Pacific Gas and Electric Company

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October 15, 2009

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

Subject: Third Quarter 2009 Monitoring Report – Board Order R7-2006-0060
PG&E Topock Compressor Station, Needles, California
Interim Measure No. 3 Groundwater Treatment System
Discharge to Injection Wells

Dear Mr. Perdue:

Enclosed is the Third Quarter 2009 Monitoring Report for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station, Interim Measure (IM) No. 3 Groundwater Treatment System.

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

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

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

Sincerely,

Curt Russell
Topock Site Manager

Enclosures:

Third Quarter 2009 Monitoring Report for the IM No. 3 Groundwater Treatment System

cc: Cliff Raley, Water Board
Tom Vandenberg, State Water Resources Control Board
Aaron Yue, DTSC

Third Quarter 2009 Monitoring Report

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

October 15, 2009

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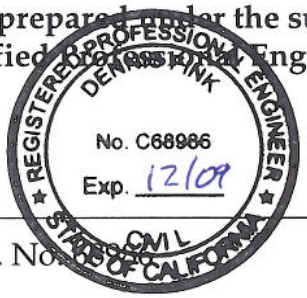
Third Quarter 2009 Monitoring Report
for Interim Measure No. 3 Groundwater Treatment System
Waste Discharge Requirements Order No. R7-2006-0060
PG&E Topock Compressor Station
Needles, California

Prepared for
Pacific Gas and Electric Company

October 15, 2009

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



Dennis Fink, P.E. No. 68986
Project Engineer

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Acronyms and Abbreviations

IM	Interim Measure
IW	injection well
MRP	Monitoring and Reporting Program
PG&E	Pacific Gas and Electric Company
RO	reverse osmosis
TPH	total petroleum hydrocarbons
Truesdail	Truesdail Laboratories, Inc.
TVSS	transient voltage surge suppressor
Water Board	California Regional Water Quality Control Board, Colorado River Basin Region
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 (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, 2008, requires quarterly monitoring reports to be submitted by the fifteenth day of the month following the end of the quarter.

This report covers monitoring activities related to operation of the IM No. 3 groundwater treatment system during the Third Quarter 2009. The groundwater monitoring results for wells OW-1S/M/D, OW-2S/M/D, OW-5S/M/D, CW-1M/D, CW-2M/D, CW-3M/D, and CW-4M/D will be submitted under separate cover, as part of the Compliance Monitoring Program.

2.0 Sampling Station Locations

Table 1 lists the locations of sampling stations. (All tables are located at the end of this report.) Sampling station locations are shown on the process and instrumentation diagrams, Figures TP-PR-10-10-04, TP-PR-10-10-08, and TP-PR-10-10-06, provided at the end of this report.

3.0 Description of Activities

The treatment system was initially operated between July 25 and July 28, 2005 for the Waste Discharge Requirement (WDR)-mandated startup phase. Discharge to the injection wells was initiated July 31, 2005 after successfully completing the startup phase in accordance with Order 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.

During the Third Quarter 2009, extraction wells TW-3D and PE-1 operated at a target pump rate of 135 gallons per minute, excluding periods of planned and unplanned downtime. Extraction wells TW-2D and TW-2S were not operated during Third Quarter 2009. The operational run time for the IM groundwater extraction system (combined or individual pumping), by month, was approximately:

- 64.0 percent during July 2009
- 97.3 percent during August 2009
- 72.8 percent during September 2009

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

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

Activities during the Third Quarter 2009 included two extended shutdowns. The first extended shutdown was in July, due primarily to planned maintenance to replace the aging reverse osmosis (RO) system. The second extended shutdown was in September due primarily to equipment failure that resulted in synthetic oil fouling of the treatment stream.

July Extended Shutdown

The IM No. 3 extraction system was shut down for 267.9 hours during July 2009, for both planned and unplanned events. The causes of the extraction system downtime included:

- Planned maintenance to replace the aging RO system with a new, modern RO system;
- Unplanned maintenance to troubleshoot the new RO system during testing; and
- Unplanned maintenance to repair the microfilter level system.

The RO unit start-up testing was completed July 27, 2009, and the IM No. 3 plant was returned to continuous treatment service.

September Extended Shutdown

The IM No. 3 facility shut down on September 9, 2009 due to equipment failure that resulted in synthetic oil fouling of the treatment stream in tank T301A from the tank mixer gearbox. Immediately upon discovery of the fouling, IM No. 3 operators shut down the extraction and injection well systems, and began cleanup and recovery actions. PG&E notified the Water Board about the incident on September 9, 2009. PG&E also had follow-up conversations with the Water Board on September 11, 14, and 16 to discuss the status of the clean-up and recovery actions. On September 16, 2009 the Water Board concurred with PG&E's recommendation to resume the injection of treated water from the IM No. 3 treatment plant into the injection wells.

The following recovery actions were implemented to address the synthetic oil fouling:

- At approximately 11:00 a.m. on September 9, 2009, injection was stopped upon discovering the oil fouling within the IM No. 3 treatment system. Injection of treated water was halted and the plant put into recirculation mode.
- At approximately 11:00 p.m. on September 9, 2009, the plant recirculation was shut down, which allowed free oil to float to the top of tanks.
- Starting at approximately 7:00 a.m. on September 10, 2009, a vacuum truck was mobilized to IM No. 3 to remove oil contamination. Removal of water in the top layer of tanks and injection pipe flushing were completed from September 10-15, 2009. The clarifier was drained and pressure-washed. The RO prefilters were inspected, and no significant fouling or petroleum odor was observed on the RO pre-filters.
- On September 14, 2009 three air-lift backwash cycles of injection well 3 (IW-3) were completed to help remove traces of oil that may have been pumped to the injection well by removing water from the injection well and the aquifer surrounding the well.
- On the afternoon of September 14, 2009 plant operation was restarted in recirculation mode.
- Injection was restarted on afternoon of September 16, 2009 after receiving Water Board concurrence.

4.0 Groundwater Treatment System Flow Rates

The Third Quarter 2009 treatment system monthly average flow rates (influent, effluent, and reverse osmosis concentrate) are presented in Table 2.

The system influent flow rate was measured by flow meters at groundwater extraction wells TW-2S, TW-2D, TW-3D, and PE-1 (Figure TP-RP-10-10-03). The treatment system effluent flow rate was measured by flow meters in the piping into injection wells IW-2 and IW-3 (Figure TP-RP-10-10-11). The reverse osmosis concentrate flow rate was measured by a flow meter at the piping carrying water from reverse osmosis concentrate tank T-701 to the truck load-out station (Figure TP-RP-10-10-08).

The IM No. 3 facility treated approximately 13,873,469 gallons of extracted groundwater during the Third Quarter 2009. The IM No. 3 facility also treated approximately 8,860 gallons of water generated from the groundwater monitoring program and 32,100 gallons of injection well backwashing/re-development water.

Three containers of solids were transported offsite from the IM No. 3 facility during Third Quarter 2009.

Periods of planned and unplanned extraction system downtime (that together resulted in approximately 22 percent of downtime during Third Quarter 2009) are summarized below. The times shown are in Pacific Standard Time to be consistent with other data collected (e.g., water level data) at the site.

4.1 July 2009

Periods of planned and unplanned extraction system down time (that together resulted in approximately 36.0 percent of downtime during July 2009) are summarized below.

- **July 2, 2009 (planned):** The extraction well system was offline from 2:37 p.m. to 6:14 p.m. for electrical and mechanical work associated with the RO upgrade. Extraction system downtime was 3 hours and 37 minutes.
- **July 3, 2009 (planned):** The extraction well system was offline from 2:02 p.m. to 9:41 p.m. for a microfilter repair. Extraction system downtime was 7 hours and 39 minutes.
- **July 4, 2009 (unplanned):** The extraction well system was offline from 3:04 p.m. to 4:18 p.m. and from 11:33 p.m. to 11:44 p.m. when City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 1 hour and 25 minutes.
- **July 8, 2009 (planned):** The extraction well system was offline from 12:24 p.m. to 12:25 p.m. and from 12:38 p.m. to 12:39 p.m. to measure and calculate the specific capacity of the extraction wells. Extraction system downtime was 2 minutes.

- **July 9, 2009 (planned):** The extraction well system was offline from 12:54 p.m. to 12:55 p.m., 12:59 p.m. to 1:00 p.m., and 1:05 p.m. to 1:06 p.m. while testing the pipeline leak detection system. Extraction system downtime was 3 minutes.
- **July 10, 2009 (unplanned):** The extraction well system was offline from 6:47 a.m. to 6:56 p.m. when the transient voltage surge suppressor (TVSS) failed after the City of Needles power supply imbalance alarmed and shut down the extraction wells. The TVSS was replaced with a spare. Since the plant was down, additional electrical work associated with the RO upgrade was completed. Extraction well downtime was 12 hours and 9 minutes.
- **July 13 - 16, 2009 (planned):** The extraction well system was offline from 9:01 a.m. on July 13, 2009 to 4:14 p.m. on July 16, 2009 for beginning the commissioning and startup of the new RO equipment that replaced the aging RO equipment. Extraction well downtime was 3 days, 7 hours, and 13 minutes.
- **July 16, 2009 (planned):** The extraction well system was offline from 5:43 p.m. to 6:18 p.m. for maintenance prior to starting up the plant with the existing RO system. Extraction well downtime was 35 minutes.
- **July 17, 2009 (planned):** The extraction well system was offline from 5:38 a.m. to 11:32 a.m. and from 11:33 a.m. to 7:45 p.m. for plant maintenance. Extraction well downtime was 14 hours and 6 minutes.
- **July 18 - 19, 2009 (unplanned):** The extraction well system was offline from 1:27 p.m. to 1:50 p.m. on July 18, 2009 and from 11:52 p.m. on July 18, 2009 to 12:21 a.m. on July 19, 2009 when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction well downtime was 52 minutes.
- **July 20, 2009 (planned):** The extraction well system was offline from 10:07 a.m. to 11:04 a.m. and 11:07 a.m. to 12:24 p.m. to switch from generator power to City of Needles power. Extraction well downtime was 2 hours and 14 minutes.
- **July 22 - 27, 2009 (planned):** The extraction well system was offline from 7:21 a.m. on July 22, 2009 to 4:13 p.m. on July 27, 2009 to complete the commissioning and startup of the new RO equipment that replaced the aging RO equipment. Extraction well downtime was 5 days, 8 hours, and 52 minutes.
- **July 28, 2009 (unplanned):** The extraction well system was offline from 7:54 a.m. to 8:17 a.m., 10:19 a.m. to 5:09 p.m., and 5:13 p.m. to 6:29 p.m. for microfilter repairs. Extraction well downtime was 8 hours and 29 minutes.
- **July 30, 2009 (unplanned):** The extraction well system was offline from 3:39 p.m. to 7:03 p.m. to replace a membrane element in the new primary RO. Extraction well downtime was 3 hours and 24 minutes.
- **July 30, 2009 (unplanned):** The extraction well system was offline from 11:56 p.m. to 11:57 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction well downtime was 1 minute.

- **July 31, 2009 (unplanned):** The extraction well system was offline from 12:00 a.m. to 12:01 a.m., from 12:06 a.m. to 12:11 a.m., 12:14 a.m. to 12:15 a.m., 12:16 a.m. to 12:21 a.m., 10:06 a.m. to 3:04 p.m., and 3:59 p.m. to 4:01 p.m. due to power supply imbalances and for plant maintenance. Extraction well downtime was 5 hours and 12 minutes.

4.2 August 2009

Periods of planned and unplanned extraction system down time (that together resulted in approximately 2.7 percent of downtime during August 2009) are summarized below.

- **August 1, 2009 (unplanned):** The extraction well system was offline from 6:06 a.m. to 6:14 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 8 minutes.
- **August 5, 2009 (unplanned):** The extraction well system was offline from 6:17 a.m. to 6:25 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 8 minutes.
- **August 7, 2009 (planned):** The extraction well system was offline from 12:03 p.m. to 12:04 p.m., 12:15 p.m. to 12:20 p.m., 12:33 p.m. to 12:34 p.m., and from 12:37 p.m. to 12:38 p.m. while testing the pipeline leak detection system. Extraction system downtime was 8 minutes.
- **August 10, 2009 (planned):** The extraction well system was offline from 11:31 a.m. to 1:16 p.m. to maintain proper levels in tanks. Extraction system downtime was 1 hour and 45 minutes.
- **August 11, 2009 (planned):** The extraction well system was offline from 1:31 a.m. to 2:22 a.m. to maintain proper levels in tanks. Extraction system downtime was 51 minutes.
- **August 11, 2009 (planned):** The extraction well system was offline from 7:53 a.m. to 6:15 p.m. to perform scheduled monthly maintenance. Extraction well downtime was 10 hours and 22 minutes.
- **August 16, 2009 (unplanned):** The extraction well system was offline from 12:45 p.m. to 1:04 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction well downtime was 19 minutes.
- **August 31, 2009 (planned):** The extraction well system was offline from 7:21 a.m. to 1:58 p.m. for the microfilter bank switch. Extraction well downtime was 6 hours and 37 minutes.

4.3 September 2009

Periods of planned and unplanned extraction system down time (that together resulted in approximately 27.2 percent of downtime during September 2009) are summarized below.

- **September 6, 2009 (unplanned):** The extraction well system was offline from 8:29 a.m. to 8:30 a.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction system downtime was 1 minute.

- **September 8, 2009 (planned):** The extraction well system was offline from 11:20 a.m. to 11:28 a.m., 11:32 a.m. to 11:33 a.m., 11:41 a.m. to 11:42 a.m. , 11:47 a.m. to 11:48 a.m., 12:04 p.m. to 12:05 p.m. and 12:10 p.m. to 12:11 p.m. for testing of the pipeline leak detection alarm system. Extraction system downtime was 13 minutes.
- **September 8, 2009 (planned):** The extraction well system was offline from 1:21 p.m. to 1:44 p.m., 1:54 p.m. to 2:17 p.m. and 2:27 p.m. to 6:59 p.m. for the microfilter bank switch. Extraction system downtime was 5 hours and 18 minutes.
- **September 9 -14, 2009 (unplanned):** The extraction well system was offline from 11:00 a.m. on September 9 to 2:19 p.m. on September 14 due to an equipment failure resulting in synthetic oil fouling of the treatment stream in operation tank T301A from the tank mixer gearbox. Extraction system downtime was 5 days, 3 hours and 19 minutes.
- **September 14 -16, 2009 (planned):** The extraction well system was offline from 3:10 p.m. to 3:26 p.m. on September 14 and from 3:32 p.m. on September 14 to 3:42 p.m. on September 16 to collect samples and to maintain proper levels in tanks. Extraction system downtime was 2 days, and 26 minutes.
- **September 23, 2009 (planned):** The extraction well system was offline from 7:58 a.m. to 3:49 p.m. for the microfilter bank switch and injection line maintenance. Extraction system downtime was 6 hours and 51 minutes.
- **September 25, 2009 (unplanned):** The extraction well system was offline from 12:12 p.m. to 2:37 p.m. due to failure of polymer feed. Extraction well downtime was 2 hours and 25 minutes.
- **September 26, 2009 (unplanned):** The extraction well system was offline from 2:00 p.m. to 2:02 p.m. when the City of Needles power supply imbalance alarmed and shut down the extraction wells. Extraction well downtime was 2 minutes.
- **September 27, 2009 (unplanned):** The extraction well system was offline from 10:11 a.m. to 10:32 p.m. due to low pressure in the TW-3D extraction well pipeline. Extraction well downtime was 21 minutes.
- **September 27-28, 2009 (unplanned):** The extraction well system was offline from 12:54 p.m. to 2:25 p.m. on September 27, from 5:23 a.m. to 5:27 a.m. on September 28, and 5:28 a.m. to 6:38 a.m. on September 28 due to high water level in the raw water tank, T-100. Extraction well downtime was 3 hours and 45 minutes.
- **September 28, 2009 (planned):** The extraction well system was offline from 7:43 a.m. to 12:32 p.m. to install new modules in the microfilter. Extraction well downtime was 4 hours and 49 minutes.

5.0 Sampling and Analytical Procedures

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

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

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

During the Third Quarter 2009, analysis of pH was conducted by field method pursuant to the Water Board letter dated October 16, 2007 (subject: Clarification of Monitoring and Reporting Program Requirements) authorizing pH measurements to be conducted in the field. The field method pH samples were collected at the designated sampling locations and field tested within 15 minutes of sampling.

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

Influent, effluent, reverse osmosis concentrate, and sludge sampling frequency was conducted in accordance with the revised MRP, issued August 28, 2008.

Groundwater quality is being monitored in observation and compliance wells according to Order R7-2006-0060, the procedures and schedules approved in the *Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area* submitted to the Water Board on June 17, 2005, and the revised MRP under Order R7-2006-0060 issued August 28, 2008. Quarterly groundwater monitoring analytical results for the injection area (wells OW-1S/M/D, OW-2S/M/D, OW-5S/M/D, CW-1M/D, CW-2M/D, CW-3M/D, and CW-4M/D) are reported in a separate document, in conjunction with groundwater level maps of the same monitoring wells.

6.0 Analytical Results

Laboratory reports for samples collected in Third Quarter 2009 were prepared by certified analytical laboratories, and are presented in Appendix A.

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

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

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

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

Additional effluent sampling analytical results are presented in Table 9. These additional samples were collected and analyzed for total petroleum hydrocarbons (TPH) at the request of the Water Board as a result of the September extended treatment system shutdown due primarily to equipment failure that resulted in synthetic oil fouling of the treatment stream.

7.0 Conclusions

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

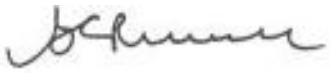
In addition, no incidents of non-compliance were identified during the reporting period. No events that caused an immediate or potential threat to human health or the environment, or new releases of hazardous waste or hazardous waste constituents, or new solid waste management units were identified during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

8.0 Certification

On August 12, 2005, PG&E submitted a signature delegation letter to the Water Board, delegating PG&E signature authority to Mr. Curt Russell and Ms. Yvonne Meeks for correspondence regarding Board Order 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: October 15, 2009

Tables

TABLE 1
Sampling Station Descriptions
Third Quarter 2009 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Sample Station	Sample ID[a]	Location
Sampling Station A: Groundwater Treatment System Influent	SC-100B-WDR-###	Sample collected from tap on pipe into T-100 (see Figure TP-RP-10-10-04).
Sampling Station B: Groundwater Treatment System Effluent	SC-700B-WDR-###	Sample collected from tap on pipe downstream from T-700 (see Figure TP-RP-10-10-04).
Sampling Station D: Groundwater Treatment System Reverse Osmosis Concentrate	SC-701-WDR-###	Sample collected from tap on pipe into T-701 (see Figure TP-RP-10-10-08).
Sampling Station E: Groundwater Treatment System Sludge	SC-SLUDGE-WDR-###	Sample collected from sludge accumulated in the phase separator used this quarter (see Figure TP-RP-10-10-06).

Note:

= Sequential sample identification number at each sample station.

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

TABLE 2
Flow Monitoring Results
Third Quarter 2009 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)
July 2009 Average Monthly Flowrate	86.0	83.4	1.8
August 2009 Average Monthly Flowrate	131.4	127.3	3.2
September 2009 Average Monthly Flowrate	96.5	93.5	2.3

Notes:

gpm: gallons per minute.

[a] Extraction wells TW-3D and PE-1 were operated during the Third Quarter 2009. Extraction wells TW-2D and TW-2S were not operated during the Third Quarter 2009.

[b] The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during the Third Quarter 2009 is approximately 0.76 percent.

[c] Effluent was discharged into injection wells IW-2 and IW-3 during the Third Quarter 2009.

TABLE 3
Sample Collection Dates
Third Quarter 2009 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Parameter	Sample Collection Dates	Results
Influent[a]	July 1, 2009	See Table 4
	August 5, 2009	
	September 2, 2009	
Effluent[b]	July 1, 2009	See Table 5
	July 8, 2009	
	July 13, 2009	
	July 21, 2009	
	July 29, 2009	
	August 5, 2009	
	August 12, 2009	
	August 19, 2009	
	August 26, 2009	
	September 2, 2009	
	September 9, 2009	
	September 16, 2009	
	September 18, 2009	
	September 23, 2009	
	September 30, 2009	
Reverse Osmosis Concentrate[c]	September 2, 2009	See Table 6
Sludge[d]	August 4, 2009	See Table 7
	September 12, 2009	
	September 18, 2009	
Additional Effluent Sampling Requested by Water Board	September 16, 2009	See Table 9
	September 17, 2009	
	September 18, 2009	
	September 19, 2009	
	September 20, 2009	
	September 21, 2009	

Notes:

[a] Influent sampling is required monthly.

[b] Effluent sampling is required weekly.

[c] Reverse Osmosis Concentrate sampling is required quarterly.

[d] Sludge samples analysis is required quarterly by composite.

TABLE 4
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Influent Monitoring Results [a]
Third Quarter 2009 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		7.00	0.0070	0.0220	---	0.0750	0.998	1.28	0.0050	0.112	0.0750	0.0810	0.0020	0.520	0.0250	0.0750	0.0600	0.0840	0.205	0.0350	0.00020	1.00	2.40	0.575
Sample ID	**Date**																						
SC-100B-WDR-210	**7/1/2009**	**4900**	**ND (0.100)**	**7980**	**7.1**	**1130**	**1190**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**3.64**	**24.8**	**1.08**	**ND (5.00)**	**2.58**	**ND (10.0)**	**ND (10.0)**	**20.7**	**ND (10.0)**	**3.12**	**ND (0.0050)**	**571**	**ND (20.0)**	**16.8**
RL		250	0.100	2.00	---	1.00	21.0	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.0050	25.0	20.0	10.0
SC-100B-WDR-215	**8/5/2009**	**4680**	**ND (0.100)**	**7980**	**7.4**	**950**	**1060**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**3.60**	**22.8**	**1.11**	**ND (5.00)**	**2.30**	**ND (10.0)**	**ND (10.0)**	**18.8**	**ND (10.0)**	**2.50**	**ND (0.0050)**	**532**	**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	50.0	20.0	10.0
SC-100B-WDR-219	**9/2/2009**	**5130**	**ND (0.100)**	**7970**	**7.6**	**1060**	**1090**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**2.05**	**13.2**	**1.04**	**ND (5.00)**	**2.91**	**ND (10.0)**	**ND (10.0)**	**12.6**	**ND (10.0)**	**3.22**	**ND (0.0050)**	**561**	**ND (20.0)**	**ND (20.0)**
RL		250	0.100	2.00	---	10.0	10.5	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.0050	12.5	20.0	20.0

