1.00	0.00200	0.500	ND

Method Blank

Parameter	Unit	DF	Result
Ammonia as N	mg/L	1.00	ND

Duplicate — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Ammonia as N	mg/L	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	10.3	10.0	103.	90 - 110

Matrix Spike — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	6.01	6.00(6.00)	100	75 - 125

Matrix Spike Duplicate — Lab ID = 989585-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	5.99	6.00(6.00)	99.8	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	5.92	6.00	98.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Ammonia as N	mg/L	1.00	5.86	6.00	97.7	90 - 110

Turbidity by SM 2130 B Batch 06TUC10E 6/3/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989585-001 Turbidity	NTU	06/03/2010	1.00	0.0140	0.100	ND
989585-002 Turbidity	NTU	06/03/2010	1.00	0.0140	0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate

Lab ID = 989585-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	8.10	8.00	101	90 - 110

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	8.06	8.00	101	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Sen Cand
Mona Nassimi
Manager, Analytical Services

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-259]

989585

COC Number

TURNAROUND TIME 10 Days

DATE 06/02/10 PAGE 1 OF 1

COMPANY E2

PROJECT NAME PG&E Topock IM3

PHONE 530-229-3303 FAX 530-339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 392895.AA.DM

SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr(VI) (218.6) Lab Filtered	Title 22 Metals List (200.7, 200.8, 245.1)	EC (120.1)	TDS (2540 c)	Turb (2130)	Total Metals (200.7) See List Below	Ammonia (4500-NH3)	Anions (300.0) F	Anions (300.0) F, NO3, NO2, SO4	TOC (5310 C)	Total Metals (200.7) Mn				NUMBER OF CONTAINERS	COMMENTS
-1 SC-700B-WDR-259	06/02/10	0800		X		X	X	X	X	X		X						4	pH=2
-2 SC-100B-WDR-259	06/02/10	0800		X		X	X	X	X	X		X	X					4	
-3 SC-701-WDR-259	06/02/10	14:00		X	X	X	X				X			X				4	

SAMPLE	TIME	PH	TIME	TEMP	EC		HEX		TOT.
SC-700B-	0800	7.1	8:05	89°	749		.001		.003
SC-100B-	0800	7.3	8:08	79°	8.22		1.25		X
SC-701	1400	7.4	14:10	88°	61.6		.006		.016

For Sample Condition See Form Attached

TOTAL NUMBER OF CONTAINERS 12

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Ron Phillips	OMI	6-2-10 1530
Signature (Received)	Rafael Davila	T.L.I	6-2-10 15:30
Signature (Relinquished)	Rafael Davila	T.L.I	6-2-10 21:30
Signature (Received)	Shakeerina	TLI	6/2/10 21:30
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

The metals include: Cr, Al, Sb, As, Ba, B, Cu, Pb, Mn, Mo, Ni, Fe, Zn

ALERT !!
Level III QC

083

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 989585

Date Delivered: 06/02/10 **Time:** 21:30 **By:** ☐Mail ☒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	☒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)? 4.2° C	☑Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☑Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC? See Comments	☑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	☐N/A
12.	Were samples pH checked? pH = See C.O.C.	☑Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☑Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☑ Std	☑Yes	☐No	☐N/A

ALERT !! Level III QC

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: Toc sample for SC-100R-WDR-259 not received

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: L. Shabunina

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14201 FRANKLIN AVENUE
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www.truesdail.com

June 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-259 PROJECT, SLUDGE MONITORING,

TLI NO.: 989586

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-259 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 June 2, 2010, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

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

No violations or nonconformance actions occurred for this data package.

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

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

for K.R.P. Iyer
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

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www.truesdail.com

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 989586
Date: June 30, 2010
Collected: June 2, 2010
Received: June 2, 2010

ANALYST LIST

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

TRUESDAIL LABORATORIES, INC.

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

Laboratory No.: 989586
Date Received: June 2, 2010

Attention: Shawn Duffy

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

Analytical Results Summary

Lab I.D.	Sample I.D.	Sample Time	SW 7199 *Hexavalent Chromium* mg/kg	EPA 300.0 *Fluoride* mg/kg	SM 2540 B *% Moisture* %
989586	SC-Sludge-WDR-259	14:00	87.0	37.6	65.7

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.

005

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

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

Laboratory No.: 989586
Date Received: June 2, 2010

Analytical Results Summary

METALS ANALYSIS: **Total Metal Analyses as Requested**

Lab I.D.	Sample ID	*Date of Analysis:* Time Coll.	Antimony SW 6010B 06/17/10 mg/kg	Arsenic SW 6010B 06/17/10 mg/kg	Barium SW 6010B 06/17/10 mg/kg	Beryllium SW 6010B 06/17/10 mg/kg	Cadmium SW 6010B 06/17/10 mg/kg	Chromium SW 6010B 06/08/10 mg/kg	Cobalt SW 6010B 06/17/10 mg/kg	Copper SW 6010B 06/17/10 mg/kg	Lead SW 6010B 06/17/10 mg/kg
989586	SC-Sludge-WDR-259	14:00	117	8.50	96.1	2.29	10.6	10300	11.2	196	11.7

Lab I.D.	Sample ID	*Date of Analysis:* Time Coll.	Mercury SW 6020 06/18/10 mg/kg	Molybdenum SW 6010B 06/17/10 mg/kg	Nickel SW 6010B 06/17/10 mg/kg	Selenium SW 6010B 06/17/10 mg/kg	Silver SW 6010B 06/25/10 mg/kg	Thallium SW 6010B 06/17/10 mg/kg	Vanadium SW 6010B 06/17/10 mg/kg	Zinc SW 6010B 06/17/10 mg/kg
989586	SC-Sludge-WDR-259	14:00	0.282	18.8	41.6	ND	ND	ND	133	264

NOTES:

ND: Not detected, or below limit of detection

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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.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 06CrH10A

Laboratory No.: 989586
Date: June 30, 2010
Collected: June 2, 2010
Received: June 2, 2010
Prep/ Analyzed: June 3, 2010
Analytical Batch: 06CrH10A

Investigation: **Hexavalent Chromium by IC Using Method SW 7199**

Analytical Results Hexavalent Chromium

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
989586	SC-Sludge-WDR-259	14:00	16:52	mg/kg	5.00	5.83	87.0