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]
Third Quarter 2009 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
	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
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]		3.50	0.0070	0.0220	---	0.0750	0.0200	1.28	0.0050	0.112	0.0750	0.0810	0.0020	0.520	0.0250	0.0750	0.0600	0.0840	0.205	0.0350	0.00020	1.00	2.40	0.575
Sample ID	**Date**																						
SC-700B-WDR-210	**7/1/2009**	**4120**	**ND (0.100)**	**6970**	**7.00**	**ND (1.00)**	**ND (0.200)**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**ND (1.00)**	**ND (10.0)**	**1.06**	**ND (5.00)**	**2.76**	**ND (10.0)**	**ND (10.0)**	**16.0**	**ND (10.0)**	**3.14**	**ND (0.0050)**	**492**	**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	25.0	20.0	10.0
SC-700B-WDR-211	**7/8/2009**	**4170**	**ND (0.100)**	**7140**	**7.00**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-212	**7/13/2009**	**3980**	**ND (0.100)**	**6970**	**7.50**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-213	**7/21/2009**	**4070**	**ND (0.100)**	**6960**	**7.10**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		125	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-214	**7/29/2009**	**4480**	**ND (0.100)**	**7630**	**7.50**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-215	**8/5/2009**	**4390**	**ND (0.100)**	**7380**	**7.80**	**ND (1.00)**	**ND (0.200)**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**ND (1.00)**	**13.6**	**1.07**	**ND (5.00)**	**2.14**	**ND (10.0)**	**44.9**	**14.2**	**ND (10.0)**	**2.31**	**ND (0.0050)**	**492**	**ND (20.0)**	**20.4**
RL		250	0.100	2.00	---	1.00	0.200	50.0	0.500	10.0	1.00	10.0	0.200	5.00	0.500	10.0	10.0	10.0	10.0	1.00	0.0050	50.0	20.0	10.0
SC-700B-WDR-216	**8/12/2009**	**3600**	**0.105**	**5990**	**7.70**	**1.23**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		125	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-217	**8/19/2009**	**4130**	**0.109**	**7060**	**7.70**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-218	**8/26/2009**	**4120**	**0.113**	**6900**	**7.20**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-219	**9/2/2009**	**4220**	**ND (0.100)**	**6990**	**7.60**	**ND (1.00)**	**ND (0.200)**	**ND (50.0)**	**ND (0.500)**	**ND (10.0)**	**ND (1.00)**	**ND (10.0)**	**1.01**	**ND (5.00)**	**2.47**	**ND (10.0)**	**ND (10.0)**	**24.6**	**ND (10.0)**	**2.84**	**ND (0.0050)**	**485**	**ND (20.0)**	**ND (20.0)**
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	20.0
SC-700B-WDR-220	**9/9/2009**	**4290**	**0.118**	**7060**	**7.60**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-221	**9/16/2009**	**4430**	**0.162**	**7610**	**7.50**	**ND (1.00)**	**0.370**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-222	**9/18/2009**	**4310**	**0.141**	**7270**	**7.80**	**ND (1.00)**	**ND (1.05)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	1.05	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-223	**9/23/2009**	**4070**	**0.169**	**7040**	**7.60**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-224	**9/30/2009**	**4190**	**ND (0.100)**	**6970**	**7.60**	**ND (1.00)**	**ND (0.200)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	---	1.00	0.200	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 5
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Effluent Monitoring Results [a]
Third Quarter 2009 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]
Third Quarter 2009 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		35.0	0.0220	---	0.000075	0.00020	0.00050	0.00014	0.0020	0.00015	0.000060	0.000075	0.00052	0.0600	0.000075	0.00073	0.00030	0.00021	0.00025	0.00019	0.000085	0.000060	0.0090
Sample ID	**Date**																						
SC-701-WDR-219	**9/2/2009**	**39600**	**51500**	**7.6**	**0.00508**	**ND (0.0021)**	**ND (0.0100)**	**ND (0.0020)**	**0.0214**	**ND (0.0020)**	**ND (0.0030)**	**ND (0.0100)**	**ND (0.0050)**	**21.3**	**ND (0.0100)**	**0.178**	**ND (0.0020)J**	**ND (0.0100)**	**0.0257**	**ND (0.0050)**	**ND (0.0020)**	**ND (0.0050)**	**ND (0.0200)**
RL		1250	2.00	---	0.0020	0.0021	0.0100	0.0020	0.0100	0.0020	0.0030	0.0100	0.0050	0.500	0.0100	0.0100	0.0020	0.0100	0.0100	0.0050	0.0020	0.0050	0.0200

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]
Third Quarter 2009 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	Bioassay
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	% Survival
MDL		0.0755	2.26	0.0037	0.0011	0.0075	0.0038	0.0038	0.0038	0.0038	0.0453	0.0151	0.0053	0.00045	0.0038	0.0018	0.0038	0.0302	0.0038	0.0340	at 750 mg/L[c]
Sample ID	Date																				
SC-Sludge-WDR-219	**9/2/2009**	**18100**	**157**	**ND (2.70)**	**50.7**	**123**	**184**	**58.2**	**8.05**	**79.7**	**70.9**	**ND (5.41)**	**38.0**	**0.699 J**	**ND (2.70)**	**ND (2.70)**	**ND (5.41)**	**ND (5.41)**	**548**	**138**	95
RL		54.1	15.1	2.70	2.70	2.70	2.70	5.41	2.70	2.70	15.1	5.41	2.70	0.270	2.70	2.70	5.41	5.41	2.70	13.5	100

NOTES:

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

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

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

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

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Third Quarter 2009 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-210	J. Aide	7/1/2009	8:25:00 AM	TLI	EPA 120.1	SC	7/6/2009	Tina Acquiat
					TLI	EPA 200.7	B	7/9/2009	Kris Collins
					TLI	EPA 200.7	FE	7/9/2009	Kris Collins
					TLI	EPA 200.8	AL	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	AS	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	BA	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	CR	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	CU	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	MN	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	MO	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	NI	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	PB	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	SB	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	ZN	7/6/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 218.6	CR6	7/1/2009	Michael Nonezyan
					TLI	EPA 300.0	FL	7/2/2009	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	7/2/2009	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	7/2/2009	Giawad Ghenniwa
					FIELD	HACH	PH	7/1/2009	J. Aide
					TLI	SM2130B	TRB	7/2/2009	Gautam Savani
					TLI	SM2540C	TDS	7/6/2009	Tina Acquiat
					TLI	SM4500NH3D	NH3N	7/6/2009	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	7/2/2009	Tina Acquiat
SC-100B	SC-100B-WDR-215	J. Aide	8/5/2009	8:00:00 AM	TLI	EPA 120.1	SC	8/6/2009	Tina Acquiat
					TLI	EPA 200.7	B	8/12/2009	Kris Collins
					TLI	EPA 200.7	FE	8/12/2009	Kris Collins
					TLI	EPA 200.8	AL	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	AS	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	BA	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	CR	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	CU	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	MN	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	MO	8/13/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	NI	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	PB	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	SB	8/16/2009	Daniel Kang/Romuel Chavez/Linda Saetern

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Third Quarter 2009 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-215	J. Aide	8/5/2009	8:00:00 AM	TLI	EPA 200.8	ZN	8/13/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 218.6	CR6	8/6/2009	Michael Nonezyan
					TLI	EPA 300.0	FL	8/6/2009	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	8/6/2009	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	8/6/2009	Giawad Ghenniwa
					FIELD	HACH	PH	8/5/2009	J. Aide
					TLI	SM2130B	TRB	8/6/2009	Gautam Savani
					TLI	SM2540C	TDS	8/6/2009	Tina Acquiat
					TLI	SM4500NH3D	NH3N	8/10/2009	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	8/6/2009	Tina Acquiat
SC-100B	SC-100B-WDR-219	J. Aide	9/2/2009	8:00:00 AM	TLI	EPA 120.1	SC	9/3/2009	Tina Acquiat
					TLI	EPA 200.7	B	9/18/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.7	CR	10/9/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.7	FE	9/21/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.7	ZN	10/2/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.8	AL	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	AS	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	BA	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	CU	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	MN	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	MO	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	NI	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	PB	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	SB	9/22/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	9/3/2009	Michael Nonezyan
					TLI	EPA 300.0	FL	9/3/2009	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	9/3/2009	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	9/3/2009	Giawad Ghenniwa
					FIELD	HACH	PH	9/2/2009	J. Aide
					TLI	SM2130B	TRB	9/3/2009	Gautam Savani
					TLI	SM2540C	TDS	9/3/2009	Tina Acquiat
					TLI	SM4500NH3D	NH3N	9/4/2009	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	9/3/2009	Tina Acquiat
SC-700B	SC-700B-WDR-210	J. Aide	7/1/2009	8:25:00 AM	TLI	EPA 120.1	SC	7/6/2009	Tina Acquiat
					TLI	EPA 200.7	B	7/9/2009	Kris Collins
					TLI	EPA 200.7	FE	7/9/2009	Kris Collins

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-210	J. Aide	7/1/2009	8:25:00 AM	TLI	EPA 200.8	AL	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	AS	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	BA	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	CR	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	CU	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	MN	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	MO	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	NI	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	PB	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	SB	7/2/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 200.8	ZN	7/6/2009	Daniel Kang/Romuel Chavez
					TLI	EPA 218.6	CR6	7/1/2009	Michael Nonezyan
					TLI	EPA 300.0	FL	7/2/2009	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	7/2/2009	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	7/2/2009	Giawad Ghenniwa
					FIELD	HACH	PH	7/1/2009	J. Aide
					TLI	SM2130B	TRB	7/2/2009	Gautam Savani
					TLI	SM2540C	TDS	7/6/2009	Tina Acquiat
					TLI	SM4500NH3D	NH3N	7/6/2009	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	7/2/2009	Tina Acquiat
SC-700B	SC-700B-WDR-211	C. Knight	7/8/2009	10:11:00 AM	TLI	EPA 120.1	SC	7/13/2009	Tina Acquiat
					TLI	EPA 200.8	CR	7/9/2009	Daniel Kang
					TLI	EPA 218.6	CR6	7/9/2009	Michael Nonezyan
					FIELD	HACH	PH	7/8/2009	C. Knight
					TLI	SM2130B	TRB	7/9/2009	Gautam Savani
					TLI	SM2540C	TDS	7/13/2009	Tina Acquiat
SC-700B	SC-700B-WDR-212	Ron Phelps	7/13/2009	8:00:00 AM	TLI	EPA 120.1	SC	7/15/2009	Tina Acquiat
					TLI	EPA 200.8	CR	7/16/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	7/14/2009	David Blackburn
					FIELD	HACH	PH	7/13/2009	Ron Phelps
					TLI	SM2130B	TRB	7/14/2009	Gautam Savani
					TLI	SM2540C	TDS	7/16/2009	Tina Acquiat
SC-700B	SC-700B-WDR-213	Ron Phelps	7/21/2009	8:00:00 AM	TLI	EPA 120.1	SC	7/23/2009	Tina Acquiat
					TLI	EPA 200.8	CR	7/24/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	7/23/2009	Michael Nonezyan
					FIELD	HACH	PH	7/21/2009	Ron Phelps

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-213	Ron Phelps	7/21/2009	8:00:00 AM	TLI	SM2130B	TRB	7/22/2009	Gautam Savani
					TLI	SM2540C	TDS	7/23/2009	Tina Acquiat
SC-700B	SC-700B-WDR-214	J. Aide	7/29/2009	8:00:00 AM	TLI	EPA 120.1	SC	7/31/2009	Tina Acquiat
					TLI	EPA 200.8	CR	7/31/2009	Daniel Kang
					TLI	EPA 218.6	CR6	7/30/2009	Michael Nonezyan
					FIELD	HACH	PH	7/29/2009	J. Aide
					TLI	SM2130B	TRB	7/30/2009	Gautam Savani
					TLI	SM2540C	TDS	7/31/2009	Tina Acquiat
SC-700B	SC-700B-WDR-215	J. Aide	8/5/2009	8:00:00 AM	TLI	EPA 120.1	SC	8/6/2009	Tina Acquiat
					TLI	EPA 200.7	B	8/12/2009	Kris Collins
					TLI	EPA 200.7	FE	8/12/2009	Kris Collins
					TLI	EPA 200.8	AL	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	AS	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	BA	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	CR	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	CU	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	MN	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	MO	8/13/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	NI	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	PB	8/10/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	SB	8/16/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 200.8	ZN	8/13/2009	Daniel Kang/Romuel Chavez/Linda Saetern
					TLI	EPA 218.6	CR6	8/6/2009	Michael Nonezyan
					TLI	EPA 300.0	FL	8/6/2009	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	8/6/2009	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	8/6/2009	Giawad Ghenniwa
					FIELD	HACH	PH	8/5/2009	J. Aide
					TLI	SM2130B	TRB	8/6/2009	Gautam Savani
					TLI	SM2540C	TDS	8/6/2009	Tina Acquiat
					TLI	SM4500NH3D	NH3N	8/10/2009	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	8/6/2009	Tina Acquiat
SC-700B	SC-700B-WDR-216	J. Aide	8/12/2009	8:00:00 AM	TLI	EPA 120.1	SC	8/13/2009	Tina Acquiat
					TLI	EPA 200.8	CR	8/18/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	8/13/2009	Michael Nonezyan
					FIELD	HACH	PH	8/12/2009	J. Aide
					TLI	SM2130B	TRB	8/13/2009	Gautam Savani

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-216	J. Aide	8/12/2009	8:00:00 AM	TLI	SM2540C	TDS	8/13/2009	Tina Acquiat
SC-700B	SC-700B-WDR-217	J. Aide	8/19/2009	8:30:00 AM	TLI	EPA 120.1	SC	8/20/2009	Tina Acquiat
					TLI	EPA 200.8	CR	8/27/2009	Daniel Kang
					TLI	EPA 218.6	CR6	8/21/2009	Michael Nonezyan
					FIELD	HACH	PH	8/19/2009	J. Aide
					TLI	SM2130B	TRB	8/21/2009	Iordan Stavrev
					TLI	SM2540C	TDS	8/20/2009	Tina Acquiat
SC-700B	SC-700B-WDR-218	J. Aide	8/26/2009	8:00:00 AM	TLI	EPA 120.1	SC	8/27/2009	Tina Acquiat
					TLI	EPA 200.8	CR	8/28/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	8/27/2009	Michael Nonezyan
					FIELD	HACH	PH	8/26/2009	J. Aide
					TLI	SM2130B	TRB	8/27/2009	Gautam Savani
					TLI	SM2540C	TDS	8/27/2009	Tina Acquiat
SC-700B	SC-700B-WDR-219	J. Aide	9/2/2009	8:00:00 AM	TLI	EPA 120.1	SC	9/3/2009	Tina Acquiat
					TLI	EPA 200.7	B	9/18/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.7	FE	9/21/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.7	ZN	10/2/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.8	AL	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	AS	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	BA	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	CR	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	CU	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	MN	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	MO	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	NI	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	PB	9/22/2009	Romuel Chavez
					TLI	EPA 200.8	SB	9/22/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	9/3/2009	Michael Nonezyan
					TLI	EPA 300.0	FL	9/3/2009	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	9/3/2009	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	9/3/2009	Giawad Ghenniwa
					FIELD	HACH	PH	9/2/2009	J. Aide
					TLI	SM2130B	TRB	9/3/2009	Gautam Savani
					TLI	SM2540C	TDS	9/3/2009	Tina Acquiat
					TLI	SM4500NH3D	NH3N	9/4/2009	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	9/3/2009	Tina Acquiat

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
Third Quarter 2009 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-220	Chris Knight	9/9/2009		TLI	EPA 120.1	SC	9/10/2009	Tina Acquiat
					TLI	EPA 200.8	CR	9/11/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	9/10/2009	Michael Nonezyan
					FIELD	HACH	PH	9/9/2009	Chris Knight
					TLI	SM2130B	TRB	9/10/2009	Gautam Savani
					TLI	SM2540C	TDS	9/11/2009	Tina Acquiat
SC-700B	SC-700B-WDR-221	Chris Lentz	9/16/2009	4:00:00 PM	TLI	EPA 120.1	SC	9/17/2009	Tina Acquiat
					TLI	EPA 200.8	CR	9/21/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	9/23/2009	Michael Nonezyan
					FIELD	HACH	PH	9/16/2009	Chris Lentz
					TLI	SM2130B	TRB	9/17/2009	Gautam Savani
					TLI	SM2540C	TDS	9/18/2009	Tina Acquiat
SC-700B	SC-700B-WDR-222	C. Knight	9/18/2009	8:00:00 AM	TLI	EPA 120.1	SC	9/18/2009	Tina Acquiat
					TLI	EPA 200.8	CR	9/22/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	9/23/2009	Michael Nonezyan
					FIELD	HACH	PH	9/18/2009	C. Knight
					TLI	SM2130B	TRB	9/18/2009	Gautam Savani
					TLI	SM2540C	TDS	9/18/2009	Tina Acquiat
SC-700B	SC-700B-WDR-223	J. Aide	9/23/2009	8:15:00 AM	TLI	EPA 120.1	SC	9/24/2009	Tina Acquiat
					TLI	EPA 200.8	CR	10/4/2009	Daniel Kang
					TLI	EPA 218.6	CR6	9/25/2009	Sonya Bersudsky
					FIELD	HACH	PH	9/23/2009	J. Aide
					TLI	SM2130B	TRB	9/24/2009	Gautam Savani
					TLI	SM2540C	TDS	9/24/2009	Tina Acquiat
SC-700B	SC-700B-WDR-224	C. Knight	9/30/2009	8:00:00 AM	TLI	EPA 120.1	SC	10/1/2009	Tina Acquiat
					TLI	EPA 200.8	CR	10/4/2009	Daniel Kang
					TLI	EPA 218.6	CR6	10/1/2009	Sonya Bersudsky
					FIELD	HACH	PH	9/30/2009	C. Knight
					TLI	SM2130B	TRB	10/1/2009	Gautam Savani
					TLI	SM2540C	TDS	10/1/2009	Tina Acquiat
SC-701	SC-701-WDR-219	J. Aide	9/2/2009	8:00:00 AM	TLI	EPA 120.1	SC	9/3/2009	Tina Acquiat
					TLI	EPA 200.7	BA	10/9/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.7	ZN	10/9/2009	Kris Collins/Daniel Kang
					TLI	EPA 200.8	AG	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	AS	10/8/2009	Romuel Chavez

TABLE 8
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Monitoring Information
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-701	SC-701-WDR-219	J. Aide	9/2/2009	8:00:00 AM	TLI	EPA 200.8	BE	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	CD	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	CO	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	CR	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	CU	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	HG	10/5/2009	Romuel Chavez
					TLI	EPA 200.8	MO	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	NI	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	PB	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	SB	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	SE	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	TL	10/8/2009	Romuel Chavez
					TLI	EPA 200.8	V	10/8/2009	Romuel Chavez
					TLI	EPA 218.6	CR6	9/3/2009	Michael Nonezyan
					TLI	EPA 300.0	FL	9/3/2009	Giawad Ghenniwa
					FIELD	HACH	PH	9/2/2009	J. Aide
					TLI	SM2540C	TDS	9/3/2009	Tina Acquiat
Phase Seperator	SC-Sludge-WDR-219	J. Aide	9/2/2009	8:30:00 AM	TLI	EPA 300.0	FL	9/3/2009	Giawad Ghenniwa
					TLI	EPA 6010B	AG	9/10/2009	Kris Collins
					TLI	EPA 6010B	BA	9/10/2009	Kris Collins
					TLI	EPA 6010B	BE	9/10/2009	Kris Collins
					TLI	EPA 6010B	CD	9/10/2009	Kris Collins
					TLI	EPA 6010B	CO	9/10/2009	Kris Collins
					TLI	EPA 6010B	CR	9/11/2009	Kris Collins
					TLI	EPA 6010B	NI	9/10/2009	Kris Collins
					TLI	EPA 6010B	PB	9/10/2009	Kris Collins
					TLI	EPA 6010B	TL	9/10/2009	Kris Collins
					TLI	EPA 6010B	V	9/10/2009	Kris Collins
					TLI	EPA 6010B	ZN	9/10/2009	Kris Collins
					TLI	SW 6020A	AS	9/23/2009	Romuel Chaves
					TLI	SW 6020A	CU	9/23/2009	Romuel Chaves
					TLI	SW 6020A	HG	10/6/2009	Romuel Chaves
					TLI	SW 6020A	MO	9/23/2009	Romuel Chaves
					TLI	SW 6020A	SB	9/23/2009	Romuel Chaves
					TLI	SW 6020A	SE	9/23/2009	Romuel Chaves
					TLI	SW 7199	CR6	9/17/2009	Michael Nonezyan

TABLE 8
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
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Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
Phase Seperator	SC-Sludge-WDR-219	J. Aide	09/2/2009	8:30:00 AM	ATL	96-Hour Acute Aquatic Toxicity Screening Test	BIO	9/4/2009 - 09/9/2009	Joe LeMay

NOTES:

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

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

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

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

AL =	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

TABLE 9
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Additional Effluent Parameters[a]
Third Quarter 2009 Monitoring Report for Interim Measure No.3 Groundwater Treatment System

Location	Date	TPH Diesel (µg/L)	TPH Motor Oil (µg/L)
SC-700B	**9/16/2009**	**55.0**	**ND (51)**
SC-700B	**9/17/2009**	**ND (50)**	**ND (50)**
SC-700B	**9/18/2009**	**ND (50)**	**ND (50)**
SC-700B	**9/19/2009**	**ND (50)**	**ND (50)**
SC-700B	**9/20/2009**	**ND (50)**	**ND (50)**
SC-700B	**9/21/2009**	**ND (50)**	**ND (50)**

NOTES:

ND = parameter not detected at the listed value
µg/L = micrograms per liter

[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).

Figures

Parcel No. 650-151-06

BLM

PG&E

West Mesa

Center Mesa

East Mesa

Treatment Plant

BLM

BAT CAVE WASH

Park Moabi Rd.

Historic Route 66

BN&SF RAILROAD

INTERSTATE 40

Colorado River

MW-35-060
MW-35-135
MW-29
MW-41S
MW-41M
MW-41D
CW-3
CW-4
CW-2
CW-1
OW-3
OW-2
IW-2
OW-5
IW-3
OW-1
IW-1
MW-18
MW-14
MW-13
MW-37S
MW-37D
MW-25
MW-40D
MW-40S
MW-33-40
MW-33-90
MW-19
MW-31-060
MW-31-135
MW-20-070
MW-20-100
MW-20-130
TW-2S
TW-2D
TW-3D
MW-20 Bench
MW-30-50
MW-30-30
MW-36 cluster
PE-1
MW-34-055
MW-34-055
MW-34-080
MW-22
MW-39 cluster
MW-28-25
MW-28-90
MW-27
MW-32-20
MW-32-35
MW-26

500
550
600

LEGEND

- IM-3 Injection Well
- Observation Well Cluster
- Compliance Monitoring Well Cluster
- Exploratory Boring
- Groundwater Monitoring Well
- IM Extraction Well
- IM-3 Pipelines

N

0 350 700 Feet

California State Plane NAD83 Zone 5 US Feet

FIGURE 1
IM NO. 3 PROJECT SITE FEATURES

IM NO. 3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

\\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MAPFILES\2006\IM3_PROJECT_AREA_MAY06.MXD IM3_PROJECT_AREA_MAY06.PDF 1/14/2008 14:59:14

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" IN 8"-RW-141-1KB

NOTE 1

4"-RW-139-1HB

V-RW-139-01

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

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

VENT

LT 100

PIT 100

FE 100

FIT 100

PE 100

V-1390

Well TW-2S Flowmeter

3"x2"

V-RW-105-02

MAG

3"-RW-105-1HB THROTTLING

V-RW-105-01

VALVE VAULT No. 1

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

LSH 100A

NOTE 1

1"

V-1390

LT 101

PIT 101

FE 101

FIT 101

PE 101

Well TW-2D Flowmeter

4" x 3"

EJ-RW-105-01

V-RW-102-02

3"-RW-102-1HB THROTTLING

V-RW-102-01

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

LSH 101A

NOTE 1

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

V-RW-105-06 THROTTLING

V-RW-105-03

V-RW-105-04

4" IN 8"-RW-107-1KB

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

TO RAW WATER STORAGE

V-RW-108-02 THROTTLING

4"-RW-130-1HB

V-RW-130-02

V-RW-130-01

Well PE-1 Flowmeter

LT 103

PIT 103

FE 103

FIT 103

PE 103

V-RW-108-01

3"-RW-108-1HB

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

NOTE 1

LSH

TO BAKER TANKS V-RW-131-01

LSH 103A

NOTE 1

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

4"x3"

V-RW-132-02

V-RW-132-01

3"-RW-132-1HB

3"x2"

Well TW-3D Flowmeter

VENT

LT 102

PI 102

PIT 102

FIT 102

PRV 102

PE 102

FE 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

P-102

LE 102

EXTRACTION WELL TW-3D

135 GPM x 248 FT. H20

PI 100

LSH 100

V-RW-103-02

3"-RW-103-1HB

V-RW-103-01

WELL VAULT No. 2

P-100

LE 100

EXTRACTION WELL TW-2S

40 GPM x 180 FT. H20

PI 101

PRV 101

LSH 101

V-RW-100-02

3"-RW-100-1HB

V-RW-100-01

WELL VAULT No. 1

P-101

LE 101

EXTRACTION WELL TW-2D

90 GPM x 245 FT. H20

PI 103

PRV 103

LSH 103

WELL VAULT No. 3

P-103

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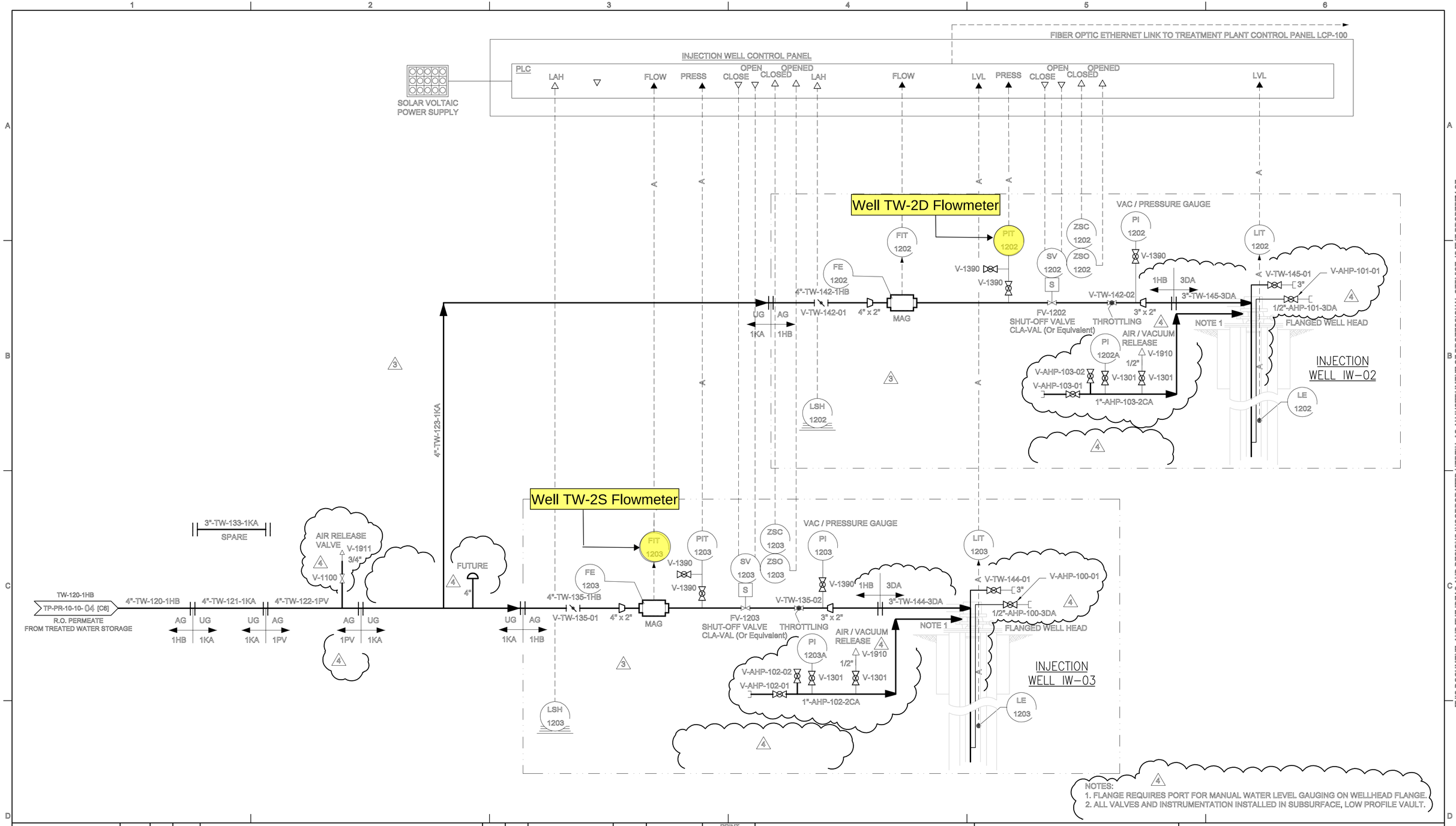
FILENAME: tppr101003.dwg PLOT DATE: 19-OCT-2005 PLOT TIME:



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	REVIEWED	REV 4	DATE 03/10/05	REVIEWED
DISCIPLINE		DISCIPLINE		
CIVIL		ELECTRICAL		
STRUCTURAL		INST & CONTROL		
MECHANICAL		ARCHITECTURAL		
PROCESS		ENVIRONMENTAL		
PIPING		GEN. ARRANG.		

PRINT DISTRIBUTION	
DATE	
STATUS	
REV.	
CLIENT	
FIELD	
INTRA CO.	

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

STATUS	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	/ /		

SCALE NONE

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

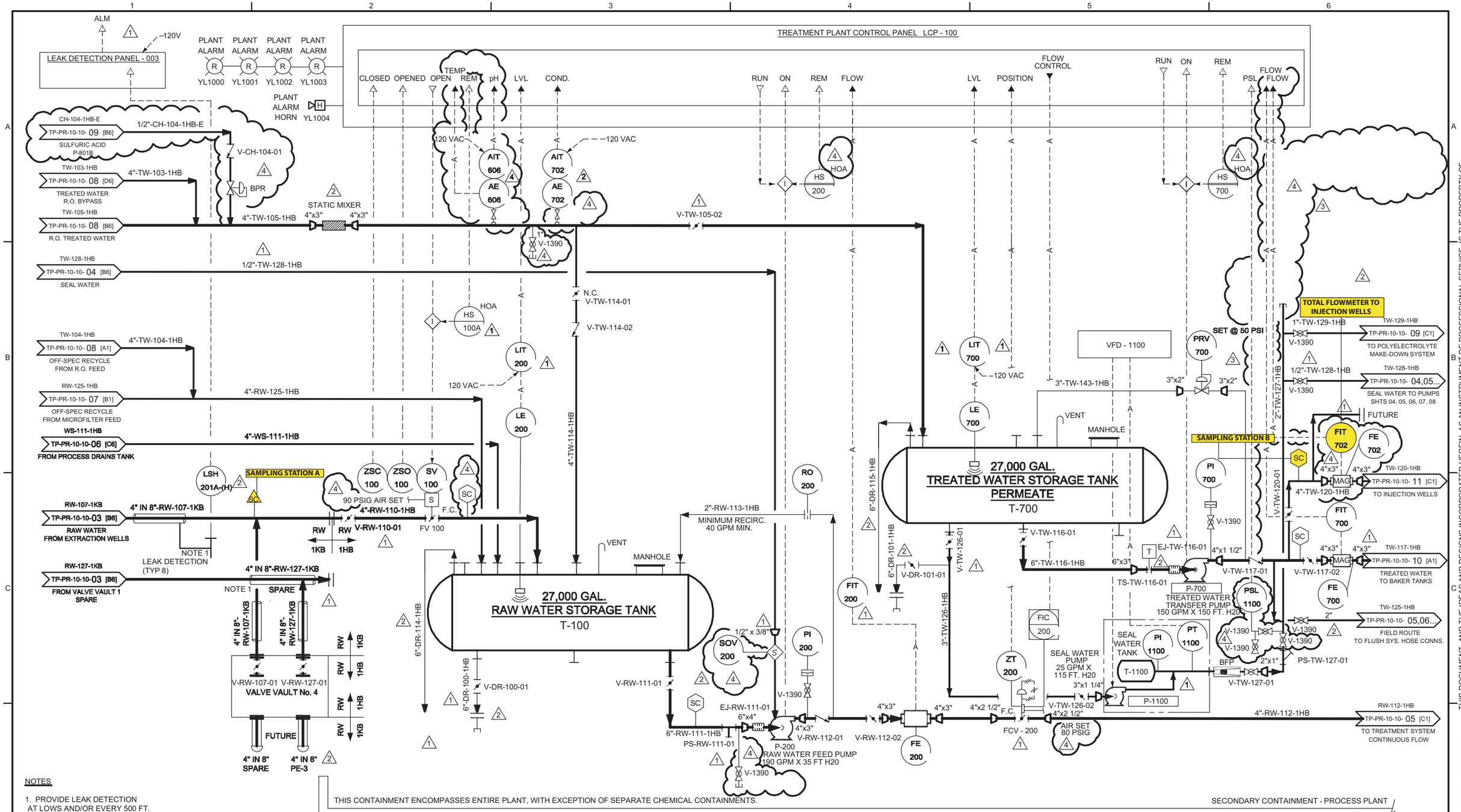
CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 11
INJECTION WELLS

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

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

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



NOTES

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

THIS CONTAINMENT ENCOMPASSES ENTIRE PLANT, WITH EXCEPTION OF SEPARATE CHEMICAL CONTAINMENTS.

SECONDARY CONTAINMENT - PROCESS PLANT

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

PRINT DISTRIBUTION

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

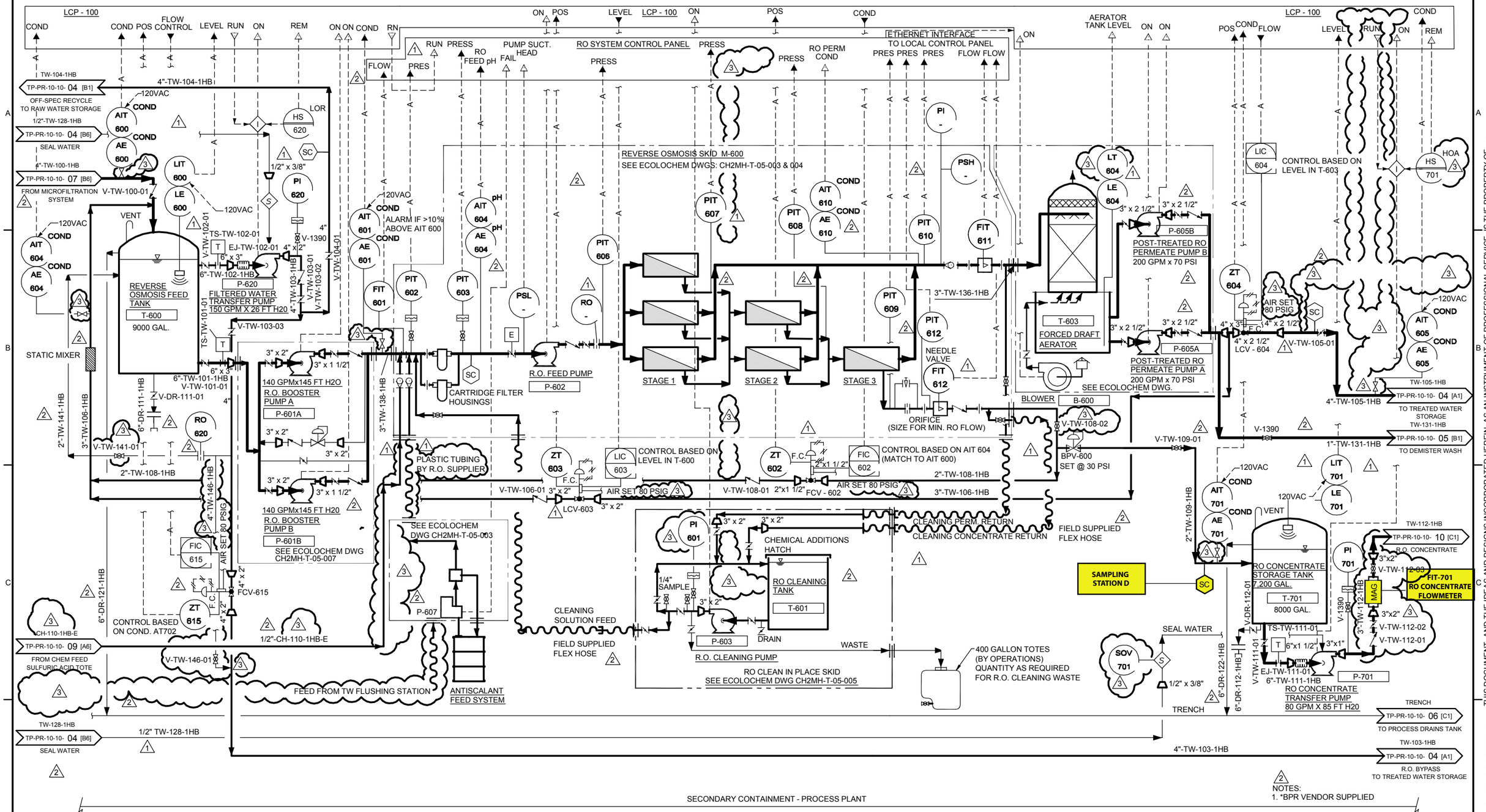
CH2MHILL

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:



NO.	DATE	REVISION	BY	CHK
D	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	09/21/05	REVISED PER AS-BUILT CONDITIONS	EFC	AJ

REVISION APPROVAL		REV 3	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	3	/ /		

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

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 08
REVERSE OSMOSIS SYSTEM

DWG. NO. TP-PR-10-10-08 REV. 3

NOTES:
1. *BPR VENDOR SUPPLIED

BAR IS ONE INCH ON ORIGINAL DRAWING

FILENAME: tppr101008.dwg PLOT DATE: 21-SEP-2005 PLOT TIME:

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

CH-109-1HB-E
TP-PR-10-10- 09 [C6]
POLYELECTROLYTE FEED CH-108-1HB-E
1/2"-CH-109-1HB-E
V-CH-109-01

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

HS 400 HOA | HS 410 HOA | NSH 400 TORQUE | AIT 400 TURB 120VAC | LIT 402 120VAC | SV 404

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

SV 400 | ZSC 400 ZSO 400 AIR SET 120 PSIG F. C. FV - 400 | AE 400 TURB | SV 401 120 PSIG AIR SET | PI 401 PE 401 | LE 402 | M-402

4"-WS-102-1HB

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

6"-RW-122-1HB

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

120 PSIG AIR SET | HS 403 HOA | SV 403 | PI 404 | PE 404 | 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-103-1HB | V-WS-109-01 | 2"-WS-109-1HB

ZSC 410 ZSO 410 AIR SET 120 PSIG F. C. FV - 410 | SV 410

V-WS-104-01

4"-WS-100-1HB

2"-WS-101-1HB | V-WS-101-01 | 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 | P-403 SEPARATOR FEED PUMP 20 GPM X 30 FT. H2O | 2"-WS-106-1HB | V-WS-106-01

HS 900 LOR | V-WS-108-01 | 4"-WS-108-1HB | 2"-WS-107-1HB | V-WS-107-01

4"-WS-110-1HB

TRUCK FILL FOR OFF-SITE DISPOSAL

V-WS-110-01

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

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

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

V-WS-113-01 | 2"-WS-113-1HB | 4" x 2"

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

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

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
TRENCH

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
TRENCH

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

SECONDARY CONTAINMENT - PROCESS PLANT

T-900A PROCESS SUMP NOTE 1

PROCESS DRAIN TANK 5,000 GAL. T-900 | P-900 PROCESS DRAIN PUMP | LSH 900 | V-DR-113-01 | VERTICAL WET PIT 175 GPM x 37 FT. H2O | 6"-DR-113-1HB

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.

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

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

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"

Appendix A
Third Quarter 2009 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

July 14, 2009

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-210 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 984092

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-210 project groundwater monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on July 1, 2009, 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.

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

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

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

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

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

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009

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	Daniel Kang / Romuel Chavez
EPA 218.6	Hexavalent Chromium	Michael Nonezyan

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

Laboratory No.: 984092

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

Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 6, 2009
Analytical Batch: 07EC09B

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
984092-1	SC-700B-WDR-210	µmhos/cm	EPA 120.1	1.00	2.00	6970
984092-2	SC-100B-WDR-210	µmhos/cm	EPA 120.1	1.00	2.00	7980

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984092-2	7980	7990	0.13%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	704	706	99.7%	90% - 110%	Yes
CVS#1	996	1000	99.6%	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

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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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.: Pending
P.O. No.: Pending

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 6, 2009
Analytical Batch: 07TDS09B

Investigation: Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
984092-1	SC-700B-WDR-210	mg/L	SM 2540C	250	4120
984092-2	SC-100B-WDR-210	mg/L	SM 2540C	250	4900

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	984093-2	5300	5240	0.57%	≤ 5%	Yes

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

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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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.: Pending
P.O. No.: Pending

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 2, 2009
Analytical Batch: 07TUC09B

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
984092-1	SC-700B-WDR-210	08:25	NTU	1.00	0.100	ND
984092-2	SC-100B-WDR-210	08:25	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	984092-2	ND	ND	0.00%	< 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	---	<0.100	Yes
LCS	7.83	8.00	97.9%	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.

EXCELLENCE IN INDEPENDENT TESTING

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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.: Pending
P.O. No.: Pending
Prep. Batch: 07CrH09A

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 1, 2009
Analytical Batch: 07CrH09A

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
984092-1	SC-700B-WDR-210	08:25	08:40	µg/L	1.05	0.20	ND
984092-2	SC-100B-WDR-210	08:25	08:51	µg/L	105	21.0	1190

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984092-2	1190	1190	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	984092-1	0.12	1.06	1.00	1.06	1.20	1.18	102%	90-110%	Yes
MS	984092-2	1190	105	15.0	1575	2660	2765	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	5.08	5.00	102%	90% - 110%	Yes
MRCVS#1	10.1	10.0	101%	95% - 105%	Yes
MRCVS#2	9.73	10.0	97.3%	95% - 105%	Yes
MRCVS#3	9.94	10.0	99.4%	95% - 105%	Yes
LCS	5.09	5.00	102%	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.: Pending
P.O. No.: Pending

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 6, 2009
Analytical Batch: 07NH3-E09B

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
984092-1	SC-700B-WDR-210	08:25	SM 4500-NH3 D	mg/L	1.00	0.500	ND
984092-2	SC-100B-WDR-210	08:25	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	984092-2	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	984092-2	0.00	1.00	6.00	6.00	6.13	6.00	102%	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	6.05	6.00	101%	90% - 110%	Yes
MRCVS#1	5.74	6.00	95.7%	90% - 110%	Yes
MRCVS#2	6.15	6.00	103%	90% - 110%	Yes
LCS	10.2	10.0	102%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 2, 2009
Analytical Batch: 07AN09B

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
984092-1	SC-700B-WDR-210	08:25	10:35	mg/L	5.00	0.500	2.76
984092-2	SC-100B-WDR-210	08:25	10:46	mg/L	5.00	0.500	2.58

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984092-2	2.58	2.79	7.82%	≤ 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	984092-2	2.58	5.00	4.00	20.0	24.0	22.6	107%	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	4.26	4.00	107%	90% - 110%	Yes
MRCVS#1	3.27	3.00	109%	90% - 110%	Yes
MRCVS#2	3.26	3.00	109%	90% - 110%	Yes
LCS	4.16	4.00	104%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).
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
Sample: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: Pending
P.O. No.: Pending

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 2, 2009
Analytical Batch: 07AN09B

Investigation: **Sulfate by Method EPA 300.0**

Analytical Results Sulfate

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
984092-1	SC-700B-WDR-210	08:25	12:29	mg/L	50.0	25.0	492
984092-2	SC-100B-WDR-210	08:25	12:40	mg/L	50.0	25.0	571

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984084-1	1100	1110	0.90%	≤ 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	984084-1	1100	200	10.0	2000	3210	3100	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	20.0	20.0	100%	90% - 110%	Yes
MRCVS#1	15.5	15.0	103%	90% - 110%	Yes
MRCVS#2	15.3	15.0	102%	90% - 110%	Yes
LCS	20.5	20.0	103%	90% - 110%	Yes

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

Respectfully submitted,
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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.: Pending
P.O. No.: Pending

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 2, 2009
Analytical Batch: 07AN09B

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

Analytical Results Nitrate as N

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
984092-1	SC-700B-WDR-210	08:25	10:35	mg/L	5.00	1.00	3.14
984092-2	SC-100B-WDR-210	08:25	10:46	mg/L	5.00	1.00	3.12

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984092-2	3.12	3.13	0.32%	≤ 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	984092-2	3.12	5.00	4.00	20.0	24.5	23.1	107%	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	4.02	4.00	101%	90% - 110%	Yes
MRCVS#1	3.03	3.00	101%	90% - 110%	Yes
LCS	4.09	4.00	102%	90% - 110%	Yes

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

Respectfully submitted,
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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.: Pending
P.O. No.: Pending

Laboratory No.: 984092
Date: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Prep/ Analyzed: July 2, 2009
Analytical Batch: 07NO209B

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
984092-1	SC-700B-WDR-210	08:25	14:46	mg/L	1.00	0.0050	ND
984092-2	SC-100B-WDR-210	08:25	14:47	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	984092-1	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	984092-1	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	0.0265	0.0270	98%	90% - 110%	Yes
MRCVS#1	0.0198	0.0200	99%	90% - 110%	Yes
LCS	0.0456	0.0450	101%	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

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

Laboratory No.: 984092
Reported: July 14, 2009
Collected: July 1, 2009
Received: July 1, 2009
Analyzed: See Below

Analytical Results

SAMPLE ID: SC-700B-WDR-210 **Time Collected:** 08:25 **LAB ID:** 984092-1

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	µg/L	50.0	070209A	07/02/09	11:03
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:03
Arsenic	EPA 200.8	ND	5.00	µg/L	1.00	070209A	07/02/09	11:03
Barium	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:03
Chromium	EPA 200.8	ND	5.00	µg/L	1.00	070209A	07/02/09	11:03
Copper	EPA 200.8	ND	5.00	µg/L	5.00	070209A	07/02/09	11:03
Lead	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:03
Manganese	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:03
Molybdenum	EPA 200.8	16.0	5.00	µg/L	10.0	070209A	07/02/09	11:03
Nickel	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:03
Zinc	EPA 200.8	ND	5.00	µg/L	10.0	070609A	07/06/09	15:43
Boron	EPA 200.7	1060	1.00	µg/L	200	070909A	07/09/09	15:33
Iron	EPA 200.7	ND	1.00	µg/L	20.0	070909A	07/09/09	15:33

SAMPLE ID: SC-100B-WDR-210 **Time Collected:** 08:25 **LAB ID:** 984092-2

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	µg/L	50.0	070209A	07/02/09	11:47
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:47
Arsenic	EPA 200.8	3.64	5.00	µg/L	1.00	070209A	07/02/09	11:47
Barium	EPA 200.8	24.8	5.00	µg/L	10.0	070209A	07/02/09	11:47
Chromium	EPA 200.8	1130	5.00	µg/L	1.00	070209A	07/02/09	11:47
Copper	EPA 200.8	ND	5.00	µg/L	5.00	070209A	07/02/09	11:47
Lead	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:47
Manganese	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:47
Molybdenum	EPA 200.8	20.7	5.00	µg/L	10.0	070209A	07/02/09	11:47
Nickel	EPA 200.8	ND	5.00	µg/L	10.0	070209A	07/02/09	11:47
Zinc	EPA 200.8	16.8	5.00	µg/L	10.0	070609A	07/06/09	16:09
Boron	EPA 200.7	1080	1.00	µg/L	200	070909A	07/09/09	15:39
Iron	EPA 200.7	ND	1.00	µg/L	20.0	070909A	07/09/09	15:39

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

984092

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www.truesdail.com

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-210]

COC Number IM3Plant-WDR - 210
TURNAROUND TIME 10 Days
DATE 07/01/09 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	New number
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-210	07/01/09	0825		X		X	X	X	X	X		X			4	pH=2
2	SC-100B-WDR-210	07/01/09	0825		X		X	X	X	X	X		X			4	pH=2

	TIME	ANALYSIS	pH	EC	CR6	CR TOTAL		TEMP
SC-700B	0825	0834	7.0	7.31	.000	.001		85.1
SC-100B	0825	0837	7.1	8:34	1.170			77.9

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

8 TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	J. Aide	GTI	7-1-09 0900
Signature (Received)	B. Dayag	TL	
Signature (Relinquished)	B. Dayag	TL	7-1-09 1500
Signature (Received)	L. Shakumura	TLI	7-1-09 2030
Signature (Relinquished)	L. Shakumura	TLI	7/1/09 20:30
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

071

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July 21, 2009

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-211 PROJECT, GROUNDWATER MONITORING, TLI NO.: 984207

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-211 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on July 8, 2009, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Mr. Shawn Duffy of CH2M Hill requested that the project description and sample ID be reported as IM3Plant-WDR-211 and SC-700B-WDR-211, respectively, rather than IM3Plant-WDR-210 and SC-700B-WDR-210 as shown on the chain of custody.

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.

Sen Cand

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: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02

Laboratory No.: 984207
Date: July 21, 2009
Collected: July 8, 2009
Received: July 8, 2009

ANALYST LIST

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

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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.: 379209.01.02
P.O. No.: 379209.01.02
Prep. Batch: 070909A

Laboratory No.: 984207
Date: July 21, 2009
Collected: July 8, 2009
Received: July 8, 2009
Prep/ Analyzed: July 9, 2009
Analytical Batch: 070909A

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
984207	SC-700B-WDR-211	µg/L	EPA 200.8	17:22	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	984207	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	984207	0.00	5.00	50.0	250	247	250	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	48.3	50.0	96.6%	90% - 110%	Yes
MRCVS#1	49.5	50.0	99.0%	90% - 110%	Yes
MRCVS#2	49.0	50.0	98.0%	90% - 110%	Yes
ICS	50.2	50.0	100%	80% - 120%	Yes
LCS	47.5	50.0	95.0%	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.