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	989502-2	ND	ND	0.00%	< 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	989502-2	0.00	10.0	8.98	89.8	86.9	89.8	96.7%	75-125%	Yes
IMS	989502-2	0.00	50.0	19.0	952	866	952	91.0%	75-125%	Yes
PDMS	989502-2	0.00	25.0	7.18	180	179	180	99.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.400	---	<0.400	Yes
MRCCS	1.99	2.00	99.4%	90% - 110%	Yes
MRCVS#1	2.02	2.00	101%	90% - 110%	Yes
MRCVS#2	2.06	2.00	103%	90% - 110%	Yes
MRCVS#3	2.06	2.00	103%	90% - 110%	Yes
LCS	1.94	2.00	96.9%	80% - 120%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 989586
Date: June 30, 2010
Collected: June 2, 2010
Received: June 2, 2010
Prep/ Analyzed: June 7, 2010
Analytical Batch: 06SOLID10A

Investigation: **Total Solids by SM 2540 B**

Analytical Results % Moisture

TLI I.D.	Field I.D.	Sample Time	Units	Results
989586	SC-Sludge-WDR-259	14:00	%	65.7

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	989586	65.7	66.2	0.76%	≤ 20%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 989586
Date: June 30, 2010
Collected: June 2, 2010
Received: June 2, 2010
Prep/ Analyzed: June 3, 2010
Analytical Batch: 06AN10D

Investigation: **Fluoride by Ion Chromatography using EPA 300.0**

Analytical Results Fluoride

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
989586	SC-Sludge-WDR-259	14:00	12:19	mg/kg	1.00	11.7	37.6

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	989585-1	2.06	2.11	2.40%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	989585-1	2.06	5.00	4.00	20.0	21.3	22.1	96.2%	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	4.10	4.00	103%	90% - 110%	Yes
MRCVS#1	3.05	3.00	102%	90% - 110%	Yes
MRCVS#2	3.06	3.00	102%	90% - 110%	Yes
LCS	4.09	4.00	102%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
DF: Dilution Factor,

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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REPORT

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

Attention: Shawn Duffy

Samples: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Investigation: Total Metal Analyses as Requested

Laboratory No.: 989586
Reported: June 30, 2010
Collected: June 2, 2010
Received: June 2, 2010
Analyzed: See Below

Analytical Results

SAMPLE ID: SC-Sludge-WDR-259 **Time Collected:** 14:00 **LAB ID:** 989586

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Antimony	SW 6010B	117	1.00	mg/kg	2.00	061710A-Th	06/17/10	16:31
Arsenic	SW 6010B	8.50	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Barium	SW 6010B	96.1	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Beryllium	SW 6010B	2.29	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Cadmium	SW 6010B	10.6	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Chromium	SW 6010B	10300	10.0	mg/kg	13.9	060810A-Th	06/08/10	17:01
Cobalt	SW 6010B	11.2	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Copper	SW 6010B	196	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Lead	SW 6010B	11.7	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Mercury	SW 6020	0.282	5.00	mg/kg	0.126	061810A-Hg	06/16/10	13:48
Molybdenum	SW 6010B	18.8	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Nickel	SW 6010B	41.6	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Selenium	SW 6010B	ND	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Silver	SW 6010B	ND	1.00	mg/kg	1.26	062510A	06/25/10	17:45
Thallium	SW 6010B	ND	1.00	mg/kg	2.00	061710A-Th	06/17/10	16:31
Vanadium	SW 6010B	133	1.00	mg/kg	1.26	061710A-Th	06/17/10	16:31
Zinc	SW 6010B	264	1.00	mg/kg	2.00	061710A-Th	06/17/10	16:31

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.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Samples: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 989586
Reported: June 30, 2010
Collected: June 2, 2010
Received: June 2, 2010

Quality Control/Quality Assurance Report

				DIGESTED BLANK		MRCCS				MRCVS			
Parameter	Method	Batch	Units	Blank	RL	Observed Value	TRUE Value	% Rec	Control Limits	Observed Value	TRUE Value	% Rec	Control Limits %
Antimony	SW 6010B	061710A-Th	mg/kg	ND	2.00	5.04	5.00	101%	90-110%	4.69	5.00	93.8%	90-110%
Arsenic	SW 6010B	061710A-Th	mg/kg	ND	0.50	5.05	5.00	101%	90-110%	4.71	5.00	94.2%	90-110%
Barium	SW 6010B	061710A-Th	mg/kg	ND	1.00	4.96	5.00	99.2%	90-110%	4.75	5.00	95.0%	90-110%
Beryllium	SW 6010B	061710A-Th	mg/kg	ND	0.50	4.95	5.00	99.0%	90-110%	4.61	5.00	92.2%	90-110%
Cadmium	SW 6010B	061710A-Th	mg/kg	ND	0.50	5.03	5.00	101%	90-110%	4.72	5.00	94.4%	90-110%
Chromium	SW 6010B	060810A-Th	mg/kg	ND	1.00	5.10	5.00	102%	90-110%	5.11	5.00	102%	90-110%
Cobalt	SW 6010B	061710A-Th	mg/kg	ND	1.00	4.96	5.00	99.2%	90-110%	4.68	5.00	93.6%	90-110%
Copper	SW 6010B	061710A-Th	mg/kg	ND	1.00	4.95	5.00	99.0%	90-110%	4.67	5.00	93.4%	90-110%
Lead	SW 6010B	061710A-Th	mg/kg	ND	1.00	5.07	5.00	101%	90-110%	4.69	5.00	93.8%	90-110%
Mercury	SW 6020	061810A-Hg	mg/kg	ND	0.100	0.00198	0.00200	98.0%	90-110%	0.00	0.00200	98.5%	90-110%
Molybdenum	SW 6010B	061710A-Th	mg/kg	ND	1.00	4.95	5.00	99.0%	90-110%	4.69	5.00	93.8%	90-110%
Nickel	SW 6010B	061710A-Th	mg/kg	ND	1.00	4.97	5.00	99.4%	90-110%	4.68	5.00	93.6%	90-110%
Selenium	SW 6010B	061710A-Th	mg/kg	ND	1.00	5.04	5.00	101%	90-110%	4.75	5.00	95.0%	90-110%
Silver	SW 6010B	062510A	mg/kg	ND	1.00	4.88	5.00	97.6%	90-110%	4.78	5.00	95.6%	90-110%
Thallium	SW 6010B	061710A-Th	mg/kg	ND	2.00	5.01	5.00	100%	90-110%	4.72	5.00	94.4%	90-110%
Vanadium	SW 6010B	061710A-Th	mg/kg	ND	1.00	4.82	5.00	96.4%	90-110%	4.54	5.00	90.8%	90-110%
Zinc	SW 6010B	061710A-Th	mg/kg	ND	2.00	5.01	5.00	100%	90-110%	4.79	5.00	95.8%	90-110%