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.: 984207

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02

Date: July 21, 2009
Collected: July 8, 2009
Received: July 8, 2009
Prep/ Analyzed: July 9, 2009
Analytical Batch: 07CrH09C

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
984207	SC-700B-WDR-211	10:11	08:48	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984208-1	333	333	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	984207	0.00	1.06	1.00	1.06	1.08	1.06	102%	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	5.11	5.00	102%	90% - 110%	Yes
MRCVS#1	9.98	10.0	99.8%	95% - 105%	Yes
MRCVS#2	9.83	10.0	98.3%	95% - 105%	Yes
MRCVS#3	9.64	10.0	96.4%	95% - 105%	Yes
MRCVS#4	9.68	10.0	96.8%	95% - 105%	Yes
MRCVS#5	9.67	10.0	96.7%	95% - 105%	Yes
MRCVS#6	9.63	10.0	96.3%	95% - 105%	Yes
LCS	5.08	5.00	102%	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.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984207
Date: July 21, 2009
Collected: July 8, 2009
Received: July 8, 2009
Prep/ Analyzed: July 9, 2009
Analytical Batch: 07TUC09F

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
984207	SC-700B-WDR-211	10:11	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	984209-7	0.559	0.560	0.18%	≤ 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	7.74	8.00	96.8%	90% - 110%	Yes
LCS	7.80	8.00	97.5%	90% - 110%	Yes
LCS	7.75	8.00	96.9%	90% - 110%	Yes

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

Respectfully submitted,
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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.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984207
Date: July 21, 2009
Collected: July 8, 2009
Received: July 8, 2009
Prep/ Analyzed: July 13, 2009
Analytical Batch: 07EC09D

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
984207	SC-700B-WDR-211	µmhos/cm	EPA 120.1	1.00	2.00	7140

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984209-9	7340	7340	0.00%	≤ 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	994	999	99.5%	90% - 110%	Yes
CVS#2	995	999	99.6%	90% - 110%	Yes
LCS	704	706	99.7%	90% - 110%	Yes
LCSD	704	706	99.7%	90% - 110%	Yes

Respectfully submitted,
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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.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984207
Date: July 21, 2009
Collected: July 8, 2009
Received: July 8, 2009
Prep/ Analyzed: July 13, 2009
Analytical Batch: 07TDS09D

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
984207	SC-700B-WDR-211	mg/L	SM 2540C	250	4170

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	984209-8	4150	4040	1.34%	≤ 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	502	500	100%	90% - 110%	Yes
LCS 2	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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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-210]

984207

COC Number

TURNAROUND TIME 10 Days

DATE 07/08/09 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	379209.01.02 TEAM 1
SAMPLERS (SIGNATURE	C. KNIGHT

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS	TIME
SC-700B-WDR-210	07/08/09	10:11	Water	x	x	x	x		x								3	pH = 2	
																		EC 7.39	10:14
																		TEMP 84.7	10:14
																		pH 7.0	10:17
																		$Cr^{(6)}$ .001	10:2
																		$Cr^{(T)}$ .002	10:2
																3	TOTAL NUMBER OF CONTAINERS		

Rec'd 07/08/09
984207

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	OMI	7-8-09 10:49
Signature (Received) Rafael Davila	Rafael	T.L.I	7-8-09 3:10
Signature (Relinquished) Rafael Davila	Rafael	T.L.I	7-8-09 23:55
Signature (Received) Shakuntla	Shakuntla	TLI	7/8/09 23:55
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.
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July 23, 2009

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-212 PROJECT, GROUNDWATER MONITORING, TLI NO.: 984276

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-212 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on July 13, 2009, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

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

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.: 379209.01.02

Laboratory No.: 984276
Date: July 23, 2009
Collected: July 13, 2009
Received: July 13, 2009

ANALYST LIST

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

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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.: 379209.01.02
P.O. No.: 379209.01.02
Prep. Batch: 071609B

Laboratory No.: 984276
Date: July 23, 2009
Collected: July 13, 2009
Received: July 13, 2009
Prep/ Analyzed: July 16, 2009
Analytical Batch: 071609B

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
984276	SC-700B-WDR-212	µg/L	EPA 200.8	17:55	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	984271-1	45.6	44.8	1.77%	≤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	984271-1	45.6	5.00	50.0	250	283	296	95.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	48.7	50.0	97.4%	90% - 110%	Yes
MRCVS#1	45.3	50.0	90.6%	90% - 110%	Yes
MRCVS#2	46.0	50.0	92.0%	90% - 110%	Yes
MRCVS#3	45.3	50.0	90.6%	90% - 110%	Yes
ICS	49.4	50.0	98.8%	80% - 120%	Yes
LCS	49.4	50.0	98.8%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Sen Cand
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.: 984276

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02

Date: July 23, 2009
Collected: July 13, 2009
Received: July 13, 2009
Prep/ Analyzed: July 14, 2009
Analytical Batch: 07CrH09D

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
984276	SC-700B-WDR-212	08:00	14:08	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984271-4	84.8	92.9	9.12%	< 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	984276	0.00	1.06	1.00	1.06	1.13	1.06	107%	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	5.12	5.00	102%	90% - 110%	Yes
MRCVS#1	10.1	10.0	101%	95% - 105%	Yes
MRCVS#2	10.1	10.0	101%	95% - 105%	Yes
MRCVS#3	10.3	10.0	103%	95% - 105%	Yes
LCS	5.06	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

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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.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984276
Date: July 23, 2009
Collected: July 13, 2009
Received: July 13, 2009
Prep/ Analyzed: July 14, 2009
Analytical Batch: 07TUC09G

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
984276	SC-700B-WDR-212	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	984265-16	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	7.55	8.00	94.4%	90% - 110%	Yes
LCS	7.70	8.00	96.3%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984276
Date: July 23, 2009
Collected: July 13, 2009
Received: July 13, 2009
Prep/ Analyzed: July 15, 2009
Analytical Batch: 07EC09F

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
984276	SC-700B-WDR-212	µmhos/cm	EPA 120.1	1.00	2.00	6970

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984276	6970	6980	0.14%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	704	706	99.7%	90% - 110%	Yes
CVS#1	995	999	99.6%	90% - 110%	Yes
CVS#2	995	999	99.6%	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

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.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984276
Date: July 23, 2009
Collected: July 13, 2009
Received: July 13, 2009
Prep/ Analyzed: July 16, 2009
Analytical Batch: 07TDS09E

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
984276	SC-700B-WDR-212	mg/L	SM 2540C	250	3980

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	984276	3980	3930	0.63%	≤ 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	499	500	99.8%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-212]

COC Number 984276

TURNAROUND TIME 10 Days

DATE 07/13/09 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	379209.01.02 TEAM 1
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS
SC-700B-WDR-212	07/13/09	0800	Water	x	x	x	x	x	3
									3 TOTAL NUMBER OF CONTAINERS

COMMENTS

TIME
pH - 7.5 0809
EC - 7.24 0810
Cr6 - .001 0813
TOTAL - .001 0822
TEMP - 84.2 - 0803

pH = 7

Rec'd 07/13/09
COC 984276

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	ONT	7-13-09 1530
Signature (Received)	Rafael Davila	T.L.I	7-13-09 15:30
Signature (Relinquished)	Rafael Davila	T.L.I	7-13-09 20:45
Signature (Received)	Shabnam Nia	TLI	7/13/09 2045
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

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14201 FRANKLIN AVENUE
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www.truesdail.com

July 30, 2009

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-213 PROJECT, GROUNDWATER MONITORING, TLI NO.: 984435

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-213 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on July 21, 2009, 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.

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 Sean Conrad
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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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.: 379209.01.02

Laboratory No.: 984435
Date: July 30, 2009
Collected: July 21, 2009
Received: July 21, 2009

ANALYST LIST

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

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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: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02
Prep. Batch: 072409A

Laboratory No.: 984435
Date: July 30, 2009
Collected: July 21, 2009
Received: July 21, 2009
Prep/ Analyzed: July 24, 2009
Analytical Batch: 072409A

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
984435	SC-700B-WDR-213	µg/L	EPA 200.8	12:28	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	984435	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	984435	0.00	5.00	50.0	250	264	250	102%	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	50.2	50.0	100%	90% - 110%	Yes
MRCVS#1	49.5	50.0	99.0%	90% - 110%	Yes
ICS	49.7	50.0	99.4%	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.

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.: 984435

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02

Date: July 30, 2009
Collected: July 21, 2009
Received: July 21, 2009
Prep/ Analyzed: July 23, 2009
Analytical Batch: 07CrH09I

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
984435	SC-700B-WDR-213	08:00	08:01	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984372-3	330	330	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	984435	0.00	1.06	1.00	1.06	1.06	1.06	100%	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	5.11	5.00	102%	90% - 110%	Yes
MRCVS#1	10.2	10.0	102%	95% - 105%	Yes
MRCVS#2	9.75	10.0	97.5%	95% - 105%	Yes
LCS	5.12	5.00	102%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sam Card
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) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984435
Date: July 30, 2009
Collected: July 21, 2009
Received: July 21, 2009
Prep/ Analyzed: July 22, 2009
Analytical Batch: 07TUC09N

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
984435	SC-700B-WDR-213	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	984415-8	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	8.18	8.00	102%	90% - 110%	Yes
LCS	7.79	8.00	97.4%	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

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.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984435
Date: July 30, 2009
Collected: July 21, 2009
Received: July 21, 2009
Prep/ Analyzed: July 23, 2009
Analytical Batch: 07EC09G

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
984435	SC-700B-WDR-213	µmhos/cm	EPA 120.1	1.00	2.00	6960

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984435	6960	6970	0.14%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	704	706	99.7%	90% - 110%	Yes
CVS#1	995	999	99.6%	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.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984435
Date: July 30, 2009
Collected: July 21, 2009
Received: July 21, 2009
Prep/ Analyzed: July 23, 2009
Analytical Batch: 07TDS09I

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
984435	SC-700B-WDR-213	mg/L	SM 2540C	125	4070

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	984435	4070	4150	0.97%	≤ 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	499	500	99.8%	90% - 110%	Yes
LCS 2	497	500	99.4%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

Rec'd 07/21/09

984435

TRUESDAIL LABORATORIES, INC.
14201 Franklin Avenue, Tustin, CA 92780-7008
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984435

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-213]

COC Number 984435
TURNAROUND TIME 10 Days
DATE 07/21/09 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: 379209.01.02 TEAM: 1
SAMPLERS (SIGNATURE): [signature]

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)		Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-213	07/21/09	8:00	Water	x	x	x	x		x	3	pH - 7 (Rafael)
										3	TOTAL NUMBER OF CONTAINERS

COMMENTS:
7-21-09 RP PULLED 8:00
TEMP - 83.6 8:04
pH - 7.1 8:07
EC - 7.22 8:07
Cr6 - .001 8:15
TOTAL - .001 8:23

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

Signature	Printed Name	Company/Agency	Date/Time
Signature (Relinquished) [signature]	Ron Phillips	OMI	7-21-09
Signature (Received) Rafael David	Rafael	T-L-I	7-21-09 15:15
Signature (Relinquished) Rafael David	Rafael	T-L-I	7-21-09 20:50
Signature (Received) Rafael David	Rafael	T-L-I	7-21-09 20:50
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ ____ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

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www.truesdail.com

August 5, 2009

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-214 PROJECT, GROUNDWATER MONITORING, TLI NO.: 984596

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-214 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on July 29, 2009, 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.

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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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.: 379209.01.02

Laboratory No.: 984596
Date: August 5, 2009
Collected: July 29, 2009
Received: July 29, 2009

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Daniel Kang
EPA 218.6	Hexavalent Chromium	Michael Nonezyan

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.: 379209.01.02
P.O. No.: 379209.01.02
Prep. Batch: 073109B

Laboratory No.: 984596
Date: August 5, 2009
Collected: July 29, 2009
Received: July 29, 2009
Prep/ Analyzed: July 31, 2009
Analytical Batch: 073109B

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
984596	SC-700B-WDR-214	µg/L	EPA 200.8	15:32	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	984596	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	984596	0.00	5.00	50.0	250	236	250	94.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	48.3	50.0	96.6%	90% - 110%	Yes
MRCVS#1	46.4	50.0	92.8%	90% - 110%	Yes
MRCVS#2	46.8	50.0	93.7%	90% - 110%	Yes
ICS	46.9	50.0	93.8%	80% - 120%	Yes
ICS#2	47.3	50.0	94.5%	80% - 120%	Yes
LCS	48.3	50.0	96.7%	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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984596

Date: August 6, 2009
Collected: July 29, 2009
Received: July 29, 2009
Prep/ Analyzed: July 29-30, 2009
Analytical Batch: 07CrH09J
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
984596	SC-700B-WDR-214	08:00	07/30/09; 08:48	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984549-2	22.5	23.6	4.77%	< 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	984596	0.00	1.06	1.00	1.06	1.06	1.06	100%	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	5.10	5.00	102%	90% - 110%	Yes
MRCVS#1	10.1	10.0	101%	95% - 105%	Yes
MRCVS#2	10.4	10.0	104%	95% - 105%	Yes
LCS	5.06	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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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.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984596
Date: August 6, 2009
Collected: July 29, 2009
Received: July 29, 2009
Prep/ Analyzed: July 30, 2009
Analytical Batch: 07TUC09Q
Revision 1

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
984596	SC-700B-WDR-214	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	984596	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	7.56	8.00	94.5%	90% - 110%	Yes
LCS	7.45	8.00	93.1%	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.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984596
Date: August 5, 2009
Collected: July 29, 2009
Received: July 29, 2009
Prep/ Analyzed: July 31, 2009
Analytical Batch: 07EC09I

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
984596	SC-700B-WDR-214	µmhos/cm	EPA 120.1	1.00	2.00	7630

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984596	7630	7650	0.26%	≤ 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	995	999	99.6%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

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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: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 379209.01.02
P.O. No.: 379209.01.02

Laboratory No.: 984596
Date: August 5, 2009
Collected: July 29, 2009
Received: July 29, 2009
Prep/ Analyzed: July 31, 2009
Analytical Batch: 07TDS09K

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
984596	SC-700B-WDR-214	mg/L	SM 2540C	250	4480

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	984596	4480	4370	1.24%	≤ 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 1	499	500	99.8%	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

RUSH

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-214]

984596

COC Number

TURNAROUND TIME 5 Days

DATE 07/29/09 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	379209.01.02 TEAM 1
SAMPLERS (SIGNATURE	

ALERT !!
Level III QC

Rec'd 07/29/09
984596

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-214	07/29/09	0800	Water	x	x	x	x	x	3	pH = 2
									3	TOTAL NUMBER OF CONTAINERS

SC-700B

TIME SAMPLED	TIME ANALYSIS	Cr6	TOTAL	TEMP	EC	pH
0800				82.5		
0802					7.5	
0803					7.81	
0809		.001				
0820		~~.003~~ RL	.003			

For Sample Condition
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

7/29/09

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	J AIDE	OMI	0900
Signature (Received) Bonifacio Dayag	B. DAYAG	TLI	7-29-09 1520
Signature (Relinquished) Bonifacio Dayag	B. DAYAG	TLI	7-29-09 2030
Signature (Received) Shabumina	Shabumina	TLI	7/29/09 20:30
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

032

TRUESDAIL LABORATORIES, INC.
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August 21, 2009

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-215 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 984729

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-215 project groundwater monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on August 5, 2009, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Mr. Shawn Duffy of CH2M Hill canceled the analysis for TOC by SM 5310 C on August 6, 2009.

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.

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

Laboratory No.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009

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	Daniel Kang / Romuel Chavez / Linda Saetern
EPA 218.6	Hexavalent Chromium	Michael Nonezyan

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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.: 984729

Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 6, 2009
Analytical Batch: 08EC09C

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
984729-1	SC-700B-WDR-215	µmhos/cm	EPA 120.1	1.00	2.00	7380
984729-2	SC-100B-WDR-215	µmhos/cm	EPA 120.1	1.00	2.00	7980

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984731-2	8620	8630	0.12%	≤ 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	966	999	96.7%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 6, 2009
Analytical Batch: 08TDS09C

Investigation: Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
984729-1	SC-700B-WDR-215	mg/L	SM 2540C	250	4390
984729-2	SC-100B-WDR-215	mg/L	SM 2540C	250	4680

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	984731-2	5270	5220	0.48%	≤ 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	499	500	99.8%	90% - 110%	Yes

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

Respectfully submitted,
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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.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 6, 2009
Analytical Batch: 08TUC09E

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
984729-1	SC-700B-WDR-215	08:00	NTU	1.00	0.100	ND
984729-2	SC-100B-WDR-215	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	984729-2	ND	ND	0.00%	< 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	---	<0.100	Yes
LCS	8.20	8.00	103%	90% - 110%	Yes
LCS	8.10	8.00	101%	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
Prep. Batch: 08CrH09F

Laboratory No.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 6, 2009
Analytical Batch: 08CrH09F

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
984729-1	SC-700B-WDR-215	08:00	09:50	µg/L	1.05	0.20	ND
984729-2	SC-100B-WDR-215	08:00	09:39	µg/L	105	21.0	1060

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984729-2	1060	1060	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	984729-1	0.00	1.06	1.00	1.06	1.06	1.06	100%	90-110%	Yes
MS	984729-2	1060	105	15.0	1575	2640	2635	100%	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	5.00	5.00	100%	90% - 110%	Yes
MRCVS#1	10.2	10.0	102%	95% - 105%	Yes
MRCVS#2	9.99	10.0	99.9%	95% - 105%	Yes
MRCVS#3	9.89	10.0	98.9%	95% - 105%	Yes
MRCVS#4	9.85	10.0	98.5%	95% - 105%	Yes
LCS	5.06	5.00	101%	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.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 10, 2009
Analytical Batch: 08NH3-E09B

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
984729-1	SC-700B-WDR-215	08:00	SM 4500-NH3 D	mg/L	1.00	0.500	ND
984729-2	SC-100B-WDR-215	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	984729-1	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	984729-2	0.00	1.00	6.00	6.00	5.87	6.00	97.8%	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	6.00	6.00	100%	90% - 110%	Yes
MRCVS#1	6.06	6.00	101%	90% - 110%	Yes
LCS	9.87	10.0	98.7%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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

Laboratory No.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 6, 2009
Analytical Batch: 08AN09E

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
984729-1	SC-700B-WDR-215	08:00	10:48	mg/L	5.00	0.500	2.14
984729-2	SC-100B-WDR-215	08:00	11:00	mg/L	5.00	0.500	2.30

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984729-2	2.30	2.42	5.08%	≤ 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	984729-2	2.30	5.00	4.00	20.0	22.9	22.3	103%	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	3.98	4.00	99.5%	90% - 110%	Yes
MRCVS#1	3.04	3.00	101%	90% - 110%	Yes
LCS	3.96	4.00	99.0%	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: Two (2) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 6, 2009
Analytical Batch: 08AN09E

Investigation: **Sulfate by Method EPA 300.0**

Analytical Results Sulfate

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
984729-1	SC-700B-WDR-215	08:00	12:42	mg/L	100	50.0	492
984729-2	SC-100B-WDR-215	08:00	13:16	mg/L	100	50.0	532

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984729-1	492	484	1.64%	≤ 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	984729-1	492	100	10.0	1000	1510	1492	102%	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	19.9	20.0	99.5%	90% - 110%	Yes
MRCVS#1	14.8	15.0	98.7%	90% - 110%	Yes
MRCVS#2	15.0	15.0	100%	90% - 110%	Yes
LCS	19.8	20.0	99.0%	90% - 110%	Yes

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

Respectfully submitted,
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Mona Nassimi, Manager
Analytical Services

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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.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 6, 2009
Analytical Batch: 08AN09E

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

Analytical Results Nitrate as N

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
984729-1	SC-700B-WDR-215	08:00	10:48	mg/L	5.00	1.00	2.31
984729-2	SC-100B-WDR-215	08:00	11:00	mg/L	5.00	1.00	2.50

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984729-2	2.50	2.64	5.45%	≤ 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	984729-2	2.50	5.00	4.00	20.0	23.7	22.5	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	3.94	4.00	98.5%	90% - 110%	Yes
MRCVS#1	2.95	3.00	98.3%	90% - 110%	Yes
LCS	3.93	4.00	98.3%	90% - 110%	Yes

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

Respectfully submitted,
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Mona Nassimi, Manager
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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.: 984729
Date: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Prep/ Analyzed: August 6, 2009
Analytical Batch: 08NO209C

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
984729-1	SC-700B-WDR-215	08:00	13:18	mg/L	1.00	0.0050	ND
984729-2	SC-100B-WDR-215	08:00	13:19	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	984729-1	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	984729-1	0.00	1.00	0.0200	0.0200	0.0195	0.0200	97.5%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.0050	---	<0.0050	Yes
MRCCS	0.0267	0.0270	98.9%	90% - 110%	Yes
MRCVS#1	0.0199	0.0200	100%	90% - 110%	Yes
LCS	0.0463	0.0450	103%	90% - 110%	Yes

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

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TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
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
Investigation: Total Metal Analyses as Requested

Laboratory No.: 984729
Reported: August 21, 2009
Collected: August 5, 2009
Received: August 5, 2009
Analyzed: See Below

Analytical Results

SAMPLE ID: SC-700B-WDR-215 **Time Collected:** 08:00 **LAB ID:** 984729-1

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	µg/L	50.0	081009A	08/10/09	15:37
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	081009A	08/10/09	15:37
Arsenic	EPA 200.8	ND	5.00	µg/L	1.00	081009A	08/10/09	15:37
Barium	EPA 200.8	13.6	5.00	µg/L	10.0	081009A	08/10/09	15:37
Chromium	EPA 200.8	ND	5.00	µg/L	1.00	081009A	08/10/09	15:37
Copper	EPA 200.8	ND	5.00	µg/L	5.00	081009A	08/10/09	15:37
Lead	EPA 200.8	ND	5.00	µg/L	10.0	081009A	08/10/09	15:37
Manganese	EPA 200.8	44.9	5.00	µg/L	10.0	081009A	08/10/09	15:37
Molybdenum	EPA 200.8	14.2	5.00	µg/L	10.0	081309B	08/13/09	23:48
Nickel	EPA 200.8	ND	5.00	µg/L	10.0	081009A	08/10/09	15:37
Zinc	EPA 200.8	20.4	5.00	µg/L	10.0	081309B	08/13/09	23:48
Boron	EPA 200.7	1070	1.00	µg/L	200	081209A	08/12/09	12:11
Iron	EPA 200.7	ND	1.00	µg/L	20.0	070909A	07/09/09	12:11

SAMPLE ID: SC-100B-WDR-215 **Time Collected:** 08:00 **LAB ID:** 984729-2

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	µg/L	50.0	081009A	08/10/09	16:03
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	081009A	08/10/09	16:03
Arsenic	EPA 200.8	3.60	5.00	µg/L	1.00	081009A	08/10/09	16:03
Barium	EPA 200.8	22.8	5.00	µg/L	10.0	081009A	08/10/09	16:03
Chromium	EPA 200.8	950	5.00	µg/L	1.00	081009A	08/10/09	16:03
Copper	EPA 200.8	ND	5.00	µg/L	5.00	081009A	08/10/09	16:03
Lead	EPA 200.8	ND	5.00	µg/L	10.0	081009A	08/10/09	16:03
Manganese	EPA 200.8	ND	5.00	µg/L	10.0	081009A	08/10/09	16:03
Molybdenum	EPA 200.8	18.8	5.00	µg/L	10.0	081309B	08/13/09	23:54
Nickel	EPA 200.8	ND	5.00	µg/L	10.0	081009A	08/10/09	16:03
Zinc	EPA 200.8	ND	5.00	µg/L	10.0	081309B	08/13/09	23:54
Boron	EPA 200.7	1110	1.00	µg/L	200	081209A	08/12/09	12:45
Iron	EPA 200.7	ND	1.00	µg/L	20.0	070909A	07/09/09	12:45

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

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-215] 984729

COC Number IM3Plant-WDR - 215
TURNAROUND TIME 10 Days
DATE 08/05/09 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 [signature]

ALERT !!
Level III QC

	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-215	08/05/09	0800		X		X	X	X	X	X		X	X					~~8~~ 4	pH2
-2	SC-100B-WDR-215	08/05/09	0800		X		X	X	X	X	X		X						4	pH2
		TIME	ANALYSIS		pH		EC		TEMP			Cr6		TOTAL						
	SC 700B	0800	0812		7.8		770		82.2			.001		.001						
	SC-100B	0800	0807		7.4		826		79.1			.251		—						
												.255								

TOTAL NUMBER OF CONTAINERS 8

CHAIN OF CUSTODY SIGNATURE RECORD

Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished) [signature]	J AIDE	OMI	8-5-09 0900
Signature (Received) Bonifacio Dayag	B. DAYAG	TLI	8-5-09 1520
Signature (Relinquished) Bonifacio Dayag	B. DAYAG	TLI	8-5-09 2030
Signature (Received) Shabunirua	Shabunirua	TLI	8/5/09 20130
Signature (Relinquished)		For Sample Conditions	
Signature (Received)		See Form Attached	

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

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August 31, 2009

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-216 PROJECT, GROUNDWATER MONITORING, TLI NO.: 984886

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-216 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on August 12, 2009, 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.

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

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.: 984886
Date: August 31, 2009
Collected: August 12, 2009
Received: August 12, 2009

ANALYST LIST

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

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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: 081809B

Laboratory No.: 984886

Date: August 31, 2009
Collected: August 12, 2009
Received: August 12, 2009
Prep/ Analyzed: August 18, 2009
Analytical Batch: 081809B

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
984886	SC-700B-WDR-216	µg/L	EPA 200.8	17:42	5.00	1.00	1.23

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984889-9	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	984889-9	0.00	5.00	50.0	250	233	250	93.2%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	47.8	50.0	95.6%	90% - 110%	Yes
MRCVS#1	47.2	50.0	94.4%	90% - 110%	Yes
MRCVS#2	47.5	50.0	95.0%	90% - 110%	Yes
MRCVS#3	46.1	50.0	92.2%	90% - 110%	Yes
ICS	46.7	50.0	93.4%	80% - 120%	Yes
LCS	47.1	50.0	94.2%	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.

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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.: 984886

Date: August 31, 2009
Collected: August 12, 2009
Received: August 12, 2009
Prep/ Analyzed: August 13, 2009
Analytical Batch: 08CrH09Q

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
984886	SC-700B-WDR-216	08:00	11:58	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984888-3	11.4	11.4	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	984886	0.124	1.06	1.00	1.06	1.27	1.18	108%	90 - 110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.15	5.00	103%	90% - 110%	Yes
MRCVS#1	9.80	10.0	98.0%	95% - 105%	Yes
MRCVS#2	9.89	10.0	98.9%	95% - 105%	Yes
MRCVS#3	9.86	10.0	98.6%	95% - 105%	Yes
LCS	5.15	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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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.: 984886
Date: August 31, 2009
Collected: August 12, 2009
Received: August 12, 2009
Prep/ Analyzed: August 13, 2009
Analytical Batch: 08TUC09K

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
984886	SC-700B-WDR-216	08:00	NTU	1.00	0.100	0.105

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984883-27	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	7.77	8.00	97.1%	90% - 110%	Yes
LCS	7.68	8.00	96.0%	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.
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.: 984886
Date: August 31, 2009
Collected: August 12, 2009
Received: August 12, 2009
Prep/ Analyzed: August 13, 2009
Analytical Batch: 08EC09E

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
984886	SC-700B-WDR-216	µmhos/cm	EPA 120.1	1.00	2.00	5990

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984886	5990	6000	0.17%	≤ 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	965	999	96.6%	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

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.: 984886
Date: August 31, 2009
Collected: August 12, 2009
Received: August 12, 2009
Prep/ Analyzed: August 13, 2009
Analytical Batch: 08TDS09H

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
984886	SC-700B-WDR-216	mg/L	SM 2540C	125	3600

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	984855-2	1000	1000	0.00%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	---	<25.0	Yes
LCS 1	497	500	99.4%	90% - 110%	Yes
LCS 2	498	500	99.6%	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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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-216] **984886**

COC Number

TURNAROUND TIME 10 Days

DATE 08/12/09 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	

ALERT !! Level III QC

Rec'd 08/12/09 SG 984886

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-216	08/12/09	0800	Water	x	x	x	x		x							3	pH-7
																3	TOTAL NUMBER OF CONTAINERS

pH - 7.7
EC - 6.14
Cr6 - .001
TOTAL - .001
TEMP - 82.5

TIME
0800

Analysis
~~0809~~ 0812
0808
0817
0826
0805

For Sample Conditions See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	J AIDE	OMI	8/12/09 0900
Signature (Received)	Rafael Davila	T.L.I	8-12-09 1500
Signature (Relinquished)	Rafael Davila	T.L.I	8-12-09 2045
Signature (Received)	Shekeenine	TLI	8/12/09 2045
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

032

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www.truesdail.com

August 31, 2009

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-217 PROJECT, GROUNDWATER MONITORING, TLI NO.: 985000

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-217 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on August 19, 2009, 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.

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

K. R. P. Iyer

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.: 985000
Date: August 31, 2009
Collected: August 19, 2009
Received: August 19, 2009

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Iordan Stavrev
EPA 200.8	Total Chromium	Daniel Kang
EPA 218.6	Hexavalent Chromium	Michael Nonezyan

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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: 082609C

Laboratory No.: 985000

Date: August 31, 2009
Collected: August 19, 2009
Received: August 19, 2009
Prep/ Analyzed: August 27, 2009
Analytical Batch: 082609C

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
985000	SC-700B-WDR-217	µg/L	EPA 200.8	00:11	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	984912-1	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	984912-1	0.00	5.00	50.0	250	248	250	99.2%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	50.6	50.0	101%	90% - 110%	Yes
MRCVS#1	50.9	50.0	102%	90% - 110%	Yes
MRCVS#2	50.6	50.0	101%	90% - 110%	Yes
MRCVS#3	46.1	50.0	92.2%	90% - 110%	Yes
ICS	50.4	50.0	101%	80% - 120%	Yes
LCS	50.3	50.0	101%	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.

EXCELLENCE IN INDEPENDENT TESTING

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

REPORT

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

Laboratory No.: 985000

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

Date: August 31, 2009
Collected: August 19, 2009
Received: August 19, 2009
Prep/ Analyzed: August 21, 2009
Analytical Batch: 08CrH09T

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
985000	SC-700B-WDR-217	08:30	10:15	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984909-2	408	408	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	985000	0.00	1.06	1.00	1.06	1.09	1.06	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	5.26	5.00	105%	90% - 110%	Yes
MRCVS#1	9.71	10.0	97.1%	95% - 105%	Yes
MRCVS#2	9.70	10.0	97.0%	95% - 105%	Yes
LCS	5.23	5.00	105%	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.: 985000
Date: August 31, 2009
Collected: August 19, 2009
Received: August 19, 2009
Prep/ Analyzed: August 21, 2009
Analytical Batch: 08TUC09N

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
985000	SC-700B-WDR-217	08:30	NTU	1.00	0.100	0.109

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985000	0.109	0.107	1.85%	≤ 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	7.51	8.00	93.9%	90% - 110%	Yes
LCS	7.48	8.00	93.5%	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.
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.: 985000
Date: August 31, 2009
Collected: August 19, 2009
Received: August 19, 2009
Prep/ Analyzed: August 20, 2009
Analytical Batch: 08EC09G

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
985000	SC-700B-WDR-217	µmhos/cm	EPA 120.1	1.00	2.00	7060

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985000	7060	7070	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	997	999	99.8%	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.: 985000
Date: August 31, 2009
Collected: August 19, 2009
Received: August 19, 2009
Prep/ Analyzed: August 20, 2009
Analytical Batch: 08TDS09L

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
985000	SC-700B-WDR-217	mg/L	SM 2540C	250	4130

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	985000	4130	4070	0.73%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	---	<25.0	Yes
LCS	499	500	99.8%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-217] 985000

COC Number

TURNAROUND TIME 10 Days

DATE 08/19/09 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 08/19/09
985000

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-217	08/19/09		Water	X	X	X	X		X							3	pH=7
																3	TOTAL NUMBER OF CONTAINERS

TEST	TIME	ANALYSIS DATE	RESULTS
pH	0830	0841	7.1
EC		0842	7.40
Cr6		0849	.001
TOTAL		0855	.002
TEMP		0837	82.2

ALERT !!
Level III QC

Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	AIDE	OMI	8/19/09 0900
Signature (Received)	Rafael Davila	T.L.I	8-19-09 15:30
Signature (Relinquished)	Rafael Davila	T.L.I	8-19-09 20:50
Signature (Received)	Shakeena	TLI	8/19/09 20:50
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

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September 1, 2009

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-218 PROJECT, GROUNDWATER MONITORING, TLI NO.: 985102

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-218 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on August 26, 2009, 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.

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

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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

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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.: 985102
Date: September 1, 2009
Collected: August 26, 2009
Received: August 26, 2009

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Michael Nonezyan

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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: 082809A

Laboratory No.: 985102

Date: September 1, 2009
Collected: August 26, 2009
Received: August 26, 2009
Prep/ Analyzed: August 28, 2009
Analytical Batch: 082809A

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
985102	SC-700B-WDR-218	µg/L	EPA 200.8	15:09	5.00	1.00	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	984910-2	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	984910-2	0.00	5.00	50.0	250	237	250	94.8%	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	48.6	50.0	97.2%	90% - 110%	Yes
MRCVS#1	46.5	50.0	93.0%	90% - 110%	Yes
MRCVS#2	48.4	50.0	96.8%	90% - 110%	Yes
MRCVS#3	48.9	50.0	97.8%	90% - 110%	Yes
MRCVS#4	48.2	50.0	96.4%	90% - 110%	Yes
ICS	48.9	50.0	97.8%	80% - 120%	Yes
LCS	48.7	50.0	97.4%	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

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

Laboratory No.: 985102

Date: September 1, 2009
Collected: August 26, 2009
Received: August 26, 2009
Prep/ Analyzed: August 27, 2009
Analytical Batch: 08CrH09W

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
985102	SC-700B-WDR-218	08:00	07:16	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985103-1	1.33	1.33	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	985102	0.00	1.06	1.00	1.06	1.04	1.06	98.1%	90 - 110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.06	5.00	101%	90% - 110%	Yes
MRCVS#1	10.2	10.0	102%	95% - 105%	Yes
MRCVS#2	9.93	10.0	99.3%	95% - 105%	Yes
MRCVS#3	9.84	10.0	98.4%	95% - 105%	Yes
LCS	5.10	5.00	102%	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.: 985102
Date: September 1, 2009
Collected: August 26, 2009
Received: August 26, 2009
Prep/ Analyzed: August 27, 2009
Analytical Batch: 08TUC09Q

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
985102	SC-700B-WDR-218	08:00	NTU	1.00	0.100	0.113

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985102	0.113	0.114	0.88%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	—	<0.100	Yes
LCS	7.80	8.00	97.5%	90% - 110%	Yes
LCS	7.63	8.00	95.4%	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.: 985102
Date: September 1, 2009
Collected: August 26, 2009
Received: August 26, 2009
Prep/ Analyzed: August 27, 2009
Analytical Batch: 08EC09L

Investigation: **Specific Conductivity by EPA 120.1**

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
985102	SC-700B-WDR-218	µmhos/cm	EPA 120.1	1.00	2.00	6900

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985102	6900	6910	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	705	706	99.9%	90% - 110%	Yes
CVS#1	995	999	99.6%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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

Laboratory No.: 985102
Date: September 1, 2009
Collected: August 26, 2009
Received: August 26, 2009
Prep/ Analyzed: August 27, 2009
Analytical Batch: 08TDS09P

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
985102	SC-700B-WDR-218	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	985102	4120	4040	0.98%	≤ 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.
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(714)730-6239 FAX: (714) 730-6462
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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-218] 985102

COC Number
TURNAROUND TIME 5 Days
DATE 08/26/09 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: 392696.AA.DM TEAM: 1
SAMPLERS (SIGNATURE: [signature]

Rec'd 08/26/09 985102

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)		Turbidity (SM2130)									NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-218	08/26/09	0800	Water	x	x	x	x		x									3	pH=7
																		3	TOTAL NUMBER OF CONTAINERS

TIME	ANALYSIS	pH	EC	Cr6	TOTAL	TEMP
0800	0817	7.2				
	0817		7.34			
	0829			.002		
	0831				.003	
	0811					82.1

RUSH

ALERT!! Level III QC

For Sample Conditions See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

Signature	Printed Name	Company/Agency	Date/Time
(Relinquished) [signature]	J Aide	CMT	8-26-09 0900
(Received) Bonifacio Dayag	B. DAYAG	TLI	8-26-09 1450
(Relinquished) Bonifacio Dayag	B. DAYAG	TLI	8-26-09 2030
(Received) [signature]	[signature]	TLI	AUG 26 2009 20:30
(Relinquished)			
(Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ ____ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

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14201 FRANKLIN AVENUE
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www.truesdail.com

October 12, 2009

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

Dear Mr. Duffy:

SUBJECT: REVISED CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-219 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 985197

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-219 project groundwater monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 2, 2009, 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.

Mercury for sample SC-701-WDR-219 was analyzed by EPA 200.8 rather that EPA 245.1 and was past the method specified holding time due to instrument problems.

Total Chromium, for sample SC-100B-WDR-219, was re-analyzed by EPA 200.7 due to the discrepancy between the Total Chromium (by EPA 200.8) and Hexavalent Chromium results. The result from the re-analysis is reported.

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.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009

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 / Daniel Kang
EPA 200.8	Metals by ICP/MS	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Michael Nonezyan

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REPORT

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

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

Laboratory No.: 985197

Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09EC09B

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
985197-1	SC-700B-WDR-219	µmhos/cm	EPA 120.1	1.00	2.00	6990
985197-2	SC-100B-WDR-219	µmhos/cm	EPA 120.1	1.00	2.00	7970
985197-3	SC-701-WDR-219	µmhos/cm	EPA 120.1	1.00	2.00	51500

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985197-3	51500	51600	0.19%	≤ 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	995	999	99.6%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,
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Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09TDS09B

Investigation: Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
985197-1	SC-700B-WDR-219	mg/L	SM 2540C	250	4220
985197-2	SC-100B-WDR-219	mg/L	SM 2540C	250	5130
985197-3	SC-701-WDR-219	mg/L	SM 2540C	1250	39600

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	985197-3	39600	38800	1.02%	≤ 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	503	500	101%	90% - 110%	Yes

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

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

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09TUC09D

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
985197-1	SC-700B-WDR-219	08:00	NTU	1.00	0.100	ND
985197-2	SC-100B-WDR-219	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	985197-2	ND	ND	0.00%	< 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.100	---	<0.100	Yes
LCS	7.50	8.00	93.8%	90% - 110%	Yes
LCS	7.63	8.00	95.4%	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: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 09CrH09B

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09CrH09B

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
985197-1	SC-700B-WDR-219	08:00	14:01	µg/L	1.05	0.20	ND
985197-2	SC-100B-WDR-219	08:00	14:12	µg/L	52.5	10.5	1090
985197-3	SC-701-WDR-219	08:00	16:39	µg/L	10.5	2.10	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985197-2	1090	1090	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	985197-1	0.00	1.05	1.00	1.05	1.02	1.05	97.1%	90-110%	Yes
MS	985197-2	1090	52.5	25.0	1313	2400	2403	99.8%	90-110%	Yes
MS	985197-3	0.00	10.5	1.00	10.5	10.1	10.5	96.2%	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	5.04	5.00	101%	90% - 110%	Yes
MRCVS#1	10.0	10.0	100%	95% - 105%	Yes
MRCVS#2	10.2	10.0	102%	95% - 105%	Yes
LCS	5.02	5.00	100%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

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Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 4, 2009
Analytical Batch: 09NH3-E09A

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
985197-1	SC-700B-WDR-219	08:00	SM 4500-NH3 D	mg/L	1.00	0.500	ND
985197-2	SC-100B-WDR-219	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	985197-2	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	983651-2	0.00	1.00	6.00	6.00	5.78	6.00	96.3%	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	5.70	6.00	95.0%	90% - 110%	Yes
MRCVS#1	5.87	6.00	97.8%	90% - 110%	Yes
LCS	10.6	10.0	106%	90% - 110%	Yes

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

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Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09AN09C

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
985197-1	SC-700B-WDR-219	08:00	11:43	mg/L	5.00	0.500	2.47
985197-2	SC-100B-WDR-219	08:00	11:54	mg/L	5.00	0.500	2.91
985197-3	SC-701-WDR-219	08:00	12:06	mg/L	5.00	0.500	21.3

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985164	0.780	0.783	0.38%	≤ 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	985164	0.780	1.00	2.00	2.00	2.79	2.78	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	4.14	4.00	104%	90% - 110%	Yes
MRCVS#1	3.14	3.00	105%	90% - 110%	Yes
MRCVS#2	3.13	3.00	104%	90% - 110%	Yes
LCS	4.12	4.00	103%	90% - 110%	Yes

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

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09AN09C

Investigation:

Sulfate by Method EPA 300.0

Analytical Results Sulfate

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
985197-1	SC-700B-WDR-219	08:00	16:05	mg/L	25.0	12.5	485
985197-2	SC-100B-WDR-219	08:00	16:17	mg/L	25.0	12.5	561

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985164	50.0	50.5	1.00%	≤ 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	985164	50.0	10.0	10.0	100	152	150	102%	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	20.0	20.0	100%	90% - 110%	Yes
MRCVS#1	15.1	15.0	101%	90% - 110%	Yes
MRCVS#2	15.2	15.0	101%	90% - 110%	Yes
MRCVS#3	15.1	15.0	101%	90% - 110%	Yes
LCS	20.0	20.0	100%	90% - 110%	Yes

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

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09AN09C

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

Analytical Results Nitrate as N

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
985197-1	SC-700B-WDR-219	08:00	11:43	mg/L	5.00	1.00	2.84
985197-2	SC-100B-WDR-219	08:00	11:54	mg/L	5.00	1.00	3.22

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985195-18	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	985195-18	0.00	1.00	4.00	4.00	4.30	4.00	108%	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	3.97	4.00	99.3%	90% - 110%	Yes
MRCVS#1	3.01	3.00	100%	90% - 110%	Yes
MRCVS#2	2.99	3.00	99.7%	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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Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 985197
Date: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09NO209B

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
985197-1	SC-700B-WDR-219	08:00	15:41	mg/L	1.00	0.0050	ND
985197-2	SC-100B-WDR-219	08:00	15:42	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	985197-1	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	985197-1	0.00	1.00	0.0200	0.0200	0.0202	0.0200	101%	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	0.0269	0.0270	99.6%	90% - 110%	Yes
MRCVS#1	0.0199	0.0200	99.5%	90% - 110%	Yes
LCS	0.0463	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: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Investigation: Total Metal Analyses as Requested

Laboratory No.: 985197
Reported: September 25, 2009
Collected: September 2, 2009
Received: September 2, 2009
Analyzed: See Below

Analytical Results

SAMPLE ID: SC-700B-WDR-219 **Time Collected:** 08:00 **LAB ID:** 985197-1

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	µg/L	50.0	092209A	09/22/09	16:03
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:03
Arsenic	EPA 200.8	ND	5.00	µg/L	1.00	092209A	09/22/09	16:03
Barium	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:03
Chromium	EPA 200.8	ND	5.00	µg/L	1.00	092209A	09/22/09	16:03
Copper	EPA 200.8	ND	5.00	µg/L	5.00	092209A	09/22/09	16:03
Lead	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:03
Manganese	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:03
Molybdenum	EPA 200.8	24.6	5.00	µg/L	10.0	092209A	09/22/09	16:03
Nickel	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:03
Zinc	EPA 200.7	ND	1.00	µg/L	20.0	100209A	10/02/09	09:21
Boron	EPA 200.7	1010	1.00	µg/L	200	091809A	09/18/09	10:59
Iron	EPA 200.7	ND	1.00	µg/L	20.0	092109A	09/21/09	11:11

SAMPLE ID: SC-100B-WDR-219 **Time Collected:** 08:00 **LAB ID:** 985197-2

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	5.00	µg/L	50.0	092209A	09/22/09	16:10
Antimony	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:10
Arsenic	EPA 200.8	2.05	5.00	µg/L	1.00	092209A	09/22/09	16:10
Barium	EPA 200.8	13.2	5.00	µg/L	10.0	092209A	09/22/09	16:10
Chromium	EPA 200.7	1060	1.00	µg/L	10.0	100909A	10/09/09	18:14
Copper	EPA 200.8	ND	5.00	µg/L	5.00	092209A	09/22/09	16:10
Lead	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:10
Manganese	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:10
Molybdenum	EPA 200.8	12.6	5.00	µg/L	10.0	092209A	09/22/09	16:10
Nickel	EPA 200.8	ND	5.00	µg/L	10.0	092209A	09/22/09	16:10
Zinc	EPA 200.7	ND	1.00	µg/L	20.0	100209A	10/02/09	09:43
Boron	EPA 200.7	1040	1.00	µg/L	200	091809A	09/18/09	11:05
Iron	EPA 200.7	ND	1.00	µg/L	20.0	092109A	09/21/09	11:17

Revision 1

SAMPLE ID: SC-701-WDR-219 **Time Collected:** 08:00 **LAB ID:** 986197-3

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Antimony	EPA 200.8	ND	10.0	µg/L	10.0	100809A	10/08/09	11:55
Arsenic	EPA 200.8	ND	10.0	µg/L	2.00	100809A	10/08/09	11:55
Barium	EPA 200.7	21.4	1.00	µg/L	10.0	100909A	10/09/09	14:14
Beryllium	EPA 200.8	ND	10.0	µg/L	2.00	100809A	10/08/09	11:55
Cadmium	EPA 200.8	ND	10.0	µg/L	3.00	100809A	10/08/09	11:55
Chromium	EPA 200.8	5.08	10.0	µg/L	100.00	100809A	10/08/09	11:55
Cobalt	EPA 200.8	ND	10.0	µg/L	5.00	100809A	10/08/09	11:55
Copper	EPA 200.8	ND	10.0	µg/L	5.00	100809A	10/08/09	11:55
Lead	EPA 200.8	ND	10.0	µg/L	10.0	100809A	10/08/09	11:55
Mercury	EPA 200.8	ND J	10.0	µg/L	2.00	100509A-Hg	10/05/09	11:31
Molybdenum	EPA 200.8	178	10.0	µg/L	10.0	100809A	10/08/09	11:55
Nickel	EPA 200.8	ND	10.0	µg/L	10.0	100809A	10/08/09	11:55
Selenium	EPA 200.8	25.7	10.0	µg/L	10.0	100809A	10/08/09	11:55
Silver	EPA 200.8	ND	10.0	µg/L	5.00	100809A	10/08/09	11:55
Thallium	EPA 200.8	ND	10.0	µg/L	2.00	100809A	10/08/09	11:55
Vanadium	EPA 200.8	ND	10.0	µg/L	5.00	100809A	10/08/09	11:55
Zinc	EPA 200.7	ND	1.00	µg/L	20.0	100909A	10/09/09	14:14

ND: Not detected,or below limit of detection.

DF: Dilution factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

985197 985197

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-219]

COC Number IM3Plant-WDR-219
TURNAROUND TIME 10 Days
DATE 09/02/09 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-219	09/02/09	0800		X		X	X	X	X	X		X			4	pH 2
-2	SC-100B-WDR-219	09/02/09	0800		X		X	X	X	X	X		X			4	pH 7
-3	SC-701-WDR-219	09/02/09	0800		X	X	X	X				X				4	pH 7

For Sample Condition See Form Attached

ALERT !! Level III QC

(RESULTS ON BACK)

12 TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

9-2-09

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	J AIDE	OMI	0900
Signature (Received) Bonifacio Dayao	B. DAYAG	TLI	9-2-09 1515
Signature (Relinquished) Bonifacio Dayao	B. DAYAG	TLI	9-2-09 2045
Signature (Received)	Hipolito	TLI	9-2-09 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

092

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September 28, 2009

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-220 PROJECT, GROUNDWATER MONITORING, TLI NO.: 985297

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-220 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 9, 2009, 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.

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.