INTERFERENCE CHECK STANDARD

Parameter	Method	Units	ICS Obs.	ICS Theo.	% Rec.	Control Limits
Arsenic	SW 6010B	mg/kg	1.94	2.00	97.0%	80-120%
Cadmium	SW 6010B	mg/kg	1.93	2.00	96.5%	80-120%
Chromium	SW 6010B	mg/kg	1.87	2.00	93.5%	80-120%
Cobalt	SW 6010B	mg/kg	1.92	2.00	96.0%	80-120%
Copper	SW 6010B	mg/kg	1.98	2.00	99.0%	80-120%
Mercury	SW 6020	mg/kg	0.00187	0.00200	93.5%	80-120%
Nickel	SW 6010B	mg/kg	1.96	2.00	98.0%	80-120%
Zinc	SW 6010B	mg/kg	2.00	2.00	100%	80-120%

LABORATORY CONTROL SAMPLES / **SAMPLE DUPLICATES**

Parameter	Method	Units	LCS Obs.	LCS Theo.	% Rec.	Control Limits	SAMPLE ID	SAMPLE RESULT	DUP RESULT	% RPD	Precision Control Limits %
Antimony	SW 6010B	mg/kg	94.1	100	94.1%	80-120%	989586	117	121	2.87%	≤20
Arsenic	SW 6010B	mg/kg	95.7	100	95.7%	80-120%	989586	8.50	9.02	5.93%	≤20
Barium	SW 6010B	mg/kg	95.8	100	95.8%	80-120%	989586	96.1	98.7	2.69%	≤20
Beryllium	SW 6010B	mg/kg	92.4	100	92.4%	80-120%	989586	2.29	2.17	5.03%	≤20
Cadmium	SW 6010B	mg/kg	97.9	100	97.9%	80-120%	989586	10.6	10.6	0.61%	≤20
Chromium	SW 6010B	mg/kg	98.5	100	98.5%	80-120%	989586	10300	9200	11.3%	≤20
Cobalt	SW 6010B	mg/kg	96.8	100	96.8%	80-120%	989586	11.2	11.5	3.08%	≤20
Copper	SW 6010B	mg/kg	95.0	100	95.0%	80-120%	989586	196	193	1.53%	≤20
Lead	SW 6010B	mg/kg	97.5	100	97.5%	80-120%	989586	11.7	12.8	8.99%	≤20
Mercury	SW 6020	mg/kg	0.487	0.500	97.4%	80-120%	989586	0.282	0.256	9.72%	≤20
Molybdenum	SW 6010B	mg/kg	96.7	100	96.7%	80-120%	989586	18.8	19.9	5.58%	≤20
Nickel	SW 6010B	mg/kg	95.8	100	95.8%	80-120%	989586	41.6	44.2	6.18%	≤20
Selenium	SW 6010B	mg/kg	93.8	100	93.8%	80-120%	989586	ND	ND	0.00%	≤20
Silver	SW 6010B	mg/kg	95.7	100	95.7%	80-120%	989586	ND	ND	0.00%	≤20
Thallium	SW 6010B	mg/kg	96.6	100	96.6%	80-120%	989586	ND	ND	0.00%	≤20
Vanadium	SW 6010B	mg/kg	93.6	100	93.6%	80-120%	989586	133	136	2.34%	≤20
Zinc	SW 6010B	mg/kg	94.9	100	94.9%	80-120%	989586	264	300	12.6%	≤20

MATRIX SPIKE

Sample ID	Parameter	Method	Units	Sample Result	DF	Spike Level	Total Amt. of Spike	Theo. Value	MS Obs.	% Rec.	Accuracy Control Limits %
989586	Antimony	SW 6010B	mg/kg	117	1.00	259	259	376	396	108%	75-125%
989586	Arsenic	SW 6010B	mg/kg	8.50	1.00	259	259	267	309	116%	75-125%
989586	Barium	SW 6010B	mg/kg	96.1	1.00	259	259	355	341	94.8%	75-125%
989586	Beryllium	SW 6010B	mg/kg	2.29	1.00	259	259	261	307	118%	75-125%
989586	Cadmium	SW 6010B	mg/kg	10.6	1.00	259	259	269	268	99.6%	75-125%
989586	Chromium	SW 6010B	mg/kg	10300	10.0	282	2817	13117	12800	88.7%	75-125%
989586	Cobalt	SW 6010B	mg/kg	11.2	1.00	259	259	270	261	96.4%	75-125%
989586	Copper	SW 6010B	mg/kg	196	1.00	259	259	455	436	92.6%	75-125%
989586	Lead	SW 6010B	mg/kg	11.7	1.00	259	259	270	255	94.0%	75-125%
989586	Mercury	SW 6020	mg/kg	0.282	5.00	0.251	1.26	1.54	1.51	97.8%	75-125%
989586	Molybdenum	SW 6010B	mg/kg	18.8	1.00	259	259	277	297	108%	75-125%
989586	Nickel	SW 6010B	mg/kg	41.6	1.00	259	259	300	285	94.1%	75-125%
989586	Selenium	SW 6010B	mg/kg	0.00	1.00	259	259	259	251	97.1%	75-125%
989586	Silver	SW 6010B	mg/kg	0.00	1.00	259	259	259	273	106%	75-125%
989586	Thallium	SW 6010B	mg/kg	0.00	1.00	259	259	259	200	77.2%	75-125%
989586	Vanadium	SW 6010B	mg/kg	133	1.00	259	259	392	359	87.4%	75-125%
989586	Zinc	SW 6010B	mg/kg	264.3	1.00	259	259	523	506	93.3%	75-125%

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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Dry Weight Calculations

Date Calculated: 6/30/10

	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	12.902	---	65.7	37.6152	37.6	4.00	11.7
Hexavalent Chromium	29.8603	---	65.7	87.0563	87.0	2.00	5.83
QC analyzed on 989502-2							
Hexavalent Chromium	ND	---	10.9	ND	ND	0.400	0.449
Hexavalent Chromium - Dup	ND	---	10.9	ND	ND	0.400	0.449
Hexavalent Chromium - MS	77.4030	---	10.9	86.8720	86.9	4.00	4.49
Hexavalent Chromium - IMS	771.922	---	10.9	866.354	866	20.0	22.4
Hexavalent Chromium - PDMS	159.223	---	10.9	178.702	179	10.0	11.2
Antimony	40.23	1.00	65.7	117.2886	117	0.431	2.00
Arsenic	2.915	1.00	65.7	8.4985	8.50	0.431	1.26
Barium	32.96	1.00	65.7	96.093	96.1	0.431	1.26
Beryllium	0.7843	1.00	65.7	2.2866	2.29	0.431	1.26
Cadmium	3.62	1.00	65.7	10.5598	10.6	0.431	1.26
Chromium	3529	10.0	65.7	10289	10300	4.76	13.9
Cobalt	3.835	1.00	65.7	11.1808	11.2	0.431	1.26
Copper	67.42	1.00	65.7	196.560	196	0.431	1.26
Lead	4.014	1.00	65.7	11.7026	11.7	0.431	1.26
Mercury	0.09693	5.00	65.7	0.28259	0.282	0.0431	0.126
Molybdenum	6.440	1.00	65.7	18.7755	18.8	0.431	1.26
Nickel	14.26	1.00	65.7	41.5743	41.6	0.431	1.26
Selenium	ND	1.00	65.7	ND	ND	0.431	1.26
Silver	ND	1.00	65.7	ND	ND	0.431	1.26
Thallium	ND	1.00	65.7	ND	ND	0.431	2.00
Vanadium	45.65	1.00	65.7	133.090	133	0.431	1.26
Zinc	90.66	1.00	65.7	264.315	264	0.431	2.00

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

where:
$Sample_{ww}$ = Sample result in wet weight

TRUESDAIL LABORATORIES, INC.