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

Laboratory No.: 985297
Date: September 28, 2009
Collected: September 9, 2009
Received: September 9, 2009

ANALYST LIST

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

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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: 091109A

Laboratory No.: 985297

Date: September 28, 2009
Collected: September 9, 2009
Received: September 9, 2009
Prep/ Analyzed: September 11, 2009
Analytical Batch: 091109A

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
985297	SC-700B-WDR-220	µg/L	EPA 200.8	13:16	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	985197-1	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	985197-1	0.00	5.00	50.0	250	252	250	101%	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	53.7	50.0	107%	90% - 110%	Yes
MRCVS#1	51.8	50.0	104%	90% - 110%	Yes
MRCVS#2	50.5	50.0	101%	90% - 110%	Yes
ICS	56.2	50.0	112%	80% - 120%	Yes
LCS	52.1	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

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.: 985297

Date: October 6, 2009
Collected: September 9, 2009
Received: September 9, 2009
Prep/ Analyzed: September 10, 2009
Analytical Batch: 09CrH09C
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
985297	SC-700B-WDR-220	08:00	08:35	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985298-1	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	985297	0.171	1.06	1.00	1.06	1.22	1.23	99.0%	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	5.04	5.00	101%	90% - 110%	Yes
MRCVS#1	9.81	10.0	98.1%	95% - 105%	Yes
MRCVS#2	9.58	10.0	95.8%	95% - 105%	Yes
MRCVS#3	9.95	10.0	99.5%	95% - 105%	Yes
MRCVS#4	9.96	10.0	99.6%	95% - 105%	Yes
MRCVS#5	10.0	10.0	100%	95% - 105%	Yes
LCS	5.04	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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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.: 985297
Date: September 28, 2009
Collected: September 9, 2009
Received: September 9, 2009
Prep/ Analyzed: September 10, 2009
Analytical Batch: 09TUC09H

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
985297	SC-700B-WDR-220	08:00	NTU	1.00	0.100	0.118

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985293-10	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	7.58	8.00	94.8%	90% - 110%	Yes
LCS	7.55	8.00	94.4%	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.: 985297
Date: September 28, 2009
Collected: September 9, 2009
Received: September 9, 2009
Prep/ Analyzed: September 10, 2009
Analytical Batch: 09EC09E

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
985297	SC-700B-WDR-220	µmhos/cm	EPA 120.1	1.00	2.00	7060

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985297	7060	7080	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	99.9%	90% - 110%	Yes
CVS#1	996	999	99.7%	90% - 110%	Yes
CVS#2	996	999	99.7%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

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

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

Laboratory No.: 985297
Date: September 28, 2009
Collected: September 9, 2009
Received: September 9, 2009
Prep/ Analyzed: September 11, 2009
Analytical Batch: 09TDS09D

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
985297	SC-700B-WDR-220	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	985297	4290	4220	0.82%	≤ 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	501	500	100.2%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-220] 985297

COC Number

TURNAROUND TIME 10 Days

DATE 09/09/09 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	392696.AA.DM TEAM 1
SAMPLERS (SIGNATURE	C Knight

Rec'd 09/09/09
985297

ALERT !!
Level III QC

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)									NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-220	09/09/09		Water	X	X	X	X		X								3	pH=7
																		TOTAL NUMBER OF CONTAINERS

SC-700B Time 0600	TEMP	EC	pH	$Cr^{(6)}$	$Cr^{(T)}$
TIME	8:04	8:04	8:09	8:22	8:31
	85.5	7.52	7.6	.002	.003

For Sample Conditions See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) C Knight	Printed Name CHRIS KNIGHT	Company/ Agency OMI	Date/ Time 9.9.2009 10:00
Signature (Received) Rafael Davis	Printed Name Rafael	Company/ Agency T.L.I	Date/ Time 9-09-09 15:30
Signature (Relinquished) Rafael Davis	Printed Name Rafael	Company/ Agency T.L.I	Date/ Time 9-9-09 22:10
Signature (Received) Shakeema	Printed Name Shakeema	Company/ Agency TLI	Date/ Time 9/9/09 22:10
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:

TRUESDAIL LABORATORIES, INC.
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www.truesdail.com

October 7, 2009

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

Dear Mr. Duffy:

SUBJECT: REVISED CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-221 PROJECT, GROUNDWATER MONITORING, TLI NO.: 985424

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-221 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples was received and delivered with the chain of custody on September 16, 2009, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for the sample and matrix spike for Hexavalent Chromium analysis by EPA 218.6 were slightly 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 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) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM

Laboratory No.: 985424
Date: September 30, 2009
Collected: September 16, 2009
Received: September 16, 2009

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Michael Nonezyan

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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: 092109A

Laboratory No.: 985424

Date: September 30, 2009
Collected: September 16, 2009
Received: September 16, 2009
Prep/ Analyzed: September 21, 2009
Analytical Batch: 092109A

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
985424	SC-700B-WDR-221	µg/L	EPA 200.8	15:15	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	985298-1	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	985298-1	0.00	5.00	50.0	250	241	250	96.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	—	<1.00	Yes
MRCCS	48.2	50.0	96.4%	90% - 110%	Yes
MRCVS#1	47.2	50.0	94.4%	90% - 110%	Yes
MRCVS#2	47.8	50.0	95.6%	90% - 110%	Yes
MRCVS#3	48.6	50.0	97.2%	90% - 110%	Yes
MRCVS#4	49.2	50.0	98.4%	90% - 110%	Yes
ICS	49.9	50.0	99.8%	80% - 120%	Yes
LCS	48.8	50.0	97.6%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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.: 985424

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

Date: October 7, 2009
Collected: September 16, 2009
Received: September 16, 2009
Prep/ Analyzed: September 23, 2009
Analytical Batch: 09CrH09G
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
985424	SC-700B-WDR-221	16:00	08:45	µg/L	1.05	0.20	0.37

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985510-1	22.8	22.7	0.44%	≤ 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	985424	0.37	1.06	1.00	1.06	1.41	1.43	98.1%	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	5.26	5.00	105%	90% - 110%	Yes
MRCVS#1	10.1	10.0	101%	95% - 105%	Yes
MRCVS#2	10.0	10.0	100%	95% - 105%	Yes
MRCVS#3	9.93	10.0	99.3%	95% - 105%	Yes
LCS	5.09	5.00	102%	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.
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.: 985424
Date: September 30, 2009
Collected: September 16, 2009
Received: September 16, 2009
Prep/ Analyzed: September 17, 2009
Analytical Batch: 09TUC09J

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
985424	SC-700B-WDR-221	16:00	NTU	1.00	0.100	0.162

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985424	0.162	0.164	1.23%	≤ 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	7.94	8.00	99.3%	90% - 110%	Yes
LCS	7.90	8.00	98.8%	90% - 110%	Yes
LCS	7.86	8.00	98.3%	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.: 985424
Date: September 30, 2009
Collected: September 16, 2009
Received: September 16, 2009
Prep/ Analyzed: September 17, 2009
Analytical Batch: 09EC09H

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
985424	SC-700B-WDR-221	µmhos/cm	EPA 120.1	1.00	2.00	7610

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985424	7610	7630	0.26%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<2.00	---	<2.00	Yes
CCS	705	706	99.9%	90% - 110%	Yes
CVS#1	996	999	99.7%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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.: 985424
Date: September 30, 2009
Collected: September 16, 2009
Received: September 16, 2009
Prep/ Analyzed: September 18, 2009
Analytical Batch: 09TDS09G

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
985424	SC-700B-WDR-221	mg/L	SM 2540C	250	4430

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	985424	4430	4390	0.45%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	---	<25.0	Yes
LCS	499	500	99.8%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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t4201 Franklin Avenue, Tustin, CA 92780-7008
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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-221] 985424

COC Number

TURNAROUND TIME 10 Days

DATE 09/16/09 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 09/16/09 slm 985424

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-221	09/16/09	1600	Water	x	x	x	x		x							3	pH=6
																3	TOTAL NUMBER OF CONTAINERS

SC-700B

	time	
PH	1607	7.5
EC	1609	8.02
TEMP	1608	90.3
HEX	1613	.001
TOTAL	1619	.002

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	CHRIS LEWIS	OMI	9-16-09 17:15
Signature (Received) Rafael Davila	Rafael	T-L-I	9-16-09 17:20
Signature (Relinquished) Rafael Davila	Rafael	T-L-I	9-16-09 23:00
Signature (Received) Shakeerra	Shakeerra	TLI	SEP 16 2009 23:00
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ 3.6°C WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

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www.truesdail.com

October 1, 2009

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-222 PROJECT, GROUNDWATER MONITORING, TLI NO.: 985465

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-222 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 18, 2009, 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.

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

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.: 985465
Date: October 1, 2009
Collected: September 18, 2009
Received: September 18, 2009

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Romuel Chavez
EPA 218.6	Hexavalent Chromium	Michael Nonezyan

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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: 092209A

Laboratory No.: 985465
Date: October 1, 2009
Collected: September 18, 2009
Received: September 18, 2009
Prep/ Analyzed: September 22, 2009
Analytical Batch: 092209A

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
985465	SC-700B-WDR-222	µg/L	EPA 200.8	15:37	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	985465	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	985465	0.00	5.00	50.0	250	242	250	96.8%	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	48.4	50.0	96.8%	90% - 110%	Yes
MRCVS#1	48.4	50.0	96.8%	90% - 110%	Yes
MRCVS#2	48.1	50.0	96.2%	90% - 110%	Yes
ICS	48.2	50.0	96.4%	80% - 120%	Yes
LCS	47.4	50.0	94.8%	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

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

Laboratory No.: 985465

Date: October 1, 2009
Collected: September 18, 2009
Received: September 18, 2009
Prep/ Analyzed: September 23, 2009
Analytical Batch: 09CrH09G

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
985465	SC-700B-WDR-222	08:00	09:53	µg/L	5.25	1.05	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985510-1	22.8	22.7	0.44%	≤ 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	985465	0.00	5.25	1.00	5.25	5.44	5.25	104%	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	5.26	5.00	105%	90% - 110%	Yes
MRCVS#1	10.1	10.0	101%	95% - 105%	Yes
MRCVS#2	10.0	10.0	100%	95% - 105%	Yes
MRCVS#3	9.93	10.0	99.3%	95% - 105%	Yes
LCS	5.09	5.00	102%	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.
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.: 985465
Date: October 1, 2009
Collected: September 18, 2009
Received: September 18, 2009
Prep/ Analyzed: September 18, 2009
Analytical Batch: 09TUC09K

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
985465	SC-700B-WDR-222	08:00	NTU	1.00	0.100	0.141

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985465	0.141	0.143	1.41%	≤ 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	7.73	8.00	96.6%	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.

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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.: 985465
Date: October 1, 2009
Collected: September 18, 2009
Received: September 18, 2009
Prep/ Analyzed: September 18, 2009
Analytical Batch: 09EC09I

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
985465	SC-700B-WDR-222	µmhos/cm	EPA 120.1	1.00	2.00	7270

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985465	7270	7280	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	996	999	99.7%	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 Sen Cant
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.: 985465
Date: October 1, 2009
Collected: September 18, 2009
Received: September 18, 2009
Prep/ Analyzed: September 18, 2009
Analytical Batch: 09TDS09G

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
985465	SC-700B-WDR-222	mg/L	SM 2540C	250	4310

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	985465	4310	4340	0.35%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	---	<25.0	Yes
LCS	499	500	99.8%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.
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(714)730-6239 FAX: (714) 730-6462
www.truesdail.com

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-222]

985465

COC Number

TURNAROUND TIME 10 Days

DATE 09/18/09 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	C Knight

Rec'd 09/18/09 Lab 985465

SAMPLE ID.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)								NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-222	09/18/09	0800	Water	x	x	x	x		x							3	pH = 7
																3	TOTAL NUMBER OF CONTAINERS

EC- 7.60 @ 08:10
pH - 7.8 @ 08:10
TEMP - 80.6° @ 0806
$Cr^{(6)}$ - .001 @ 0826
$Cr^{(T)}$ .002 @ 0833

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished	C Knight	C. Knight	OMI	9/18/09 0848
Received	Bonifacio Dayog	B. DAYAG	TLI	9-18-09
Relinquished	Bonifacio Dayog	B. DAYAG	TLI	9-18-09 1530
Received	Shakuntala	Shakuntala	TLI	SEP 18 2009 1530
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

SEP 18 2009 1530

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October 7, 2009

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

Dear Mr. Duffy:

SUBJECT: REVISED CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-223 PROJECT, GROUNDWATER MONITORING, TLI NO.: 985530

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-223 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 23, 2009, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

The straight run for the sample and matrix spike for Hexavalent Chromium analysis by EPA 218.6 were slightly 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

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

TRUESDAIL LABORATORIES, INC.
EXCELLENCE IN INDEPENDENT TESTING

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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.: 985530
Date: October 5, 2009
Collected: September 23, 2009
Received: September 23, 2009

ANALYST LIST

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

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

Laboratory No.: 985530

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM
Prep. Batch: 100409A

Date: October 5, 2009
Collected: September 23, 2009
Received: September 23, 2009
Prep/ Analyzed: October 4, 2009
Analytical Batch: 100409A

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
985530	SC-700B-WDR-223	µg/L	EPA 200.8	20:24	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	985618	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	985618	0.00	5.00	50.0	250	236	250	94.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	---	<1.00	Yes
MRCCS	49.7	50.0	99.4%	90% - 110%	Yes
MRCVS#1	50.2	50.0	100%	90% - 110%	Yes
MRCVS#2	47.6	50.0	95.2%	90% - 110%	Yes
MRCVS#3	50.8	50.0	102%	90% - 110%	Yes
ICS	49.6	50.0	99.2%	80% - 120%	Yes
LCS	50.1	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.

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.: 985530

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

Date: October 5, 2009
Collected: September 23, 2009
Received: September 23, 2009
Prep/ Analyzed: September 25, 2009
Analytical Batch: 09CrH09I

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
985530	SC-700B-WDR-223	08:15	13:02	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985550-2	2.38	2.45	2.90%	< 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	985530	0.00	1.06	1.00	1.06	1.03	1.06	97.2%	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	5.23	5.00	105%	90% - 110%	Yes
MRCVS#1	10.2	10.0	102%	95% - 105%	Yes
MRCVS#2	9.97	10.0	99.7%	95% - 105%	Yes
MRCVS#3	9.86	10.0	98.6%	95% - 105%	Yes
LCS	5.26	5.00	105%	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.: 985530
Date: October 5, 2009
Collected: September 23, 2009
Received: September 23, 2009
Prep/ Analyzed: September 24, 2009
Analytical Batch: 09TUC09M

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
985530	SC-700B-WDR-223	08:15	NTU	1.00	0.100	0.169

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985529-1	0.116	0.117	0.86%	≤ 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	7.40	8.00	92.5%	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.: 985530
Date: October 5, 2009
Collected: September 23, 2009
Received: September 23, 2009
Prep/ Analyzed: September 24, 2009
Analytical Batch: 09EC09K

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
985530	SC-700B-WDR-223	µmhos/cm	EPA 120.1	1.00	2.00	7040

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985530	7040	7050	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	705	706	99.9%	90% - 110%	Yes
CVS#1	997	999	99.8%	90% - 110%	Yes
LCS	705	706	99.9%	90% - 110%	Yes
LCSD	705	706	99.9%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

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.: 985530
Date: October 5, 2009
Collected: September 23, 2009
Received: September 23, 2009
Prep/ Analyzed: September 24, 2009
Analytical Batch: 09TDS09I

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
985530	SC-700B-WDR-223	mg/L	SM 2540C	250	4070

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	985530	4070	4150	0.97%	≤ 5%	Yes

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

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-223]

COC Number 985530

TURNAROUND TIME 10 Days

DATE 09/23/09 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) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-223	09/23/09	0815	Water	x	x	x	x	x	3	pH=7
									3	TOTAL NUMBER OF CONTAINERS

ANALYSIS

pH. 7.6 0821

EC - 7.30 0821

Cr6 - .001 0833

TOTAL - .002 0840

TEMP - 79.1 0820

For Sample Conditions See Form Attached

ALERT !!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished		J AIDE	OMI	9/23/09 0900
Received	Bonifacio Dayag	B. DAYAG	TLI	9-23-09 1500
Relinquished	Bonifacio Dayag	B. DAYAG	TLI	9-23-09 2130
Received			TLI	9/24/09 0420
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

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October 6, 2009

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-224 PROJECT, GROUNDWATER MONITORING, TLI NO.: 985618

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-224 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 30, 2009, 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.

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

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.: 985618
Date: October 6, 2009
Collected: September 30, 2009
Received: September 30, 2009

ANALYST LIST

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

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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: 100409A

Laboratory No.: 985618

Date: October 6, 2009
Collected: September 30, 2009
Received: September 30, 2009
Prep/ Analyzed: October 4, 2009
Analytical Batch: 100409A

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
985618	SC-700B-WDR-224	µg/L	EPA 200.8	18:05	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	985618	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	985618	0.00	5.00	50.0	250	236	250	94.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<1.00	—	<1.00	Yes
MRCCS	49.7	50.0	99.4%	90% - 110%	Yes
MRCVS#1	50.2	50.0	100%	90% - 110%	Yes
MRCVS#2	47.6	50.0	95.2%	90% - 110%	Yes
MRCVS#3	50.8	50.0	102%	90% - 110%	Yes
ICS	49.6	50.0	99.2%	80% - 120%	Yes
LCS	50.1	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

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

Laboratory No.: 985618

Date: October 6, 2009
Collected: September 30, 2009
Received: September 30, 2009
Prep/ Analyzed: October 1, 2009
Analytical Batch: 10CrH09A

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
985618	SC-700B-WDR-224	08:00	07:44	µg/L	1.05	0.20	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985620-1	9.12	9.10	0.22%	< 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	985618	0.00	1.06	1.00	1.06	1.06	1.06	100%	90 - 110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<0.200	---	<0.200	Yes
MRCCS	5.21	5.00	104%	90% - 110%	Yes
MRCVS#1	10.2	10.0	102%	95% - 105%	Yes
MRCVS#2	10.2	10.0	102%	95% - 105%	Yes
MRCVS#3	10.1	10.0	101%	95% - 105%	Yes
MRCVS#4	9.91	10.0	99.1%	95% - 105%	Yes
LCS	5.23	5.00	105%	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.
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.: 985618
Date: October 6, 2009
Collected: September 30, 2009
Received: September 30, 2009
Prep/ Analyzed: October 1, 2009
Analytical Batch: 10TUC09A

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
985618	SC-700B-WDR-224	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	985618	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	7.80	8.00	97.5%	90% - 110%	Yes
LCS	8.10	8.00	101%	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.: 985618
Date: October 6, 2009
Collected: September 30, 2009
Received: September 30, 2009
Prep/ Analyzed: October 1, 2009
Analytical Batch: 10EC09A

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
985618	SC-700B-WDR-224	µmhos/cm	EPA 120.1	1.00	2.00	6970

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985618	6970	6980	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	706	706	100%	90% - 110%	Yes
CVS#1	996	999	99.7%	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.

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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.: 985618
Date: October 6, 2009
Collected: September 30, 2009
Received: September 30, 2009
Prep/ Analyzed: October 1, 2009
Analytical Batch: 10TDS09A

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
985618	SC-700B-WDR-224	mg/L	SM 2540C	250	4190

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	985618	4190	4230	0.48%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
Blank	ND	<25.0	---	<25.0	Yes
LCS	499	500	99.8%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

RUSH

TRUESDAIL LABORATORIES, INC.
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(714)730-6239 FAX: (714) 730-6462
www.truesdail.com

CHAIN OF CUSTODY RECORD

985618 [IM3Plant-WDR-224]

COC Number
TURNAROUND TIME 5 Days
DATE 09/30/09 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) C.Knight / Ryan Phelps

Rec'd 09/30/09
985618

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	Turbidity (SM2130)	NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-224	09/30/09	0800	Water	X	X	X	X	X	3	pH = 6
									3	TOTAL NUMBER OF CONTAINERS

TEMP – 80.4°F @ 8:02
EC – 7.25 @ 8:02
pH – 7.6 @ 8:09
$Cr^{(6)}$ – .001 @ 8:29
$Cr^{(T)}$ – .003 @ 8:37

For Sample Conditions See Form Attached

ALERT !!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished	C.Knight	C.KNIGHT	OMI	9-30-09 15:05
Received	Bonifacio Dayag	B. DAYAG	TLI	9-30-09 1500
Relinquished	Bonifacio Dayag	B. DAYAG	TLI	9-30-09 2145
Received	[signature]	[signature]	TLI	SEP 30 2009 2145
Relinquished				
Received				

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

TRUESDAIL LABORATORIES, INC.
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October 7, 2009

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-219 PROJECT, SLUDGE MONITORING,

TLI NO.: 985199

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-219 project sludge monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 2, 2009, 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.

Mercury was analyzed past the method specified holding time due to instrument problems.

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

for 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

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.: 985199
Date: October 7, 2009
Collected: September 2, 2009
Received: September 2, 2009

ANALYST LIST

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

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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: 09CrH09E

Laboratory No.: 985199
Date: October 7, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 17, 2009
Analytical Batch: 09CrH09E

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
985199	SC-Sludge-WDR-219	08:30	15:53	mg/kg	10.0	15.1	157

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985199	157	145	8.25%	< 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	985199	157	10.0	30.2	302	436	459	92.4%	75-125%	Yes
MS	985199	157	50.0	58.6	2928	2940	3085	95.0%	75-125%	Yes
PDMS	985199	157	25.0	24.2	605	803	762	107%	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	2.02	2.00	101%	90% - 110%	Yes
MRCVS#1	2.07	2.00	103%	90% - 110%	Yes
LCS	1.69	2.00	84.5%	80% - 120%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Sam Cook
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.: 985199
Date: October 7, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 23, 2009
Analytical Batch: 09SOLID09B

Investigation: **Total Solids by SM 2540 B**

Analytical Results % Moisture

TLI I.D.	Field I.D.	Sample Time	Units	Results
985199	SC-Sludge-WDR-219	08:30	%	73.5

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985199	73.5	73.0	0.68%	≤ 20%	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) Soil Sample
Project Name: PG&E Topock Project
Project No.: 392895.AA.DM
P.O. No.: 392895.AA.DM

Laboratory No.: 985199
Date: October 7, 2009
Collected: September 2, 2009
Received: September 2, 2009
Prep/ Analyzed: September 3, 2009
Analytical Batch: 09AN09C

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
985199	SC-Sludge-WDR-219	08:30	12:17	mg/kg	1.00	15.1	70.9

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	985164	0.780	0.783	0.38%	≤ 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	985164	0.780	1.00	2.00	2.00	2.79	2.78	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	4.14	4.00	104%	90% - 110%	Yes
MRCVS#1	3.14	3.00	105%	90% - 110%	Yes
MRCVS#2	3.13	3.00	104%	90% - 110%	Yes
LCS	4.12	4.00	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

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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.: 985199
Reported: October 7, 2009
Collected: September 2, 2009
Received: September 2, 2009
Analyzed: See Below

Analytical Results

SAMPLE ID: SC-Sludge-WDR-219 **Time Collected:** 08:30 **LAB ID:** 985199

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Antimony	SW 6020	ND	10.0	mg/kg	2.70	092309A	09/23/09	13:54
Arsenic	SW 6020	50.7	10.0	mg/kg	2.70	092309A	09/23/09	13:54
Barium	SW 6010B	123	1.00	mg/kg	2.70	091009A	09/10/09	17:29
Beryllium	SW 6010B	184	1.00	mg/kg	2.70	091009A	09/10/09	17:29
Cadmium	SW 6010B	58.2	1.00	mg/kg	5.41	091009A	09/10/09	17:29
Chromium	SW 6010B	18100	20.0	mg/kg	54.1	091109A	09/11/09	12:02
Cobalt	SW 6010B	8.05	1.00	mg/kg	2.70	091009A	09/10/09	17:29
Copper	SW 6020	79.7	10.0	mg/kg	2.70	092309A	09/23/09	13:54
Lead	SW 6010B	ND	1.00	mg/kg	5.41	091009A	09/10/09	17:29
Mercury	SW 6020	0.699 J	5.00	mg/kg	0.270	100609A-Hg	10/06/09	12:58
Molybdenum	SW 6020	38.0	10.0	mg/kg	2.70	092309A	09/23/09	13:54
Nickel	SW 6010B	ND	1.00	mg/kg	2.70	091009A	09/10/09	17:29
Selenium	SW 6020	ND	10.0	mg/kg	2.70	092309A	09/23/09	13:54
Silver	SW 6010B	ND	1.00	mg/kg	5.41	091009A	09/10/09	17:29
Thallium	SW 6010B	ND	1.00	mg/kg	5.41	091009A	09/10/09	17:29
Vanadium	SW 6010B	548	1.00	mg/kg	2.70	091009A	09/10/09	17:29
Zinc	SW 6010B	138	1.00	mg/kg	13.5	091009A	09/10/09	17:29

NOTES:

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

ND: Not detected,or below limit of detection.

DF: Dilution factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

985199 985199

TRUESDAL[illegible] BORATORIES, INC.
14201 Franklin [illegible]venue, Tustin, CA 92780-7008
(714)730-6239 FAX: (714) 730-6462
www.truesdall.com

CHAIN OF CUSTODY RECORD

[IM3plant-WDR-219]

COC Number 985199 IM3Plant-WDR
TURNAROUND TIME 10 Days
DATE 09/02/09 PAGE 1 OF 1

COMPANY CH2M HILL
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-219	09/02/09	0830	Sludge	X	X	X	X	4	
								4	TOTAL NUMBER OF CONTAINERS

ALERT !
Level III QC

For Sample Condition
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

9-2-09

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	JAIME	OMI	0900
Signature (Received) Bonifacio Dayag	B. DAYAG	TLI	9-2-09 1515
Signature (Relinquished) Bonifacio Dayag	B. DAYAG	TLI	9-2-09 2045
Signature (Received)	Hipolito	TLI	9-2-09 2100
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

051

TRUESDAIL LABORATORIES, INC.

ALERT !!
Level III QC

Sample Integrity & Analysis Discrepancy Form

Client: [redacted] ***Lab #*** 985199

Date Delivered: 9 / 2 / 09 ***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* R.D
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*

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:* Rafael Dávila

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: September 9, 2009

Client: Truesdail Laboratories, Inc.
14201 Franklin Avenue
Tustin, CA 92780
Attn: Sean Condon

Laboratory No.: A-09090406-001
Sample ID.: 985199

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

Date Sampled: 09/02/09
Date Received: 09/04/09
Date Tested: 09/05/09 to 09/09/09

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
985199	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.: A090904 06 001

Client/ID: Truesdail 983199

TEST SUMMARY

Species: ***Pimephales promelas***.
Fish length (mm): av: 25; min: 24; max: 26.
Fish weight (gm): av: 0.28; min: 0.25; max: 0.32.
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-090902.

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:	9-5-09 1030			9-6-09 1100				9-7-09 1030				9-8-09 1100				9-9-09 1100			
Analyst:																			
	°C	DO	pH	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	19.9	8.5	7.6	20.2	8.4	7.2	0	20.1	8.2	7.1	0	20.1	8.5	7.1	0	20.3	8.4	7.1	0
Control B	19.8	8.4	7.6	20.1	8.7	7.1	0	20.1	8.0	7.0	0	20.1	8.4	7.0	0	20.2	8.7	7.1	0
400 mg/l A	19.8	8.2	7.5	20.0	8.6	7.1	0	20.0	8.7	7.2	0	20.1	8.9	7.1	0	20.1	8.7	7.1	0
400 mg/l B	19.7	8.2	7.5	20.0	8.6	7.1	0	20.0	8.8	7.1	0	20.0	8.8	7.1	0	20.0	8.9	7.1	0
750 mg/l A	19.8	8.3	7.5	20.0	8.7	7.1	0	19.8	8.7	7.1	0	20.0	8.5	7.1	0	20.0	8.7	7.0	1
750 mg/l B	19.7	8.2	7.5	20.0	8.7	7.1	0	19.9	8.7	7.1	0	19.9	8.4	7.0	0	20.1	8.6	7.1	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	30 mg/l $CaCO_3$	42 mg/l $CaCO_3$	30 mg/l $CaCO_3$	47 mg/l $CaCO_3$
Final	31 mg/l $CaCO_3$	43 mg/l $CaCO_3$	34 mg/l $CaCO_3$	48 mg/l $CaCO_3$

Total Number Dead		
Control	0	/20
400 mg/l	0	/20
750 mg/l	1	/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: *09/03/09* 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 results to:
TRUESDAIL LABORATORIES, INC.
Attn: Sean Condon
14201 Franklin Avenue, Tustin, California 92780-7008
Please include Truesdail Sample ID on your invoice

Sample ID	Date	Time	Matrix	Tests/Methods Required: Acute Aquatic Toxicity ~~(% Survival)~~ HWS	Container Qty.	Comments/Container Type
985199	09/02/09	08:30	Sludge	X	1	8 oz Jar/Glass
					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:

Relinquished by:	Amir Marivani	Amir Marivani	Truesdail Labs, Inc.	09/03/09	9:30
	Signature	Printed Name	Company	Date	Time
Received by:		Joe LeMay		9-4-09	
	Signature	Printed Name	Company	Date	Time

TLI Phone:(714) 730-6239 • Fax (714) 730-6462

September 23, 2009

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N003250

RE: PG&E Topock IM3

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 16, 2009 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Jose Tenorio Jr.
Laboratory Director

CLIENT: CH2M HILL
Project: PG&E Topock IM3
Lab Order: N003250

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Sample was received intact with proper chain of custody documentation.

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

All samples were analyzed within method holding time.

Prep Comments for 3510_W_DMPGE:

Sample N003250-001A: pH 7. Sample N003250-002A: pH 7, Sample is turbid.

Analytical Comments for EPA 8260B Water:

Matrix Spike (MS) N003123-001AMS and Matrix Spike Duplicate (MSD) N003123-001AMSD were out of recovery criteria for 2-Butanone, Acetone, Styrene, Acrylonitrile, Freon, and 1,2,4-Trimethylbenzene. The associated Laboratory Control Sample (LCS) was within acceptance criteria for batch D09VW084.
.

Advanced Technology Laboratories *3151 W. Post Road, Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691*

CLIENT:	CH2M HILL	**Client Sample ID:**	SC700B-091609
Lab Order:	N003250	**Collection Date:**	9/16/2009 4:00:00 PM
Project:	PG&E Topock IM3	**Matrix:**	WATER
Lab ID:	N003250-001		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3510C				**EPA 8015B**		
RunID: GC3_090916B	QC Batch: 33511			PrepDate: 9/16/2009		Analyst: **JT**
TPH-Diesel	55	51		ug/L	1	9/17/2009 02:17 AM
TPH-Motor Oil	ND	51		ug/L	1	9/17/2009 02:17 AM
Surr: p-Terphenyl	89.7	57-132		%REC	1	9/17/2009 02:17 AM

Qualifiers:

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

CLIENT: CH2M HILL
Lab Order: N003250
Project: PG&E Topock IM3
Lab ID: N003250-002

Client Sample ID: IW3-091609
Collection Date: 9/16/2009 3:10:00 PM
Matrix: WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3510C				**EPA 8015B**		
RunID: GC3_090916B	QC Batch: 33511			PrepDate: 9/16/2009		Analyst: **JT**
TPH-Diesel	95	62		ug/L	1	9/17/2009 02:46 AM
TPH-Motor Oil	130	62		ug/L	1	9/17/2009 02:46 AM
Surr: p-Terphenyl	84.8	57-132		%REC	1	9/17/2009 02:46 AM
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
				EPA 8260B		
RunID: MS1_090916B	QC Batch: D09VW084			PrepDate:		Analyst: **QBM**
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,1,1-Trichloroethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,1,2-Trichloroethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,1-Dichloroethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,1-Dichloroethene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,1-Dichloropropene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,2,3-Trichloropropane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	9/16/2009 11:19 PM
1,2-Dibromoethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,2-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,2-Dichloroethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,2-Dichloropropane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,3-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,3-Dichloropropane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
1,4-Dichlorobenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
2,2-Dichloropropane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
2-Butanone	ND	10		µg/L	1	9/16/2009 11:19 PM
2-Chlorotoluene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
4-Chlorotoluene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
4-Isopropyltoluene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
4-Methyl-2-pentanone	ND	10		µg/L	1	9/16/2009 11:19 PM
Acetone	ND	10		µg/L	1	9/16/2009 11:19 PM
Acrylonitrile	ND	20		µg/L	1	9/16/2009 11:19 PM
Benzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Bromobenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM

Qualifiers:

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

CLIENT: CH2M HILL
Lab Order: N003250
Project: PG&E Topock IM3
Lab ID: N003250-002

Client Sample ID: IW3-091609
Collection Date: 9/16/2009 3:10:00 PM
Matrix: WATER

VOLATILE ORGANIC COMPOUNDS BY GC/MS

EPA 8260B

RunID: MS1_090916B | QC Batch: D09VW084 | PrepDate: | Analyst: **QBM**

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Bromochloromethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Bromodichloromethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Bromoform	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Bromomethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Carbon disulfide	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Carbon tetrachloride	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Chlorobenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Chloroethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Chloroform	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Chloromethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
cis-1,2-Dichloroethene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Dibromochloromethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Dibromomethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Dichlorodifluoromethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Ethylbenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Freon-113	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Hexachlorobutadiene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Isopropylbenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
m,p-Xylene	ND	2.0		µg/L	1	9/16/2009 11:19 PM
Methylene chloride	ND	5.0		µg/L	1	9/16/2009 11:19 PM
MTBE	ND	1.0		µg/L	1	9/16/2009 11:19 PM
n-Butylbenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
n-Propylbenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Naphthalene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
o-Xylene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
sec-Butylbenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Styrene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
tert-Butylbenzene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Tetrachloroethene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Toluene	ND	2.5		µg/L	1	9/16/2009 11:19 PM
trans-1,2-Dichloroethene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Trichloroethene	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Trichlorofluoromethane	ND	1.0		µg/L	1	9/16/2009 11:19 PM
Vinyl chloride	ND	1.0		µg/L	1	9/16/2009 11:19 PM

Qualifiers:

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

CLIENT:	CH2M HILL	**Client Sample ID:**	IW3-091609
Lab Order:	N003250	**Collection Date:**	9/16/2009 3:10:00 PM
Project:	PG&E Topock IM3	**Matrix:**	WATER
Lab ID:	N003250-002		

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
VOLATILE ORGANIC COMPOUNDS BY GC/MS						
		EPA 8260B				
RunID: MS1_090916B	QC Batch: D09VW084			PrepDate:		Analyst: **QBM**
Xylenes, Total	ND	3.0		µg/L	1	9/16/2009 11:19 PM
Surr: 1,2-Dichloroethane-d4	86.4	72-119		%REC	1	9/16/2009 11:19 PM
Surr: 4-Bromofluorobenzene	105	76-119		%REC	1	9/16/2009 11:19 PM
Surr: Dibromofluoromethane	87.0	85-115		%REC	1	9/16/2009 11:19 PM
Surr: Toluene-d8	111	81-120		%REC	1	9/16/2009 11:19 PM

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **MB-33511**	SampType: **MBLK**	TestCode: **8015_W_DM_**	Units: **ug/L**	Prep Date: **9/16/2009**	RunNo: **74865**
Client ID: **PBW**	Batch ID: **33511**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **9/16/2009**	SeqNo: **1132867**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	16.120	50									
TPH-Motor Oil	18.728	50									
Surr: p-Terphenyl	60.427		80.00		75.5	57	132				

Sample ID: **LCS-33511-DRO**	SampType: **LCS**	TestCode: **8015_W_DM_**	Units: **ug/L**	Prep Date: **9/16/2009**	RunNo: **74865**
Client ID: **LCSW**	Batch ID: **33511**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **9/17/2009**	SeqNo: **1132868**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	829.431	50	1000	16.12	81.3	61	143				
Surr: p-Terphenyl	51.776		80.00		64.7	57	132				

Sample ID: **LCS-33511-ORO**	SampType: **LCS**	TestCode: **8015_W_DM_**	Units: **ug/L**	Prep Date: **9/16/2009**	RunNo: **74865**
Client ID: **LCSW**	Batch ID: **33511**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **9/17/2009**	SeqNo: **1132870**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	797.884	50	1000	18.73	77.9	50	150				
Surr: p-Terphenyl	61.256		80.00		76.6	57	132				

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D090916LCS2** SampType: **LCS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **LCSW** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	26.670	1.0	25.00	0	107	81	129				
1,1,1-Trichloroethane	22.040	1.0	25.00	0	88.2	67	132				
1,1,2,2-Tetrachloroethane	27.000	1.0	25.00	0	108	63	128				
1,1,2-Trichloroethane	24.800	1.0	25.00	0	99.2	75	125				
1,1-Dichloroethane	25.240	1.0	25.00	0	101	69	133				
1,1-Dichloroethene	24.210	1.0	25.00	0	96.8	68	130				
1,1-Dichloropropene	26.770	1.0	25.00	0	107	73	132				
1,2,3-Trichlorobenzene	29.890	1.0	25.00	0	120	67	137				
1,2,3-Trichloropropane	27.090	1.0	25.00	0	108	73	124				
1,2,4-Trichlorobenzene	26.670	1.0	25.00	0	107	66	134				
1,2,4-Trimethylbenzene	27.450	1.0	25.00	0	110	74	132				
1,2-Dibromo-3-chloropropane	22.840	2.0	25.00	0	91.4	50	132				
1,2-Dibromoethane	27.230	1.0	25.00	0	109	80	121				
1,2-Dichlorobenzene	27.050	1.0	25.00	0	108	71	122				
1,2-Dichloroethane	25.380	1.0	25.00	0	102	69	132				
1,2-Dichloropropane	24.960	1.0	25.00	0	99.8	75	125				
1,3,5-Trimethylbenzene	27.810	1.0	25.00	0	111	74	131				
1,3-Dichlorobenzene	27.360	1.0	25.00	0	109	75	124				
1,3-Dichloropropane	26.000	1.0	25.00	0	104	73	126				
1,4-Dichlorobenzene	26.650	1.0	25.00	0	107	74	123				
2,2-Dichloropropane	22.650	1.0	25.00	0	90.6	69	137				
2-Butanone	289.230	10	250.0	0	116	49	136				
2-Chlorotoluene	28.840	1.0	25.00	0	115	73	126				
4-Chlorotoluene	29.140	1.0	25.00	0	117	74	128				
4-Isopropyltoluene	28.140	1.0	25.00	0	113	73	130				
4-Methyl-2-pentanone	294.510	10	250.0	0	118	58	134				
Acetone	312.250	10	250.0	0	125	40	135				
Acrylonitrile	225.920	20	250.0	0	90.4	75	125				
Benzene	25.660	1.0	25.00	0	103	81	122				
Bromobenzene	27.250	1.0	25.00	0	109	76	124				

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D090916LCS2** SampType: **LCS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **LCSW** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromochloromethane	23.500	1.0	25.00	0	94.0	65	129				
Bromodichloromethane	25.180	1.0	25.00	0	101	76	121				
Bromoform	22.850	1.0	25.00	0	91.4	69	128				
Bromomethane	21.780	1.0	25.00	0	87.1	53	141				
Carbon disulfide	21.210	1.0	25.00	0	84.8	75	125				
Carbon tetrachloride	22.600	1.0	25.00	0	90.4	66	138				
Chlorobenzene	26.350	1.0	25.00	0	105	81	122				
Chloroethane	29.120	1.0	25.00	0	116	58	133				
Chloroform	25.480	1.0	25.00	0	102	69	128				
Chloromethane	19.670	1.0	25.00	0	78.7	56	131				
cis-1,2-Dichloroethene	25.850	1.0	25.00	0	103	72	126				
cis-1,3-Dichloropropene	27.360	1.0	25.00	0	109	69	131				
Dibromochloromethane	26.290	1.0	25.00	0	105	66	133				
Dibromomethane	25.690	1.0	25.00	0	103	76	125				
Dichlorodifluoromethane	18.010	1.0	25.00	0	72.0	53	153				
Ethylbenzene	27.990	1.0	25.00	0	112	73	127				
Freon-113	20.300	1.0	25.00	0	81.2	75	125				
Hexachlorobutadiene	27.390	1.0	25.00	0	110	67	131				
Isopropylbenzene	30.900	1.0	25.00	0	124	75	127				
m,p-Xylene	58.840	1.0	50.00	0	118	76	128				
Methylene chloride	22.520	5.0	25.00	0	90.1	63	137				
MTBE	26.230	1.0	25.00	0	105	65	123				
n-Butylbenzene	27.920	1.0	25.00	0	112	69	137				
n-Propylbenzene	30.260	1.0	25.00	0	121	72	129				
Naphthalene	25.530	1.0	25.00	0	102	54	138				
o-Xylene	30.020	1.0	25.00	0	120	80	121				
sec-Butylbenzene	30.980	1.0	25.00	0	124	72	127				
Styrene	25.810	1.0	25.00	0	103	65	134				
tert-Butylbenzene	28.030	1.0	25.00	0	112	70	129				
Tetrachloroethene	26.580	1.0	25.00	0	106	66	128				

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D090916LCS2** SampType: **LCS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **LCSW** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132799**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	24.030	2.5	25.00	0	96.1	77	122				
trans-1,2-Dichloroethene	26.290	1.0	25.00	0	105	63	137				
trans-1,3-Dichloropropene	28.270	1.0	25.00	0	113	59	135				
Trichloroethene	25.510	1.0	25.00	0	102	70	127				
Trichlorofluoromethane	25.950	1.0	25.00	0	104	57	129				
Vinyl chloride	21.090	1.0	25.00	0	84.4	50	134				
Xylenes, Total	88.860	2.0	75.00	0	118	75	125				
Surr: 1,2-Dichloroethane-d4	23.800		25.00		95.2	72	119				
Surr: 4-Bromofluorobenzene	26.410		25.00		106	76	119				
Surr: Dibromofluoromethane	23.490		25.00		94.0	85	115				
Surr: Toluene-d8	25.390		25.00		102	81	120				

Sample ID: **N003218-006AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **ZZZZZZ** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	24.530	1.0	25.00	0	98.1	81	129				
1,1,1-Trichloroethane	19.490	1.0	25.00	0	78.0	67	132				
1,1,2,2-Tetrachloroethane	20.510	1.0	25.00	0	82.0	63	128				
1,1,2-Trichloroethane	20.520	1.0	25.00	0	82.1	75	125				
1,1-Dichloroethane	22.500	1.0	25.00	0	90.0	69	133				
1,1-Dichloroethene	21.850	1.0	25.00	0	87.4	68	130				
1,1-Dichloropropene	24.470	1.0	25.00	0	97.9	73	132				
1,2,3-Trichlorobenzene	26.080	1.0	25.00	0	104	67	137				
1,2,3-Trichloropropane	20.420	1.0	25.00	0	81.7	73	124				
1,2,4-Trichlorobenzene	24.220	1.0	25.00	0	96.9	66	134				
1,2,4-Trimethylbenzene	21.730	1.0	25.00	0	86.9	74	132				
1,2-Dibromo-3-chloropropane	16.830	2.0	25.00	0	67.3	50	132				
1,2-Dibromoethane	21.780	1.0	25.00	0	87.1	80	121				
1,2-Dichlorobenzene	24.300	1.0	25.00	0	97.2	71	122				

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003218-006AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **ZZZZZZ** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,2-Dichloroethane	20.430	1.0	25.00	0	81.7	69	132				
1,2-Dichloropropane	22.540	1.0	25.00	0	90.2	75	125				
1,3,5-Trimethylbenzene	25.050	1.0	25.00	0	100	74	131				
1,3-Dichlorobenzene	25.150	1.0	25.00	0	101	75	124				
1,3-Dichloropropane	20.840	1.0	25.00	0	83.4	73	126				
1,4-Dichlorobenzene	24.430	1.0	25.00	0	97.7	74	123				
2,2-Dichloropropane	18.790	1.0	25.00	0	75.2	69	137				
2-Butanone	88.270	10	250.0	0	35.3	49	136				S
2-Chlorotoluene	27.060	1.0	25.00	0	108	73	126				
4-Chlorotoluene	27.200	1.0	25.00	0	109	74	128				
4-Isopropyltoluene	25.990	1.0	25.00	0	104	73	130				
4-Methyl-2-pentanone	187.820	10	250.0	0	75.1	58	134				
Acetone	71.970	10	250.0	0	28.8	40	135				S
Acrylonitrile	174.600	20	250.0	0	69.8	75	125				S
Benzene	23.660	1.0	25.00	0	94.6	81	122				
Bromobenzene	24.290	1.0	25.00	0	97.2	76	124				
Bromochloromethane	19.720	1.0	25.00	0	78.9	65	129				
Bromodichloromethane	22.330	1.0	25.00	0	89.3	76	121				
Bromoform	17.340	1.0	25.00	0	69.4	69	128				
Bromomethane	21.060	1.0	25.00	0	84.2	53	141				
Carbon disulfide	19.380	1.0	25.00	0	77.5	75	125				
Carbon tetrachloride	20.630	1.0	25.00	0	82.5	66	138				
Chlorobenzene	24.470	1.0	25.00	0	97.9	81	122				
Chloroethane	28.190	1.0	25.00	0	113	58	133				
Chloroform	23.210	1.0	25.00	0.5200	90.8	69	128				
Chloromethane	18.890	1.0	25.00	0	75.6	56	131				
cis-1,2-Dichloroethene	23.220	1.0	25.00	0	92.9	72	126				
cis-1,3-Dichloropropene	24.110	1.0	25.00	0	96.4	69	131				
Dibromochloromethane	21.930	1.0	25.00	0	87.7	66	133				
Dibromomethane	20.160	1.0	25.00	0	80.6	76	125				

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003218-006AMS** SampType: **MS** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **ZZZZZZ** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132800**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	16.950	1.0	25.00	0	67.8	53	153				
Ethylbenzene	26.190	1.0	25.00	0	105	73	127				
Freon-113	17.440	1.0	25.00	0	69.8	75	125				S
Hexachlorobutadiene	26.960	1.0	25.00	0	108	67	131				
Isopropylbenzene	31.190	1.0	25.00	0.5100	123	75	127				
m,p-Xylene	54.430	1.0	50.00	0.5000	108	76	128				
Methylene chloride	20.190	5.0	25.00	0	80.8	63	137				
MTBE	20.950	1.0	25.00	0	83.8	65	123				
n-Butylbenzene	26.190	1.0	25.00	0	105	69	137				
n-Propylbenzene	28.540	1.0	25.00	0	114	72	129				
Naphthalene	18.700	1.0	25.00	0	74.8	54	138				
o-Xylene	27.950	1.0	25.00	0	112	80	121				
sec-Butylbenzene	29.430	1.0	25.00	0	118	72	127				
Styrene	16.510	1.0	25.00	0	66.0	65	134				
tert-Butylbenzene	26.510	1.0	25.00	0	106	70	129				
Tetrachloroethene	25.120	1.0	25.00	0	100	66	128				
Toluene	22.830	2.5	25.00	0	91.3	77	122				
trans-1,2-Dichloroethene	22.850	1.0	25.00	0	91.4	63	137				
trans-1,3-Dichloropropene	23.550	1.0	25.00	0	94.2	59	135				
Trichloroethene	23.680	1.0	25.00	0	94.7	70	127				
Trichlorofluoromethane	24.230	1.0	25.00	0	96.9	57	129				
Vinyl chloride	19.980	1.0	25.00	0	79.9	50	134				
Xylenes, Total	82.380	2.0	75.00	0	110	75	125				
Surr: 1,2-Dichloroethane-d4	20.230		25.00		80.9	72	119				
Surr: 4-Bromofluorobenzene	25.880		25.00		104	76	119				
Surr: Dibromofluoromethane	21.440		25.00		85.8	85	115				
Surr: Toluene-d8	25.570		25.00		102	81	120				

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003218-006AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **ZZZZZZ** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
1,1,1,2-Tetrachloroethane	24.880	1.0	25.00	0	99.5	81	129	24.53	1.42	20	
1,1,1-Trichloroethane	20.560	1.0	25.00	0	82.2	67	132	19.49	5.34	20	
1,1,2,2-Tetrachloroethane	21.920	1.0	25.00	0	87.7	63	128	20.51	6.65	20	
1,1,2-Trichloroethane	22.260	1.0	25.00	0	89.0	75	125	20.52	8.13	20	
1,1-Dichloroethane	23.400	1.0	25.00	0	93.6	69	133	22.50	3.92	20	
1,1-Dichloroethene	22.350	1.0	25.00	0	89.4	68	130	21.85	2.26	20	
1,1-Dichloropropene	25.780	1.0	25.00	0	103	73	132	24.47	5.21	20	
1,2,3-Trichlorobenzene	25.730	1.0	25.00	0	103	67	137	26.08	1.35	20	
1,2,3-Trichloropropane	21.210	1.0	25.00	0	84.8	73	124	20.42	3.80	20	
1,2,4-Trichlorobenzene	23.610	1.0	25.00	0	94.4	66	134	24.22	2.55	20	
1,2,4-Trimethylbenzene	18.080	1.0	25.00	0	72.3	74	132	21.73	18.3	20	S
1,2-Dibromo-3-chloropropane	17.580	2.0	25.00	0	70.3	50	132	16.83	4.36	20	
1,2-Dibromoethane	23.370	1.0	25.00	0	93.5	80	121	21.78	7.04	20	
1,2-Dichlorobenzene	25.220	1.0	25.00	0	101	71	122	24.30	3.72	20	
1,2-Dichloroethane	22.440	1.0	25.00	0	89.8	69	132	20.43	9.38	20	
1,2-Dichloropropane	23.710	1.0	25.00	0	94.8	75	125	22.54	5.06	20	
1,3,5-Trimethylbenzene	24.300	1.0	25.00	0	97.2	74	131	25.05	3.04	20	
1,3-Dichlorobenzene	25.890	1.0	25.00	0	104	75	124	25.15	2.90	20	
1,3-Dichloropropane	21.880	1.0	25.00	0	87.5	73	126	20.84	4.87	20	
1,4-Dichlorobenzene	25.000	1.0	25.00	0	100	74	123	24.43	2.31	20	
2,2-Dichloropropane	20.000	1.0	25.00	0	80.0	69	137	18.79	6.24	20	
2-Butanone	96.910	10	250.0	0	38.8	49	136	88.27	9.33	20	S
2-Chlorotoluene	27.760	1.0	25.00	0	111	73	126	27.06	2.55	20	
4-Chlorotoluene	28.080	1.0	25.00	0	112	74	128	27.20	3.18	20	
4-Isopropyltoluene	25.210	1.0	25.00	0	101	73	130	25.99	3.05	20	
4-Methyl-2-pentanone	208.430	10	250.0	0	83.4	58	134	187.8	10.4	20	
Acetone	76.780	10	250.0	0	30.7	40	135	71.97	6.47	20	S
Acrylonitrile	186.570	20	250.0	0	74.6	75	125	174.6	6.63	20	S
Benzene	24.360	1.0	25.00	0	97.4	81	122	23.66	2.92	20	
Bromobenzene	25.030	1.0	25.00	0	100	76	124	24.29	3.00	20	