TOTAL SOLIDS BY SM 2540 B

Date of Analysis: 06/07/10

E2 Sean

Analytical Batch: 06SOLID10A
Oven Temp, °C: 105

Lab No.	Dish Number	Weight of dish, g	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
989586	1	1.3234	2.0592	3.3826	2.0300	0.7066	34.314	65.686
D	2	1.3219	2.0567	3.3786	2.0174	0.6955	33.816	66.184

Relative Percent Difference			
Sample ID	Sample	Sample Dup	RPD
989586	65.686	66.184	0.8

$$\% \text{ Total Solids} = \frac{(A - B) * 100}{C - B} = \frac{\text{Weight of dried residue} \times 100}{\text{Weight of wet sample}}$$

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

Reviewer Name

Reviewer Signature

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CHAIN OF CUSTODY RECORD

[IM3plant-WDR-259]

COC Number 989586

TURNAROUND TIME 10 Days

DATE 06/02/10 PAGE 1 OF 1

COMPANY E2

PROJECT NAME PG&E Topock IM3

PHONE 530-229-3303 FAX 530-339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 392895.AA.DM

SAMPLERS (SIGNATURE)

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Anions (300.0) F	Bioassay 96hr Acute	Metals (6010B) Title 22, (includes Mercury)	Cr6 (7199)	NUMBER OF CONTAINERS	COMMENTS
SC-Sludge-WDR-259	06/02/10	14:00	Sludge	X		X	X	4	
								4	TOTAL NUMBER OF CONTAINERS

For Sample Conditions See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Ron Phelps	OMI	6-2-10 1536
Signature (Received)	Rafael Davila	T.L.I	6-2-10 15:30
Signature (Relinquished)	Rafael Davila	T.L.I	6-2-10 21:30
Signature (Received)	Shabnam	TLI	6/2/10 21:30
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

ALERT !!
Level III QC

043

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 989586

Date Delivered: 06/02/10 **Time:** 21:30 **By:** ☐Mail ☑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	☒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)? 4.2° C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc.)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒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	☒N/A
12.	Were samples pH checked? pH = _____	☐Yes	☐No	☒N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒ Std	☒Yes	☐No	☐N/A

ALERT !! Level III QC

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☒Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☐Other_____

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Shabnam

LABORATORY REPORT

Aquatic Testing Laboratories
"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

Date: June 28, 2010

Client: Truesdail Laboratories, Inc.
14201 Franklin Avenue
Tustin, CA 92780
Attn: Sean Condon

Laboratory No.: A-10062201-001
Sample ID.: 989586

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

Date Sampled: 06/02/10
Date Received: 06/22/10
Date Tested: 06/23/10 to 06/27/10

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
989586	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

Lab No.: A10062201-001

Client/ID: Tamsdale 989586

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish length (mm): av: 27; min: 25; max: 29.
Fish weight (gm): av: 0.37; min: 0.30; max: 0.45.
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 $CaCO_3$).
QA/QC Batch No.: RT-100602.

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

	INITIAL			24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	6-23-10 1030			6-24-10 1000				6-25-10 1000				6-26-10 1020				6-27-10 1100			
Analyst:																			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.5	8.6	7.6	20.9	8.2	7.4	0	20.6	8.3	7.5	0	21.0	8.1	7.4	0	21.2	7.9	7.3	0
Control B	20.4	8.6	7.6	20.8	8.1	7.4	0	20.5	8.1	7.5	0	21.0	8.1	7.3	0	21.1	7.9	7.3	0
400 mg/l A	20.4	8.5	7.7	20.9	8.4	7.6	0	20.6	8.3	7.7	0	21.0	8.2	7.6	0	21.3	8.2	7.1	0
400 mg/l B	20.3	8.5	7.7	20.8	8.6	7.6	0	20.5	8.5	7.7	0	21.0	8.4	7.7	0	21.1	8.5	7.7	0
750 mg/l A	20.3	8.5	7.8	20.8	8.7	7.7	0	20.6	8.5	7.8	0	20.9	8.5	7.7	0	21.1	8.6	7.8	0
750 mg/l B	20.2	8.6	7.8	20.7	8.5	7.7	0	20.5	8.4	7.8	0	20.9	8.5	7.8	0	21.0	8.5	7.8	0

Comments: Extraction method: Mechanical shaking X.
None (aqueous solution) —.
Dissolved Oxygen (DO) readings in mg/l O_2.

	CONTROL		HIGH CONCENTRATION	
	Alkalinity	Hardness	Alkalinity	Hardness
Initial	37 mg/l $CaCO_3$	46 mg/l $CaCO_3$	40 mg/l $CaCO_3$	49 mg/l $CaCO_3$
Final	34 mg/l $CaCO_3$	46 mg/l $CaCO_3$	65 mg/l $CaCO_3$	81 mg/l $CaCO_3$

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

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.)

TRUESDAIL LABORATORIES, INC.

14201 Franklin Avenue, Tustin, California 92780

ALERT!!
Level III QC

Laboratory Transmittal Form

Date: 06/21/10 Page: 1 of 1
Laboratory: Aquatic Testing Laboratories
Attention: Joe LeMay
Address: 4350 Transport St. #107, Ph#:805-650- 0546
City: Ventura State: CA Zip: 93003

Please sign, date & *return this form with the results*, to:
TRUESDAIL LABORATORIES, INC.
Attn: Sean Condon
14201 Franklin Avenue, Tustin, California 92780
Please include Truesdail Sample ID on your invoice

Sample ID	Date	Time	Matrix	Tests/Methods Required	Container Qty.	Comments/Container Type
				Acute Aquatic Toxicity, 96 hr Acute		
989586	6/2/10	14:00	Sludge	X	1	Glass /Jar 9 oz
						Level 3
					1	Containers Total

Type of Service:
☒ X Normal (5-10 day TAT) ☐ RUSH (5 day TAT)
☐ URGENT (24-48 hr. TAT) ☐ Results needed by: _____

Sample Conditions:
Received on Ice? Yes/No Sealed? Yes/No
Special Shipment/Handling or Storage Requirements:

	Signature	Printed Name	Company	Date	Time
Relinquished by:	*Luda Shabunina*	Luda Shabunina	TLI	06/21/10	15:30
Received by:	Loci Montoya	Loci Montoya	ATL	6-22-10	0930

TLI Phone:(714) 730-6239 • Fax (714) 730-6462

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June 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-260 PROJECT, GROUNDWATER MONITORING, TLI NO.: 989709

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-260 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 June 9, 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 and the associated matrix spike for sample SC-700B-WDR-260 for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium 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.

fg – Mona Nassimi
Manager, Analytical Services

K.R.P. Iyer
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: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 989709
Date: June 23, 2010
Collected: June 9, 2010
Received: June 9, 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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

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

Laboratory No.: 989709
Date Received: June 9, 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	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989709-001	SC-700B-WDR-260	E120.1	NONE	6/9/10	8:00	EC	7280	umhos/cm	2.00
989709-001	SC-700B-WDR-260	E200.8	NONE	6/9/10	8:00	Chromium	ND	ug/L	1.0
989709-001	SC-700B-WDR-260	E200.8	NONE	6/9/10	8:00	Manganese	ND	ug/L	10.0
989709-001	SC-700B-WDR-260	E218.6	LABFLT	6/9/10	8:00	Chromium, hexavalent	0.67	ug/L	0.20
989709-001	SC-700B-WDR-260	SM2130B	NONE	6/9/10	8:00	Turbidity	ND	NTU	0.100
989709-001	SC-700B-WDR-260	SM2540C	NONE	6/9/10	8:00	Total Dissolved Solids	4530	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.

005

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REPORT

Client: **E2 Consulting Engineers, Inc.**
155 Grand Avenue, Suite 800
Oakland, CA 94612
Attention: Shawn Duffy
Project Neme: PG&E Topock Project
P.O. Number: 392895.AA.DM
Project Number: 392895.AA.DM

Laboratory No. 989709

Printed 6/23/10

Samples Received on 6/9/10 9:30:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-260	989709-001	06/09/2010 08:00	Water

Specific Conductivity - EPA 120.1 Batch 06EC10B 6/11/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989709-001 Specific Conductivity	umhos/cm	06/11/2010	1.00	0.0380	2.00	7280

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989709-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7290	7280	0.137	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	701.	706.	99.3	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	703.	706.	99.6	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	704.	706.	99.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	986.	1000	98.6	90 - 110

Chrome VI by EPA 218.6

Batch 06Crn 0C

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989709-001 Chromium, Hexavalent	ug/L	06/10/2010 11:54	1.05	0.0190	0.20	0.67

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate Lab ID = 989710-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	2.50	2.48	0.803	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.00	5.00	100.	90 - 110

Matrix Spike Lab ID = 989709-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.72	1.73(1.06)	99.1	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.94	5.00	98.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.4	10.0	104.	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

Metals by EPA 200.8, Total Batch 061410A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989709-001 Chromium	ug/L	06/14/2010 14:50	5.00	0.0750	1.0	ND
Manganese	ug/L	06/14/2010 14:50	5.00	0.0600	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND

Duplicate — Lab ID = 989709-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance 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	Acceptance Range
Chromium	ug/L	1.00	49.7	50.0	99.4	90 - 110
Manganese	ug/L	1.00	52.8	50.0	106	90 - 110

Matrix Spike — Lab ID = 989709-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	234.	250.(250)	93.6	75 - 125
Manganese	ug/L	5.00	233.	250.(250)	93.2	75 - 125

Matrix Spike Duplicate — Lab ID = 989709-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	234.	250.(250)	93.6	75 - 125
Manganese	ug/L	5.00	229.	250.(250)	91.6	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.6	50.0	99.2	90 - 110
Manganese	ug/L	1.00	52.6	50.0	105	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.5	50.0	95.0	90 - 110
Manganese	ug/L	1.00	47.5	50.0	95.0	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.8	50.0	97.6	90 - 110
Manganese	ug/L	1.00	48.6	50.0	97.2	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	46.6	50.0	93.2	80 - 120
Manganese	ug/L	1.00	46.5	50.0	93.0	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.7	50.0	97.4	80 - 120
Manganese	ug/L	1.00	51.6	50.0	103	80 - 120

Total Dissolved Solids by SM 2540 C

Batch 06TDS10D — 6/15/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989709-001 Total Dissolved Solids	mg/L	06/15/2010	1.00	0.434	250.	4530

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate — Lab ID = 989709-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	4310	4530	4.98	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	494.	500.	98.8	90 - 110

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Turbidity by SM 2130 B

Batch 06TUC10K

6/10/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989709-001 Turbidity	NTU	06/10/2010	1.00	0.0140	0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate

Lab ID = 989709-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.90	8.00	98.8	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.83	8.00	97.9	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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-260]

989709

COC Number

TURNAROUND TIME 10 Days

DATE 06/09/10 PAGE 1 OF 1

COMPANY	E2
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612
P.O. NUMBER	392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE	

Rec'd 06/09/10
Sec 989709

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-260	06/09/10	0800	Water	x	x	x	x		x							3	pH = 7
																3	TOTAL NUMBER OF CONTAINERS

Analysis

pH 7.6 0809
FC 7.66 0810
Cr6 .001 0818
TOTAL .004 0826
TEMP 82.2 0809

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished) C. Knight	C. KNIGHT	QUI	Date/ Time 6-9-10 15:30
Signature (Received) Rafael Davila	Rafael	T.L.I	Date/ Time 6-9-10 15:30
Signature (Relinquished) Rafael Davila	Rafael	T.L.I	Date/ Time 6-9-10 21:30
Signature (Received) Shabunina	Linda	TLI	Date/ Time JUN 09 2010 11:30
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

032

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 989709

Date Delivered: 06 / 09 /10 **Time:** 21:30 **By:** ☐Mail ☒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	☒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)? 4 °C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc.)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒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	☒N/A
12.	Were samples pH checked? pH = See C.O.C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒ Std	☒Yes	☐No	☐N/A

ALERT !! Level III QC

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: L. Shabunina

\\MATRIX\env\Disasp.FormBlank.doc

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

June 25, 2010

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-261 PROJECT, GROUNDWATER MONITORING, TLI NO.: 989819

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-261 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 June 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 before disposal.

The matrix spike for sample SC-700B-WDR-261 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.

for Mona Nassimi
Manager, Analytical Services

K.R.P. Iyer
Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 989819
Date: June 25, 2010
Collected: June 17, 2010
Received: June 17, 2010

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Iordan Stavrev
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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

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

Laboratory No.: 989819
Date Received: June 17, 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	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989819-001	SC-700B-WDR-261	E120.1	NONE	6/17/10	8:00	EC	7530	umhos/cm	2.00
989819-001	SC-700B-WDR-261	E200.7	NONE	6/17/10	8:00	Chromium	ND	ug/L	1.0
989819-001	SC-700B-WDR-261	E200.7	NONE	6/17/10	8:00	Manganese	ND	ug/L	10.0
989819-001	SC-700B-WDR-261	E218.6	LABFLT	6/17/10	8:00	Chromium, hexavalent	ND	ug/L	0.20
989819-001	SC-700B-WDR-261	SM2130B	NONE	6/17/10	8:00	Turbidity	ND	NTU	0.100
989819-001	SC-700B-WDR-261	SM2540C	NONE	6/17/10	8:00	Total Dissolved Solids	4350	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.

005

TRUESDAIL LABORATORIES, INC.

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TUSTIN, CALIFORNIA 92780-7008
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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. 989819

Printed 6/25/10

Samples Received on 6/17/10 10:00:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-261	989819-001	06/17/2010 08:00	Water

Specific Conductivity - EPA 120.1 Batch 06EC10D 6/21/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989819-001 Specific Conductivity	umhos/cm	06/21/2010	1.00	0.0380	2.00	7530

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989819-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7540	7530	0.133	0 - 10

Lab 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	713.	706.	101	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	717.	706.	102	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	978.	1000	97.8	90 - 110

Chrome VI by EPA 218.6

Batch 06CrH10E

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989819-001 Chromium, Hexavalent	ug/L	06/22/2010 08:36	1.05	0.0190	0.20	ND

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 989820-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	1.05	3.43	3.40	0.878	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.05	5.00	101.	90 - 110

Matrix Spike — Lab ID = 989819-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.25	1.25(1.06)	100	90 - 110

Matrix Spike — Lab ID = 989819-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.74	5.85(5.25)	98.0	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	5.06	5.00	101	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.96	10.0	99.6	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

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.1	10.0	101.	95 - 105

Metals by EPA 200.8, Total

Batch 062110B

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989819-001 Chromium	ug/L	06/21/2010 17:22	5.00	0.0960	1.0	ND
Manganese	ug/L	06/21/2010 17:22	5.00	0.210	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND

Duplicate

Lab ID = 989819-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance 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	Acceptance Range
Chromium	ug/L	1.00	51.5	50.0	103.	90 - 110
Manganese	ug/L	1.00	51.9	50.0	104	90 - 110

Matrix Spike

Lab ID = 989819-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	236.	250.(250)	94.4	75 - 125
Manganese	ug/L	5.00	234.	250.(250)	93.6	75 - 125

Matrix Spike Duplicate

Lab ID = 989819-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	235.	250.(250)	94.0	75 - 125
Manganese	ug/L	5.00	230.	250.(250)	92.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.5	50.0	103.	90 - 110
Manganese	ug/L	1.00	51.6	50.0	103	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.3	50.0	96.6	90 - 110
Manganese	ug/L	1.00	48.4	50.0	96.8	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.3	50.0	98.6	80 - 120
Manganese	ug/L	1.00	49.1	50.0	98.2	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.6	50.0	99.2	80 - 120
Manganese	ug/L	1.00	49.5	50.0	99.0	80 - 120

Total Dissolved Solids by SM 2540 C

Batch 06TDS10E — 6/22/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989819-001 Total Dissolved Solids	mg/L	06/22/2010	1.00	0.434	250.	4350

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate — Lab ID = 989819-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	4390	4350	0.915	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	498.	500.	99.6	90 - 110

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Turbidity by SM 2130 B

Batch 06TUC10O — 6/18/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989819-001 Turbidity	NTU	06/18/2010	1.00	0.0140	0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate — Lab ID = 989819-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.44	8.00	93.0	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.40	8.00	92.5	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi
Manager, Analytical Services

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-261]

989819

COC Number

TURNAROUND TIME 10 Days

DATE 06/17/10 PAGE 1 OF 1

COMPANY E2

PROJECT NAME PG&E Topock

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 392895.AA.DM TEAM 1

SAMPLERS (SIGNATURE

Rec'd 06/17/10
989819

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM254(X)C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-261	06/17/10	0800	Water	x	x	x	x		x							3	pH = 6
																3	TOTAL NUMBER OF CONTAINERS

ANALYSIS

pH 7.0 0809
EC 7.88 0808
Cr_6 .002 0819
TOTAL .004 0826
TEMP 19.5 0809

ALERT !!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	JAIDO	ONT	6/17/10 1530
Signature (Received)	Hipolito	TLI	6-17-10 15:30
Signature (Relinquished)	Hipolito	TLI	6-17-10 22:00
Signature (Received)	Linda	TLI	JUN 17 2010 22:00
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

033

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 989819

Date Delivered: 06/17/10 **Time:** 12:00 **By:** ☐Mail ☒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	☒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)? 4 °C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒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	☒N/A
12.	Were samples pH checked? pH = See C.O.C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒Std	☒Yes	☐No	☐N/A

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: L. Shakespeare

ALERT !!
Level III QC

TRUESDAIL LABORATORIES, INC.
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14201 FRANKLIN AVENUE
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www.truesdail.com

July 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-262 PROJECT, GROUNDWATER MONITORING, TLI NO.: 989902

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-262 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 June 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.

The result from the straight run and associated matrix spike for sample SC-700B-WDR-262 for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium 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.

fs—Mona Nassimi
Manager, Analytical Services

K.R.P. Iyer
Quality Assurance/Quality Control Officer

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(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.: 989902
Date: June 30, 2010
Collected: June 23, 2010
Received: June 23, 2010

ANALYST LIST

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

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

Laboratory No.: 989902
Date Received: June 23, 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	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989902-001	SC-700B-WDR-262	E120.1	NONE	6/23/10	8:00	EC	7250	umhos/cm	2.00
989902-001	SC-700B-WDR-262	E200.8	NONE	6/23/10	8:00	Chromium	ND	ug/L	1.0
989902-001	SC-700B-WDR-262	E200.8	NONE	6/23/10	8:00	Manganese	ND	ug/L	10.0
989902-001	SC-700B-WDR-262	E218.6	LABFLT	6/23/10	8:00	Chromium, hexavalent	0.22	ug/L	0.20
989902-001	SC-700B-WDR-262	SM2130B	NONE	6/23/10	8:00	Turbidity	ND	NTU	0.100
989902-001	SC-700B-WDR-262	SM2540C	NONE	6/23/10	8:00	Total Dissolved Solids	4530	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.

005

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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. 989902

Printed 7/1/10

Samples Received on 6/23/10 8:45:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-262	989902-001	06/23/2010 08:00	Water

Specific Conductivity - EPA 120.1 Batch 06EC10F 6/24/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989902-001 Specific Conductivity	umhos/cm	06/24/2010	1.00	0.0380	2.00	7250

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989902-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7270	7250	0.275	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	701.	706.	99.3	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	701.	706.	99.3	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	967.	1000	96.7	90 - 110

Chrome VI by EPA 218.6

Batch 06CrH10F

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989902-001 Chromium, Hexavalent	ug/L	06/24/2010 08:40	1.05	0.0190	0.20	0.22

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 989879-002

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	26.2	301.	303.	0.662	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.86	5.00	97.2	90 - 110

Matrix Spike — Lab ID = 989902-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.22	1.28(1.06)	94.3	90 - 110

Matrix Spike — Lab ID = 989902-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.18	5.25(5.25)	98.7	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.99	5.00	99.8	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.0	10.0	100.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.78	10.0	97.8	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

Metals by EPA 200.8, Total Batch 062510A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989902-001 Chromium	ug/L	06/25/2010 14:37	5.00	0.0750	1.0	ND
Manganese	ug/L	06/25/2010 14:37	5.00	0.0600	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND

Duplicate — Lab ID = 989902-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance 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	Acceptance Range
Chromium	ug/L	1.00	50.8	50.0	102	90 - 110
Manganese	ug/L	1.00	50.7	50.0	101	90 - 110

Matrix Spike — Lab ID = 989902-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	245.	250.(250)	98.0	75 - 125
Manganese	ug/L	5.00	242.	250.(250)	96.8	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.7	50.0	101	90 - 110
Manganese	ug/L	1.00	50.7	50.0	101	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	48.6	50.0	97.2	90 - 110
Manganese	ug/L	1.00	48.9	50.0	97.8	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.4	50.0	98.8	80 - 120
Manganese	ug/L	1.00	49.3	50.0	98.6	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	50.1	50.0	100	80 - 120
Manganese	ug/L	1.00	50.7	50.0	101	80 - 120

Total Dissolved Solids by SM 2540 C Batch 06TDS10G 6/24/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989902-001 Total Dissolved Solids	mg/L	06/24/2010	1.00	0.434	250.	4530

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate Lab ID = 989902-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	4340	4530	4.28	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	505.	500.	101.	90 - 110

Client: E2 Consulting Engineers, Inc.

Project Name: PG&E Topock Project
Project Number: 392895.AA.DM

Turbidity by SM 2130 B

Batch 06TUC10R

6/24/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989902-001 Turbidity	NTU	06/24/2010	1.00	0.0140	0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate

Lab ID = 989902-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.80	8.00	97.5	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.82	8.00	97.8	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi
Manager, Analytical Services

Rec'd 06/23/10
SDG 989902

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-262]

989902

COC Number

TURNAROUND TIME 10 Days

DATE 06/23/10 PAGE 1 OF 1

COMPANY E2

PROJECT NAME PG&E Topock

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 392895.AA.DM TEAM 1

SAMPLERS (SIGNATURE)

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-262	06/23/10	800	Water	x	x	x	x	x	3	pH = 7
									3	TOTAL NUMBER OF CONTAINERS

TEMP - 79.7
PH - 7.0 TIME - 805
EC - 7.73
Cr6 - .001
TOTAL - .003

ALERT !!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)			OMI	6-23-10 1600
Signature (Received)			TLI	6-23-10 1600
Signature (Relinquished)			TLI	6-23-10 20:45
Signature (Received)	Shabunina	Luda	TLI	6/23/10 20:45
Signature (Relinquished)				
Signature (Received)				

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

032

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E 2 **Lab #** 989902

Date Delivered: 06 / 23/10 **Time:** 2045 **By:** ☐Mail ☒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	☒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)? 3.8 °C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc.)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒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	☒N/A
12.	Were samples pH checked? pH = See C.O.C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☐ **RUSH** ☒ Std	☒Yes	☐No	☐N/A

ALERT !! Level III QC

15. **Sample Matrix:** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Shabunig

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www.truesdail.com

July 6, 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-263 PROJECT, GROUNDWATER MONITORING, TLI NO.: 989981

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-263 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 June 30, 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 straight run and associated matrix spike for sample SC-700B-WDR-263 for Hexavalent Chromium analysis by EPA 218.6 were just outside the retention time window. Because the matrix spike recovery was within acceptable limits and the results from the 5x dilution agree with those from the straight run, the data from the straight run is reported.

Total Chromium 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. Iyer
Quality Assurance/Quality Control Officer

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.: 989981
Date: July 6, 2010
Collected: June 30, 2010
Received: June 30, 2010

ANALYST LIST

EPA 120.1	Specific Conductivity	Iordan Stavrev
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

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

Laboratory No.: 989981
Date Received: June 30, 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	Analysis Method	Extraction Method	Sample Date	Sample Time	Parameter	Result	Units	RL
989981-001	SC-700B-WDR-263	E120.1	NONE	6/30/10	8:00	EC	7710	umhos/cm	2.00
989981-001	SC-700B-WDR-263	E200.8	NONE	6/30/10	8:00	Chromium	ND	ug/L	1.0
989981-001	SC-700B-WDR-263	E200.8	NONE	6/30/10	8:00	Manganese	ND	ug/L	10.0
989981-001	SC-700B-WDR-263	E218.6	LABFLT	6/30/10	8:00	Chromium, hexavalent	0.31	ug/L	0.20
989981-001	SC-700B-WDR-263	SM2130B	NONE	6/30/10	8:00	Turbidity	ND	NTU	0.100
989981-001	SC-700B-WDR-263	SM2540C	NONE	6/30/10	8:00	Total Dissolved Solids	4580	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.

005

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REPORT

Client: **CH2MHill**
155 Grand Avenue, Suite 800
Oakland, CA 94612

Attention: Shawn Duffy
Project Name: PG & E Topock
P.O. Number: 55685
Project Number: 184004.PS.02

Laboratory No. 989981

Printed 7/6/10

Samples Received on 6/30/10 8:00:00 PM

Field ID	Lab ID	Collected	Matrix
SC-700B-WDR-263	989981-001	06/30/2010 08:00	Water

Specific Conductivity - EPA 120.1 Batch 07EC10A 7/1/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989981-001 Specific Conductivity	umhos/cm	07/01/2010	1.00	0.0380	2.00	7710

Method Blank

Parameter	Unit	DF	Result
Specific Conductivity	umhos	1.00	ND

Duplicate — Lab ID = 989981-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Specific Conductivity	umhos	1.00	7730	7710	0.259	0 - 10

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	691.	706.	97.9	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	697.	706.	98.7	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Specific Conductivity	umhos	1.00	990.	1000	99.0	90 - 110

Chrome VI by EPA 218.6 Batch 07CrH10A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989981-001 Chromium, Hexavalent	ug/L	07/01/2010 11:13	1.05	0.0190	0.20	0.31

Method Blank

Parameter	Unit	DF	Result
Chromium, Hexavalent	ug/L	1.00	ND

Duplicate — Lab ID = 989899-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	58.4	57.8	1.03	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.79	5.00	95.8	90 - 110

Matrix Spike — Lab ID = 989981-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.33	1.37(1.06)	96.2	90 - 110

Matrix Spike — Lab ID = 989901-004

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.84	1.85(1.06)	99.1	90 - 110

Matrix Spike — Lab ID = 989901-005

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.85	1.87(1.06)	98.1	90 - 110

Matrix Spike — Lab ID = 989901-003

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.06	1.82	1.91(1.06)	91.5	90 - 110

Matrix Spike — Lab ID = 989981-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	5.25	5.56	5.61(5.25)	99.0	90 - 110

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	4.73	5.00	94.6	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	10.3	10.0	103.	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.98	10.0	99.8	95 - 105

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium, Hexavalent	ug/L	1.00	9.88	10.0	98.8	95 - 105

Metals by EPA 200.8, Total Batch 070210A

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989981-001 Chromium	ug/L	07/02/2010 14:36	5.00	0.0750	1.0	ND
Manganese	ug/L	07/02/2010 14:36	5.00	0.0600	10.0	ND

Method Blank

Parameter	Unit	DF	Result
Chromium	ug/L	1.00	ND
Manganese	ug/L	1.00	ND

Duplicate — Lab ID = 989981-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance 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	Acceptance Range
Chromium	ug/L	1.00	51.3	50.0	103	90 - 110
Manganese	ug/L	1.00	51.7	50.0	103	90 - 110

Matrix Spike — Lab ID = 989981-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	238.	250.(250)	95.2	75 - 125
Manganese	ug/L	5.00	240.	250.(250)	96.0	75 - 125

Matrix Spike Duplicate — Lab ID = 989981-001

Parameter	Unit	DF	Result	Expected/Added	Recovery	Acceptance Range
Chromium	ug/L	5.00	236.	250.(250)	94.4	75 - 125
Manganese	ug/L	5.00	240.	250.(250)	96.0	75 - 125

MRCCS - Secondary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	51.1	50.0	102	90 - 110
Manganese	ug/L	1.00	52.1	50.0	104	90 - 110

MRCVS - Primary

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	47.4	50.0	94.8	90 - 110
Manganese	ug/L	1.00	48.3	50.0	96.6	90 - 110

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard A

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	ND	0		
Manganese	ug/L	1.00	ND	0		

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	49.7	50.0	99.4	80 - 120
Manganese	ug/L	1.00	50.8	50.0	102	80 - 120

Interference Check Standard AB

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Chromium	ug/L	1.00	53.0	50.0	106.	80 - 120
Manganese	ug/L	1.00	53.7	50.0	107	80 - 120

Total Dissolved Solids by SM 2540 C Batch 07TDS10A 7/1/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989981-001 Total Dissolved Solids	mg/L	07/01/2010	1.00	0.434	250.	4580

Method Blank

Parameter	Unit	DF	Result
Total Dissolved Solids	mg/L	1.00	ND

Duplicate Lab ID = 989981-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Total Dissolved Solids	mg/L	1.00	4660	4580	1.73	0 - 5

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Total Dissolved Solids	mg/L	1.00	490.	500.	98.0	90 - 110

Turbidity by SM 2130 B Batch 07TUC0A 7/1/10

Parameter	Unit	Analyzed	DF	MDL	RL	Result
989981-001 Turbidity	NTU	07/01/2010	1.00	0.0140	0.100	ND

Method Blank

Parameter	Unit	DF	Result
Turbidity	NTU	1.00	ND

Duplicate — Lab ID = 989981-001

Parameter	Unit	DF	Result	Expected	RPD	Acceptance Range
Turbidity	NTU	1.00	ND	0	0	0 - 20

Lab Control Sample

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.63	8.00	95.4	90 - 110

Lab Control Sample Duplicate

Parameter	Unit	DF	Result	Expected	Recovery	Acceptance Range
Turbidity	NTU	1.00	7.70	8.00	96.2	90 - 110

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Sean Condon
Assistant Project Manager

989981

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-263]

COC Number
TURNAROUND TIME 5 Days
DATE 06/30/10 PAGE 1 OF 1

COMPANY	E2
PROJECT NAME	PG&E Topock
PHONE	(530) 229-3303 FAX (530) 339-3303
ADDRESS	155 Grand Ave Ste 1000 Oakland, CA 94612
P.O. NUMBER	392895.AA.DM TEAM 1
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Cr, Mn	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-263	06/30/10	0800	Water	X	X	X	X	X	3	pH = 7
									3	TOTAL NUMBER OF CONTAINERS

TIME	ANALYSIS	pH	EC	Cr6	TOTAL	TEMP
0800	0807	7.1	8.03	.002	.003	82.9

RUSH

ALERT !!
Level III QC

For Sample Conditions See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

6-30-10

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	J AIDE	OMT	1505
Signature (Received) Bonifacio Dayag	B. DAYAG	TLI	6-30-10 1505
Signature (Relinquished) Bonifacio Dayag	B. DAYAG	TLI	6-30-10 2000
Signature (Received) L. Shabunina	Shabunina	TLI	6/30/10 20:00
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 4.7°C F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

Sample Integrity & Analysis Discrepancy Form

Client: E2 **Lab #** 989981

Date Delivered: 06/30/10 **Time:** 20:00 **By:** ☐Mail ☒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	☒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)? 4.7 °C	☒Yes	☐No	☐N/A
7.	Were samples received intact (i.e. broken bottles, leaks, air bubbles, etc..)?	☒Yes	☐No	☐N/A
8.	Were sample custody seals intact?	☐Yes	☐No	☒N/A
9.	Does the number of samples received agree with COC?	☒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	☒N/A
12.	Were samples pH checked? pH = see C. O. C.	☒Yes	☐No	☐N/A
13.	Were all analyses within holding time at time of receipt? If not, notify Project Manager.	☒Yes	☐No	☐N/A
14.	Have Project due dates been checked and accepted? Turn Around Time (TAT): ☒ **RUSH** ☐ Std	☒Yes	☐No	☐N/A

ALERT !!
Level III QC

RUSH

15. ***Sample Matrix:*** ☐Liquid ☐Drinking Water ☐Ground Water ☐Waste Water ☐Sludge ☐Soil ☐Wipe ☐Paint ☐Solid ☒Other Water

16. Comments: _____

17. Sample Check-In completed by **Truesdail** Log-In/Receiving: Shabreesha