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003218-006AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **ZZZZZZ** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Bromochloromethane	20.190	1.0	25.00	0	80.8	65	129	19.72	2.36	20	
Bromodichloromethane	23.690	1.0	25.00	0	94.8	76	121	22.33	5.91	20	
Bromoform	18.550	1.0	25.00	0	74.2	69	128	17.34	6.74	20	
Bromomethane	21.270	1.0	25.00	0	85.1	53	141	21.06	0.992	20	
Carbon disulfide	20.370	1.0	25.00	0	81.5	75	125	19.38	4.98	20	
Carbon tetrachloride	22.230	1.0	25.00	0	88.9	66	138	20.63	7.47	20	
Chlorobenzene	24.990	1.0	25.00	0	100	81	122	24.47	2.10	20	
Chloroethane	28.800	1.0	25.00	0	115	58	133	28.19	2.14	20	
Chloroform	23.820	1.0	25.00	0.5200	93.2	69	128	23.21	2.59	20	
Chloromethane	19.810	1.0	25.00	0	79.2	56	131	18.89	4.75	20	
cis-1,2-Dichloroethene	24.460	1.0	25.00	0	97.8	72	126	23.22	5.20	20	
cis-1,3-Dichloropropene	25.140	1.0	25.00	0	101	69	131	24.11	4.18	20	
Dibromochloromethane	22.760	1.0	25.00	0	91.0	66	133	21.93	3.71	20	
Dibromomethane	22.360	1.0	25.00	0	89.4	76	125	20.16	10.3	20	
Dichlorodifluoromethane	17.980	1.0	25.00	0	71.9	53	153	16.95	5.90	20	
Ethylbenzene	26.640	1.0	25.00	0	107	73	127	26.19	1.70	20	
Freon-113	18.900	1.0	25.00	0	75.6	75	125	17.44	8.04	20	
Hexachlorobutadiene	27.220	1.0	25.00	0	109	67	131	26.96	0.960	20	
Isopropylbenzene	30.060	1.0	25.00	0.5100	118	75	127	31.19	3.69	20	
m,p-Xylene	54.900	1.0	50.00	0.5000	109	76	128	54.43	0.860	20	
Methylene chloride	21.140	5.0	25.00	0	84.6	63	137	20.19	4.60	20	
MTBE	22.860	1.0	25.00	0	91.4	65	123	20.95	8.72	20	
n-Butylbenzene	25.030	1.0	25.00	0	100	69	137	26.19	4.53	20	
n-Propylbenzene	29.410	1.0	25.00	0	118	72	129	28.54	3.00	20	
Naphthalene	17.850	1.0	25.00	0	71.4	54	138	18.70	4.65	20	
o-Xylene	28.510	1.0	25.00	0	114	80	121	27.95	1.98	20	
sec-Butylbenzene	29.580	1.0	25.00	0	118	72	127	29.43	0.508	20	
Styrene	12.370	1.0	25.00	0	49.5	65	134	16.51	28.7	20	SR
tert-Butylbenzene	27.230	1.0	25.00	0	109	70	129	26.51	2.68	20	
Tetrachloroethene	25.130	1.0	25.00	0	101	66	128	25.12	0.0398	20	

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **N003218-006AMSD** SampType: **MSD** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **ZZZZZZ** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132801**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Toluene	23.790	2.5	25.00	0	95.2	77	122	22.83	4.12	20	
trans-1,2-Dichloroethene	23.800	1.0	25.00	0	95.2	63	137	22.85	4.07	20	
trans-1,3-Dichloropropene	25.130	1.0	25.00	0	101	59	135	23.55	6.49	20	
Trichloroethene	24.640	1.0	25.00	0	98.6	70	127	23.68	3.97	20	
Trichlorofluoromethane	24.560	1.0	25.00	0	98.2	57	129	24.23	1.35	20	
Vinyl chloride	20.720	1.0	25.00	0	82.9	50	134	19.98	3.64	20	
Xylenes, Total	83.410	2.0	75.00	0	111	75	125	82.38	1.24	20	
Surr: 1,2-Dichloroethane-d4	21.190		25.00		84.8	72	119		0		
Surr: 4-Bromofluorobenzene	26.730		25.00		107	76	119		0		
Surr: Dibromofluoromethane	22.150		25.00		88.6	85	115		0		
Surr: Toluene-d8	26.560		25.00		106	81	120		0		

Sample ID: **D090916MB5** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **PBW** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132802**

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

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D090916MB5** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **PBW** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132802**

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

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003250
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8260_WP_LLPGE

Sample ID: **D090916MB5** SampType: **MBLK** TestCode: **8260_WP_LL** Units: **µg/L** Prep Date: RunNo: **74862**
Client ID: **PBW** Batch ID: **D09VW084** TestNo: **EPA 8260B** Analysis Date: **9/16/2009** SeqNo: **1132802**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Dichlorodifluoromethane	ND	1.0									
Ethylbenzene	ND	1.0									
Freon-113	ND	1.0									
Hexachlorobutadiene	ND	1.0									
Isopropylbenzene	ND	1.0									
m,p-Xylene	0.540	1.0									
Methylene chloride	ND	5.0									
MTBE	ND	1.0									
n-Butylbenzene	ND	1.0									
n-Propylbenzene	ND	1.0									
Naphthalene	ND	1.0									
o-Xylene	ND	1.0									
sec-Butylbenzene	ND	1.0									
Styrene	ND	1.0									
tert-Butylbenzene	ND	1.0									
Tetrachloroethene	ND	1.0									
Toluene	ND	2.5									
trans-1,2-Dichloroethene	ND	1.0									
trans-1,3-Dichloropropene	ND	1.0									
Trichloroethene	ND	1.0									
Trichlorofluoromethane	ND	1.0									
Vinyl chloride	ND	1.0									
Xylenes, Total	ND	2.0									
Surr: 1,2-Dichloroethane-d4	22.420		25.00		89.7	72	119				
Surr: 4-Bromofluorobenzene	26.000		25.00		104	76	119				
Surr: Dibromofluoromethane	21.260		25.00		85.0	85	115				
Surr: Toluene-d8	26.730		25.00		107	81	120				

Qualifiers:

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

Advanced Technology Laboratories
3151 W.Post Road, Las Vegas, NV 89118
(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[IM3Plant- 54]

COC Number

TURNAROUND TIME 09-17-09

DATE 09/16/09 PAGE 1 OF - -

COMPANY	CH2M HILL
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	
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Modified 8015 (Mobil SCH 636)	8260													NUMBER OF CONTAINERS	COMMENTS
~~T702B-091609~~ SC702B-091609	09/16/09	16:00	water	X														1	
IW3-091609	09/16/09	15:10	water	X	X													3	
																		4	TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Ken Vose	CH2M HILL OMI	9-16-09 17:15
Signature (Received)	G. AFICIONADO	ATL	9-16-09 18:15
Signature (Relinquished)	G. AFICIONADO	ATL	9-16-09 20:32
Signature (Received)	GLEN GEESMUNDT	ATL	9-16-09 20:32
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 3.8°C °F

w/ ice

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

September 30, 2009

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N003255

RE: PG&E Topock IM3

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 17, 2009 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

for

Jose Tenorio Jr.
Laboratory Director

CLIENT: CH2M HILL
Project: PG&E Topock IM3
Lab Order: N003255

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Smple was received intact with proper chain of custody documentation.

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

Sample was analyzed within method holding time.

Prep Comments for 3510 Water:

Sample N003255-001A pH is 7.0

Advanced Technology Laboratories
3151 W. Post Road, Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Lab Order: N003255
Project: PG&E Topock IM3
Lab ID: N003255-001

Client Sample ID: SC-700B-091709
Collection Date: 9/17/2009 2:40:00 PM
Matrix: WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3510C				**EPA 8015B**		
RunID: GC3_090918A	QC Batch: 33515			PrepDate: 9/17/2009		Analyst: **JT**
TPH-Diesel	ND	50		ug/L	1	9/18/2009 02:10 AM
TPH-Motor Oil	ND	50		ug/L	1	9/18/2009 02:10 AM
Surr: p-Terphenyl	91.8	57-132		%REC	1	9/18/2009 02:10 AM

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003255
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **LCS-33515-DRO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/17/2009** RunNo: **74874**
Client ID: **LCSW** Batch ID: **33515** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/18/2009** SeqNo: **1133106**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	856.603	50	1000	0	85.7	61	143				
Surr: p-Terphenyl	63.465		80.00		79.3	57	132				

Sample ID: **LCS-33515-ORO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/17/2009** RunNo: **74874**
Client ID: **LCSW** Batch ID: **33515** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/18/2009** SeqNo: **1133108**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	872.709	50	1000	0	87.3	50	150				
Surr: p-Terphenyl	72.049		80.00		90.1	57	132				

Sample ID: **MB-33515** SampType: **MBLK** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/17/2009** RunNo: **74874**
Client ID: **PBW** Batch ID: **33515** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/18/2009** SeqNo: **1133111**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	46.578	50									
TPH-Motor Oil	32.517	50									
Surr: p-Terphenyl	65.806		80.00		82.3	57	132				

Qualifiers:

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

Advanced Technology Laboratories
3151 W.Post Road, Las Vegas, NV 89118
(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[IM3Plant- 55]

COC Number
TURNAROUND TIME 09-18-09
DATE 09/17/09 PAGE 1 OF

COMPANY CH2M HILL
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
SAMPLERS (SIGNATURE [signature]
SC-700B WCK

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Modified 8015 (Mobil SCH 636)	NUMBER OF CONTAINERS	COMMENTS
SC-700B [illegible]-091709	09/17/09	14:40		X	1	
NOO 7255-001						

TOTAL NUMBER OF CONTAINERS: 1

CHAIN OF CUSTODY SIGNATURE RECORD

Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished) [signature]	C.KNIGHT	DMS	9-17-09 1520
Signature (Received) [signature]	G. AFICIONADO	ATL	9-17-05 1715
Signature (Relinquished) [signature]	G. AFICIONADO	ATL	9-17-05 1925
Signature (Received) [signature]	G. GESMUNDO	ATL	9/17/09 19:25
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS
RECEIVED COOL ☑ w/ice WARM ☐ 3.2°C°F
CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

September 30, 2009

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N003260

RE: PG&E Topock IM3

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 18, 2009 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Jose Tenorio Jr.
Laboratory Director

CLIENT: CH2M HILL
Project: PG&E Topock IM3
Lab Order: N003260

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Smple was received intact with proper chain of custody documentation.

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

Sample was analyzed within method holding time.

Prep Comments for 3510 Water:

Sample N003260-001A: pH is 7.0

Advanced Technology Laboratories
3151 W. Post Road, Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Lab Order: N003260
Project: PG&E Topock IM3
Lab ID: N003260-001

Client Sample ID: SC-700B-091809
Collection Date: 9/18/2009 8:00:00 AM
Matrix: GROUND WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3510C				**EPA 8015B**		
RunID: GC3_090918B	QC Batch: 33518			PrepDate:	9/18/2009	Analyst: **JT**
TPH-Diesel	ND	50		ug/L	1	9/18/2009 11:12 PM
TPH-Motor Oil	ND	50		ug/L	1	9/18/2009 11:12 PM
Surr: p-Terphenyl	91.8	57-132		%REC	1	9/18/2009 11:12 PM

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003260
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **LCS-33518-DRO**	SampType: **LCS**	TestCode: **8015_W_DM_**	Units: **ug/L**	Prep Date: **9/18/2009**	RunNo: **74894**
Client ID: **LCSW**	Batch ID: **33518**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **9/18/2009**	SeqNo: **1133345**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	869.757	50	1000	0	87.0	61	143				
Surr: p-Terphenyl	65.093		80.00		81.4	57	132				

Sample ID: **LCSD-33518-DRO**	SampType: **LCSD**	TestCode: **8015_W_DM_**	Units: **ug/L**	Prep Date: **9/18/2009**	RunNo: **74894**
Client ID: **LCSS02**	Batch ID: **33518**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **9/18/2009**	SeqNo: **1133346**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	914.618	50	1000	0	91.5	61	143	869.8	5.03	30	
Surr: p-Terphenyl	72.572		80.00		90.7	57	132		0		

Sample ID: **LCS-33518-ORO**	SampType: **LCS**	TestCode: **8015_W_DM_**	Units: **ug/L**	Prep Date: **9/18/2009**	RunNo: **74894**
Client ID: **LCSW**	Batch ID: **33518**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **9/18/2009**	SeqNo: **1133347**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	886.386	50	1000	0	88.6	50	150				
Surr: p-Terphenyl	71.655		80.00		89.6	57	132				

Sample ID: **LCSD-33518-ORO**	SampType: **LCSD**	TestCode: **8015_W_DM_**	Units: **ug/L**	Prep Date: **9/18/2009**	RunNo: **74894**
Client ID: **LCSS02**	Batch ID: **33518**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **9/18/2009**	SeqNo: **1133348**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	834.832	50	1000	0	83.5	50	150	886.4	5.99	30	
Surr: p-Terphenyl	76.947		80.00		96.2	57	132		0		

Sample ID: **MB-33518**	SampType: **MBLK**	TestCode: **8015_W_DM_**	Units: **ug/L**	Prep Date: **9/18/2009**	RunNo: **74894**
Client ID: **PBW**	Batch ID: **33518**	TestNo: **EPA 8015B**	**EPA 3510C**	Analysis Date: **9/18/2009**	SeqNo: **1133350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003260
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **MB-33518** SampType: **MBLK** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/18/2009** RunNo: **74894**
Client ID: **PBW** Batch ID: **33518** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/18/2009** SeqNo: **1133350**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	43.559	50									
TPH-Motor Oil	31.008	50									
Surr: p-Terphenyl	71.231		80.00		89.0	57	132				

Qualifiers:

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

Advanced Technology Laboratories *3151 W. Post Road, Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691*

Advanced Technology Laboratories
3151 W.Post Road, Las Vegas, NV 89118
(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[IM3Plant- 56]

COC Number
TURNAROUND TIME 09-21-09
DATE 09/18/09 PAGE 1 OF

COMPANY	CH2M HILL
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	
SAMPLERS (SIGNATURE	C. Kriegir

SAMPLE I.D. (SC-700B WCK)	DATE	TIME	DESCRIPTION	Modified 8015 (Mobil SCH 636)													NUMBER OF CONTAINERS	COMMENTS
~~T702B~~-091809 SC-700B-	09/18/09	0800		X													1	
																	1	TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished) [signature]	Ryan Phelps	OMI	9-18-09 13:54
Signature (Received) [signature]	G. AFICIONADO	ATL	9-18-09 13:54
Signature (Relinquished) [signature]	G. AFICIONADO	ATL	9-18-9 1030
Signature (Received) [signature]	J. TENORIO	ATL	9/18/09@430pm
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ 4.0 WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

September 30, 2009

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N003270

RE: PG&E Topock IM3

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 21, 2009 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Jose Tenorio Jr.
Laboratory Director

CLIENT: CH2M HILL
Project: PG&E Topock IM3
Lab Order: N003270

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Smple was received intact with proper chain of custody documentation.

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

Sample was analyzed within method holding time.

Prep Comments for 3510 Water:

Sample N003270-001A: pH is 7.0

Advanced Technology Laboratories
3151 W. Post Road, Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Lab Order: N003270
Project: PG&E Topock IM3
Lab ID: N003270-001

Client Sample ID: T700B-091909
Collection Date: 9/19/2009 12:00:00 PM
Matrix: WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3510C				**EPA 8015B**		
RunID: GC3_090921A	QC Batch: 33538			PrepDate: 9/21/2009		Analyst: **JT**
TPH-Diesel	ND	50		ug/L	1	9/22/2009 02:11 AM
TPH-Motor Oil	ND	50		ug/L	1	9/22/2009 02:11 AM
Surr: p-Terphenyl	91.6	57-132		%REC	1	9/22/2009 02:11 AM

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003270
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **LCS-33538-DRO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **LCSW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	998.925	50	1000	0	99.9	61	143				
Surr: p-Terphenyl	71.385		80.00		89.2	57	132				

Sample ID: **LCS-33538-ORO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **LCSW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	947.702	50	1000	0	94.8	50	150				
Surr: p-Terphenyl	73.821		80.00		92.3	57	132				

Sample ID: **MB-33538** SampType: **MBLK** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **PBW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	14.965	50									
TPH-Motor Oil	17.802	50									
Surr: p-Terphenyl	84.711		80.00		106	57	132				

Qualifiers:

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

Advanced Technology Laboratories
3151 W.Post Road, Las Vegas, NV 89118
(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[IM3Plant- 57]

COC Number

TURNAROUND TIME 09-22-09

DATE 09/19/09 PAGE 1 OF - -

COMPANY CH2M HILL

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

SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Modified 8015 (Mobil SCH 636)	NUMBER OF CONTAINERS	COMMENTS
T700B-091909	09/19/09	1200		X	1	
					1	TOTAL NUMBER OF CONTAINERS

Cr^{6} - .001 pH - 7.6 TEMP 90.1

TOTAL - .002 EC - 7.52

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	Printed Name J. AIDE	Company/ Agency O M t	Date/ Time 9-19-09 1220.
Signature (Received)	Printed Name MORRISON	Company/ Agency ATL	Date/ Time 9/21/09 @ 0900
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ 5.1°C ☑

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

September 30, 2009

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N003271

RE: PG&E Topock IM3

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 21, 2009 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Jose Tenorio Jr.
Laboratory Director

CLIENT: CH2M HILL
Project: PG&E Topock IM3
Lab Order: N003271

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Smple was received intact with proper chain of custody documentation.

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

Sample was analyzed within method holding time.

Prep Comments for 3510 Water:

Sample N003271-001A: pH is 7.0

Advanced Technology Laboratories
3151 W. Post Road, Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Lab Order: N003271
Project: PG&E Topock IM3
Lab ID: N003271-001

Client Sample ID: T700B-092009
Collection Date: 9/20/2009 8:00:00 AM
Matrix: WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3510C				**EPA 8015B**		
RunID: GC3_090921A	QC Batch: 33538			PrepDate: 9/21/2009		Analyst: **JT**
TPH-Diesel	ND	50		ug/L	1	9/22/2009 02:40 AM
TPH-Motor Oil	ND	50		ug/L	1	9/22/2009 02:40 AM
Surr: p-Terphenyl	103	57-132		%REC	1	9/22/2009 02:40 AM

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003271
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **LCS-33538-DRO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **LCSW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	998.925	50	1000	0	99.9	61	143				
Surr: p-Terphenyl	71.385		80.00		89.2	57	132				

Sample ID: **LCS-33538-ORO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **LCSW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	947.702	50	1000	0	94.8	50	150				
Surr: p-Terphenyl	73.821		80.00		92.3	57	132				

Sample ID: **MB-33538** SampType: **MBLK** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **PBW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	14.965	50									
TPH-Motor Oil	17.802	50									
Surr: p-Terphenyl	84.711		80.00		106	57	132				

Qualifiers:

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

Advanced Technology Laboratories
3151 W.Post Road, Las Vegas, NV 89118
(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[IM3Plant- 58]

COC Number

TURNAROUND TIME 09-22-09

DATE 09/20/09 PAGE 1 OF - -

COMPANY	CH2M HILL
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	
SAMPLERS (SIGNATURE	Bonnie Phelps

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Modified 8015 (Mobil SCH 636)	NUMBER OF CONTAINERS	COMMENTS
T700B-092009	09/20/09	0800		X	1	
					/	TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Relinquished	Bonnie Phelps	BONNIE PHELPS	CH2M	9-21-09 0900
Received		MBCANYON	ATL	9/21/09@900
Relinquished				
Received				
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 5.1°C °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS:

September 30, 2009

Shawn P. Duffy
CH2M HILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

TEL: (530) 229-3303
FAX: (530) 339-3303

CA-ELAP No.: 2676
NV Cert. No.: NV-009222007A

Workorder No.: N003272

RE: PG&E Topock IM3

Attention: Shawn P. Duffy

Enclosed are the results for sample(s) received on September 21, 2009 by Advanced Technology Laboratories - Las Vegas . The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

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

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

Sincerely,

Jose Tenorio Jr.
Laboratory Director

CLIENT: CH2M HILL
Project: PG&E Topock IM3
Lab Order: N003272

CASE NARRATIVE

SAMPLE RECEIVING/GENERAL COMMENTS

Smple was received intact with proper chain of custody documentation.

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

Sample was analyzed within method holding time.

Prep Comments for 3510 Water:

Sample N003272-001A: pH is 7.0

Advanced Technology Laboratories
3151 W. Post Road, Las Vegas, NV 89118 Tel: 702-307-2659 Fax: 702-307-2691

CLIENT: CH2M HILL
Lab Order: N003272
Project: PG&E Topock IM3
Lab ID: N003272-001

Client Sample ID: T700B-092109
Collection Date: 9/21/2009 8:00:00 AM
Matrix: WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL & MOTOR OIL RANGE ORGANICS BY GC/FID						
EPA 3510C				**EPA 8015B**		
RunID: GC3_090921A	QC Batch: 33538			PrepDate: 9/21/2009		Analyst: **JT**
TPH-Diesel	ND	50		ug/L	1	9/22/2009 03:09 AM
TPH-Motor Oil	ND	50		ug/L	1	9/22/2009 03:09 AM
Surr: p-Terphenyl	107	57-132		%REC	1	9/22/2009 03:09 AM

Qualifiers:

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

CLIENT: CH2M HILL
Work Order: N003272
Project: PG&E Topock IM3

ANALYTICAL QC SUMMARY REPORT

TestCode: 8015_W_DM_PGE

Sample ID: **LCS-33538-DRO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **LCSW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133517**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	998.925	50	1000	0	99.9	61	143				
Surr: p-Terphenyl	71.385		80.00		89.2	57	132				

Sample ID: **LCS-33538-ORO** SampType: **LCS** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **LCSW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133519**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Motor Oil	947.702	50	1000	0	94.8	50	150				
Surr: p-Terphenyl	73.821		80.00		92.3	57	132				

Sample ID: **MB-33538** SampType: **MBLK** TestCode: **8015_W_DM_** Units: **ug/L** Prep Date: **9/21/2009** RunNo: **74904**
Client ID: **PBW** Batch ID: **33538** TestNo: **EPA 8015B** **EPA 3510C** Analysis Date: **9/22/2009** SeqNo: **1133524**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
TPH-Diesel	14.965	50									
TPH-Motor Oil	17.802	50									
Surr: p-Terphenyl	84.711		80.00		106	57	132				

Qualifiers:

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

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(702) 307-2659 FAX: (702) 307-2691

CHAIN OF CUSTODY RECORD

[IM3Plant- 59]

COC Number
TURNAROUND TIME 09-22-09
DATE 09/21/09 PAGE 1 OF - -

COMPANY CH2M HILL
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
SAMPLERS (SIGNATURE

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Modified 8015 (Mobil SCH 636)	NUMBER OF CONTAINERS	COMMENTS
T700B-092109	09/21/09	0800		X	1	
					1	TOTAL NUMBER OF CONTAINERS

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Tom Phillips	ORM1	9-21-09 0900
Signature (Received)	MBCARTIN	ATL	9/21/09 0900
Signature (Relinquished)			
Signature (Received)			
Signature (Relinquished)			
Signature (Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☑ WARM ☐ 5.1°C °F

CUSTODY SEALED YES ☐ NO ☑

SPECIAL REQUIREMENTS: