Pacific Gas and Electric Company

Curt Russell
Topock Onsite Project Manager
GT&D Remediation

Topock Compressor Station
145453 National Trails Hwy
Needles, CA 92363

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

760.326.5582
Fax: 760.326.5542
Email: gcr4@pge.com

October 15, 2007

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

Subject: Board Order R7-2006-0060
PG&E Topock Compressor Station, Needles, California
Interim Measure No. 3 Groundwater Treatment System
Discharge to Injection Wells
September 2007 and Third Quarter 2007 Monitoring Report

Dear Mr. Perdue:

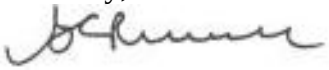
Enclosed is the September 2007 and Third Quarter 2007 Monitoring Report for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station, Interim Measure (IM) No. 3 Groundwater Treatment System.

This report is being submitted in compliance with the Waste Discharge Requirements (WDRs) issued September 20, 2006 by the Colorado River Basin Regional Water Quality Control Board (Water Board) under Order R7-2006-0060. 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 Onsite Project Manager

Enclosures:
September 2007 and Third Quarter 2007 Monitoring Report for the IM No. 3 Groundwater Treatment System.

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

September 2007 and Third Quarter 2007 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

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

Prepared for

California Regional Water Quality Control Board
Colorado River Basin Region

on behalf of

Pacific Gas and Electric Company

October 15, 2007

CH2MHILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

September 2007 and Third Quarter 2007 Monitoring Report
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, 2007

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

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

Contents

Tables

Figures

Appendix

Acronyms and Abbreviations

EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
IM	Interim Measure
MRP	Monitoring and Reporting Program
PG&E	Pacific Gas and Electric Company
PST	Pacific Standard Time
TOC	total organic carbon
Truesdail	Truesdail Laboratories, Inc.
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 Monitoring and Reporting Program (MRP) under the order requires monthly monitoring reports to be submitted by the fifteenth day of the following month.

This report covers monitoring activities related to operation of the IM No. 3 groundwater treatment system during September 2007 and, by reference, the Third Quarter 2007. 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 and figures are located at the end of this report.) Sampling station locations are provided in the process and instrumentation diagrams: Figures TP-PR-10-10-04, TP-PR-10-10-08, and TP-PR-10-10-06.

3.0 Description of Activities

The treatment system was initially operated between July 25 and July 28, 2005 for the 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 the following components:

- 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 September 2007, extraction wells TW-3D and PE-1 operated at a target pump rate of 135 gallons per minute (gpm) excluding periods of planned and unplanned downtime (planned and unplanned downtime is described in Section 4.0). Extraction well TW-2D was also operated for short periods (less than 15 minutes) on September 5, 2007 to support field operations. The target pump flow rates and TW-2D flow rates during July 2007 and August 2007 were presented in the July 2007 and August 2007 monthly monitoring reports submitted to the Water Board August 15, 2007 and September 14, 2007, respectively.

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.

4.0 Groundwater Treatment System Flow Rates

The September 2007 treatment system monthly average flow rates (influent, effluent, and reverse osmosis concentrate) are presented in Table 2. The average flow rates during July 2007 and August 2007 were presented in the July 2007 and August 2007 monthly monitoring reports submitted to the Water Board August 15, 2007 and September 14, 2007, respectively.

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 well 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 5,798,060 gallons of extracted groundwater during September 2007. The IM No. 3 facility also treated approximately 710 gallons of water generated from the groundwater monitoring program and 38,000 gallons of water from IM-3 injection well development. The quantity of extracted groundwater, water generated from the groundwater monitoring program, and water from the IM-3 injection well development activities during July 2007 and August 2007 were presented in the July 2007 and August 2007 monthly monitoring reports submitted to the Water Board August 15, 2007 and September 14, 2007, respectively.

Two containers of solids from the IM No. 3 facility were transported offsite during September 2007. Data characterizing the containers of solids from the IM No. 3 facility transported offsite during July 2007 and August 2007 were presented in the July 2007 and August 2007 monthly monitoring reports submitted to the Water Board August 15, 2007 and September 14, 2007, respectively.

Periods of planned and unplanned extraction system down time (that together resulted in 0.5 percent downtime during September 2007) are summarized below. The times shown are in Pacific Standard Time (PST) to be consistent with other data collected (e.g., water level data) at the site.

- **September 19, 2007 (unplanned)**: The extraction well system was temporarily offline from 12:30 pm until 12:45 pm after a City of Needles power imbalance. Extraction system downtime was 15 minutes.
- **September 24, 2007 (planned):** The extraction well system was temporarily offline from 9:25 am until 11:36 am to complete plant maintenance activities including cleaning the pipe between the chemical reduction loop and Chrome Reduction Tank (T-300) and polymer system maintenance. Extraction system downtime was 2 hours 11 minutes.

- **September 27, 2007 (planned):** The extraction well system was temporarily offline from 9:15 am until 10:45 am to switch to a cleaned set of microfilter modules. Extraction system downtime was 1 hour 30 minutes.

The periods of planned and unplanned extraction system down time during July 2007 and August 2007 were presented in the July 2007 and August 2007 monthly monitoring reports submitted to the Water Board on August 15, 2007 and September 14, 2007, respectively.

5.0 Sampling and Analytical Procedures

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.

All 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.

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 was conducted in accordance with the sampling frequency required by the MRP. The sampling analytical results are shown in Tables 3, 4, 5, and 6, respectively.

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

6.0 Analytical Results

Laboratory reports for samples collected in September 2007 were prepared by certified analytical laboratories, and are presented in Appendix A. Laboratory reports for samples collected during July 2007 and August 2007 were presented in the July 2007 and August 2007 monthly monitoring reports submitted to the Water Board August 15, 2007 and September 14, 2007, respectively.

The September 2007 analytical results from groundwater treatment system influent, effluent, reverse osmosis concentrate, and sludge samples are presented in Tables 3, 4, 5, and 6, respectively.

In accordance with the WDR reporting requirements, the following sampling frequency schedule was followed:

- The influent was sampled monthly; the sample date was September 5, 2007. Results are presented in Table 3.
- The effluent was sampled weekly; the sample dates were September 5, 12, 19, and 26, 2007. Results are presented in Table 4.
- The reverse osmosis concentrate was sampled monthly; the sample date was September 5, 2007. Results are presented in Table 5.
- The sludge was sampled monthly; the sample date was September 5, 2007. In accordance with the WDRs, sludge is required to be sampled each time it is transported offsite (unless sludge is transported offsite more frequently than monthly, in which case the sampling frequency is monthly). Although no sludge was shipped offsite during September 2007, a sample was collected and analyzed. Results are presented in Table 6.
- The sludge is required to have an aquatic bioassay test quarterly; the Third Quarter 2007 aquatic bioassay test was performed on a sludge sample collected July 2, 2007. Results were presented in the July 2007 Monthly Report submitted August 15, 2007.

Table 7 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

In addition to the WDR required parameters, one influent sample (collected September 5, 2007) was analyzed for dissolved manganese, and four influent samples (collected September 5, 12, 19 and 26, 2007) were analyzed for total organic carbon (TOC). The additional analyses were completed for IM No. 3 facility treatment process evaluation and overall water chemistry characterization. The concentrations are comparable to historic influent conditions and the laboratory reports are included in Appendix A.

7.0 Conclusions

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

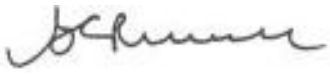
In addition, no incidents of non-compliance were identified during the reporting period, and no events that caused an immediate or potential threat to human health or the environment, or new releases of hazardous waste or hazardous waste constituents, or new solid waste management units, were identified 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 R7-2006-0600 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 October 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 Onsite Project Manager

Date: October 15, 2007

Tables

TABLE 1
Sampling Station Descriptions
September 2007 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
September 2007 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)
September 2007 Average Monthly Flowrate	134.2	128.1	6.2

Notes:
gpm: gallons per minute.
[a] Extraction wells TW-3D and PE-1 were operated during September 2007. TW-2D was operated for a short period on September 5, 2007 to support field activities.
[b] The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during September 2007 was less than 0.1 percent, which is within the range of acceptable accuracy considering the margin of error for onsite instrumentation, the water contained within the sludge, purge water treated at the IM-3 facility in addition to the extraction wells, and differences in the inventory of water in the treatment system between the beginning and end of the reporting period.
[c] Effluent was discharged into injection wells IW-02 and IW-03 during September 2007.

TABLE 3
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Influent Monitoring Results [a]
September 2007 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency		Monthly																							
Analytes		TDS	Turbidity	Specific Conductance	pH [c]	Chromium	Hexavalent Chromium	Aluminium	Ammonia (as N)	Antimony	Arsenic	Barium	Boron	Copper	Fluoride	Lead	Manganese	Manganese Dissolved [d]	Molybdenum	Nickel	Nitrate (as N)	Nitrite (as N)	Sulfate	Iron	Zinc
Units [b]		mg/L	NTU	µmhos/cm	pHunits	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	µg/L	mg/L	mg/L	mg/L	µg/L	µg/L
MDL		64.0	0.0160	0.705	0.0570	0.75	1.8	0.85	0.0090	0.13	0.12	0.095	0.00084	0.17	0.0905	0.12	0.094	0.094	0.094	0.25	0.0840	0.0010	1.54	0.95	0.82
Sample ID	**Date**																								
SC-100B-WDR-115	**9/5/2007**	**4620**	**0.118**	**7180**	**7.53 J**	**1540**	**1630**	**ND (50.0)**	**ND (0.500)**	**ND (3.0)**	**ND (5.0)**	**ND (300)**	**1.26**	**ND (10.0)**	**2.86**	**ND (2.0)**	**1.4**	**1.4**	**20.0**	**ND (20.0)**	**3.30**	**ND (0.0050)**	**597**	**29.2**	**ND (20.0)**
RL		250	0.100	2.00	2.00	2.0	20.0	50.0	0.500	3.0	5.0	300	0.200	10.0	0.500	2.0	1.0	1.0	5.0	20.0	1.00	0.0050	25.0	20.0	20.0

NOTES:

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

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 pH results are J flagged because recent EPA requirements for pH analysis have 15-minute holding time.

d Manganese was field filtered

TABLE 4
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Effluent Monitoring Results[a]
September 2007 Monthly Report for Interim Measures No.3 Groundwater Treatment System

WDRs Effluent Limits[b]	Ave. Monthly	NA	NA	NA	6.5-8.4	25	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Max Daily	NA	NA	NA	6.5-8.4	50	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Required Sampling Frequency		**Weekly**						**Monthly**																
Analytes		TDS	Turbidity	Specific Conductance	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	pHunits	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]		64.0	0.0160	0.705	0.0570	0.075	0.088	0.85	0.0090	0.13	0.12	0.095	0.00084	0.17	0.0905	0.12	0.094	0.094	0.25	0.0840	0.0010	3.07	0.95	0.82
Sample ID	**Date**																							
SC-700B-WDR-115	**9/5/2007**	**4170**	**ND (0.100)**	**6510**	**8.08 J**	**ND (1.0)**	**ND (0.20)**	**ND (50.0)**	**ND (0.500)**	**ND (3.0)**	**ND (5.0)**	**ND (300)**	**1.28**	**ND (10.0)**	**2.28**	**ND (2.0)**	**35.7**	**15.3**	**ND (20.0)**	**2.95**	**ND (0.0050)**	**492**	**ND (20.0)**	**ND (20.0)**
RL		250	0.100	2.00	2.00	1.0	0.20	50.0	0.500	3.0	5.0	300	0.200	10.0	0.500	2.0	1.0	5.0	20.0	1.00	0.0050	50.0	20.0	20.0
SC-700B-WDR-116	**9/12/2007**	**4310**	**ND (0.100)**	**6920**	**8.20 J**	**ND (1.0)**	**ND (0.20)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	2.00	1.0	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-117	**9/19/2007**	**4530**	**0.165**	**7020**	**8.16 J**	**ND (1.0)**	**ND (1.0)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	2.00	1.0	1.0	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-118	**9/26/2007**	**4360**	**ND (0.100)**	**7040**	**8.11 J**	**ND (1.0)**	**ND (0.20)**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**
RL		250	0.100	2.00	2.00	1.0	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

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 pH results are J flagged because recent EPA requirements for pH analysis have 15-minute holding time.

TABLE 5
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Reverse Osmosis Concentrate Results [a]
September 2007 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency		Monthly																				
Analytes		TDS	Specific Conductance	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	pHunits	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
Sample ID	Date / MDL	128	0.705	0.0570	0.000075	0.000088	0.00013	0.00012	0.000095	0.000071	0.00012	0.000072	0.00017	0.0905	0.00012	0.000094	0.000049	0.00025	0.00063	0.00029	0.000094	0.000086	0.00082
SC-701-WDR-115	**9/5/2007**	**22000**	**28900**	**7.84 J**	**0.0013**	**ND (0.0010)**	**ND (0.0030)**	**ND (0.0050)**	**ND (0.300)**	**ND (0.0010)**	**ND (0.0020)**	**ND (0.0050)**	**ND (0.0100)**	**12.8**	**ND (0.0020)**	**0.0907**	**ND (0.00020)**	**ND (0.0200)**	**0.0116**	**0.0078**	**ND (0.0010)**	**ND (0.0050)**	**ND (0.0200)**
RL		500	2.00	2.00	0.0010	0.0010	0.0030	0.0050	0.300	0.0010	0.0020	0.0050	0.0100	0.500	0.0020	0.0050	0.00020	0.0200	0.0050	0.0050	0.0010	0.0050	0.0200

NOTES:

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

[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] pH results are J flagged because recent EPA requirements for pH analysis have 15-minute holding time.

TABLE 6
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Sludge Monitoring Results[a]
September 2007 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency		Monthly [c]																		
Analytes		Chromium	Hexavalent Chromium	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Copper [d]	Fluoride	Lead [d]	Molybdenum [d]	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc [d]
Units [b]		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL		0.204	0.0018	0.0316	0.0653	0.0517	0.330	0.0281	0.401	0.0941	0.362	0.0281	0.0222	0.0112	0.138	0.149	0.0680	0.0222	0.359	0.448
Sample ID	**Date**																			
SC-Sludge-WDR-115	**9/5/2007**	**13000**	**222 J**	**ND (0.774)**	**48.3**	**115**	**91.9**	**ND (0.774)**	**ND (31.0)**	**ND (47.5)**	**61.0**	**ND (2.52)**	**ND (27.7)**	**0.327**	**15.5**	**ND (0.774)**	**ND (0.774)**	**ND (0.774)**	**70.7**	**ND (66.4)**
RL		8.92	2.62	0.774	1.78	1.78	31.0	0.774	31.0	1.78	6.56	0.774	0.774	0.147	1.78	0.774	0.774	0.774	31.0	1.78

NOTES:

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

c Sludge shall be tested for the listed constituents each time sludge is transported offsite, unless transport is more frequent than monthly, in which case the sampling frequency shall be monthly

d Sample results are reported non-detect at (value) due to laboratory blank contamination.

TABLE 7
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
September 2007 Monthly Report for Interim Measures 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-115	David Chaney	9/5/2007	3:10:00 PM	TLI	EPA 120.1	SC	9/6/2007	Tina Acquiat
					TLI	EPA 200.7	FE	9/18/2007	Daisy Duyan
					TLI	EPA 200.7	B	9/18/2007	Daisy Duyan
					TLI	EPA 200.8	MO	9/27/2007	Michel Mendoza
					TLI	EPA 200.8	AL	9/28/2007	Michel Mendoza
					TLI	EPA 200.8	AS	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	BA	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	CR	10/5/2007	Michel Mendoza
					TLI	EPA 200.8	CU	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	MND	9/27/2007	Michel Mendoza
					TLI	EPA 200.8	NI	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	PB	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	SB	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	ZN	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	MN	9/25/2007	Michel Mendoza
					TLI	EPA 218.6	CR6	9/5/2007	Jean Paul Gleeson
					TLI	EPA 300.0	FL	9/6/2007	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	9/6/2007	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	9/6/2007	Giawad Ghenniwa
					TLI	SM2130B	TRB	9/6/2007	Gautam Savani
					TLI	SM2540C	TDS	9/6/2007	Tina Acquiat
					TLI	SM4500-HB	PH	9/6/2007	Tina Acquiat
					TLI	SM4500NH3D	NH3N	9/10/2007	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	9/7/2007	Tina Acquiat
SC-700B	SC-700B-WDR-115	David Chaney	9/5/2007	3:10:00 PM	TLI	EPA 120.1	SC	9/6/2007	Tina Acquiat
					TLI	EPA 200.7	B	9/18/2007	Daisy Duyan
					TLI	EPA 200.7	FE	9/20/2007	Daisy Duyan
					TLI	EPA 200.8	AS	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	ZN	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	SB	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	PB	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	NI	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	MO	9/27/2007	Michel Mendoza
					TLI	EPA 200.8	MN	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	CU	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	BA	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	AL	9/28/2007	Michel Mendoza
					TLI	EPA 200.8	CR	9/25/2007	Michel Mendoza

TABLE 7
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
September 2007 Monthly Report for Interim Measures 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-115	David Chaney	9/5/2007	3:10:00 PM	TLI	EPA 218.6	CR6	9/6/2007	Jean Paul Gleeson
					TLI	EPA 300.0	NO3N	9/6/2007	Giawad Ghenniwa
					TLI	EPA 300.0	FL	9/6/2007	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	9/6/2007	Giawad Ghenniwa
					TLI	SM2130B	TRB	9/6/2007	Gautam Savani
					TLI	SM2540C	TDS	9/6/2007	Tina Acquiat
					TLI	SM4500-HB	PH	9/6/2007	Tina Acquiat
					TLI	SM4500NH3D	NH3N	9/10/2007	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	9/7/2007	Tina Acquiat
SC-700B	SC-700B-WDR-116	David Chaney	9/12/2007	1:35:00 PM	TLI	EPA 120.1	SC	9/13/2007	Tina Acquiat
					TLI	EPA 200.8	CR	9/13/2007	Michel Mendoza
					TLI	EPA 218.6	CR6	9/13/2007	Jean Paul Gleeson
					TLI	SM2130B	TRB	9/13/2007	Gautam Savani
					TLI	SM2540C	TDS	9/13/2007	Tina Acquiat
					TLI	SM4500-HB	PH	9/13/2007	Tina Acquiat
SC-700B	SC-700B-WDR-117	Ron Phelps	9/19/2007	10:50:00 AM	TLI	EPA 120.1	SC	9/20/2007	Tina Acquiat
					TLI	EPA 200.8	CR	9/20/2007	Michel Mendoza
					TLI	EPA 218.6	CR6	9/20/2007	Jean Paul Gleeson
					TLI	SM2130B	TRB	9/19/2007	Gautam Savani
					TLI	SM2540C	TDS	9/24/2007	Tina Acquiat
					TLI	SM4500-HB	PH	9/20/2007	Tina Acquiat
SC-700B	SC-700B-WDR-118	Ron Phelps	9/26/2007	9:30:00 AM	TLI	EPA 120.1	SC	9/28/2007	Tina Acquiat
					TLI	EPA 200.8	CR	9/27/2007	Michel Mendoza
					TLI	EPA 218.6	CR6	9/27/2007	Jean Paul Gleeson
					TLI	SM2130B	TRB	9/27/2007	Gautam Savani
					TLI	SM2540C	TDS	9/28/2007	Tina Acquiat
					TLI	SM4500-HB	PH	9/27/2007	Tina Acquiat
SC-701	SC-701-WDR-115	David Chaney	9/5/2007	3:10:00 PM	TLI	EPA 120.1	SC	9/6/2007	Tina Acquiat
					TLI	EPA 200.8	CR	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	SE	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	AG	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	ZN	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	CD	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	TL	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	SB	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	PB	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	NI	9/25/2007	Michel Mendoza

TABLE 7
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
September 2007 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-701	SC-701-WDR-115	David Chaney	9/5/2007	3:10:00 PM	TLI	EPA 200.8	MO	9/27/2007	Michel Mendoza
					TLI	EPA 200.8	CU	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	CO	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	BE	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	BA	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	AS	9/25/2007	Michel Mendoza
					TLI	EPA 200.8	V	9/25/2007	Michel Mendoza
					TLI	EPA 218.6	CR6	9/6/2007	Jean Paul Gleeson
					TLI	EPA 245.1	HG	9/20/2007	Stanley Hsieh
					TLI	EPA 300.0	FL	9/6/2007	Giawad Ghenniwa
					TLI	SM2540C	TDS	9/6/2007	Tina Acquiat
					TLI	SM4500-HB	PH	9/6/2007	Tina Acquiat
Phase Seperator	SC-Sludge-WDR-115	David Chaney	9/5/2007	3:41:00 PM	TLI	EPA 300.0	FL	9/10/2007	Giawad Ghenniwa
					TLI	EPA 6010B	V	9/11/2007	Daisy Duyan
					TLI	EPA 6010B	BE	9/11/2007	Daisy Duyan
					TLI	EPA 6010B	CO	9/11/2007	Daisy Duyan
					TLI	EPA 7471A	HG	9/18/2007	Stanley Hsieh
					TLI	SM2540B	MOIST	9/10/2007	Gautam Savani
					TLI	SW 6020A	CU	10/3/2007	Michel Mendoza
					TLI	SW 6020A	ZN	10/4/2007	Michel Mendoza
					TLI	SW 6020A	TL	9/7/2007	Michel Mendoza
					TLI	SW 6020A	SE	9/7/2007	Michel Mendoza
					TLI	SW 6020A	SB	9/11/2007	Michel Mendoza
					TLI	SW 6020A	PB	9/7/2007	Michel Mendoza
					TLI	SW 6020A	MO	9/7/2007	Michel Mendoza
					TLI	SW 6020A	CR	10/3/2007	Michel Mendoza
					TLI	SW 6020A	CD	9/7/2007	Michel Mendoza
					TLI	SW 6020A	BA	10/3/2007	Michel Mendoza
					TLI	SW 6020A	AS	10/3/2007	Michel Mendoza
					TLI	SW 6020A	AG	9/7/2007	Michel Mendoza
					TLI	SW 6020A	NI	10/3/2007	Michel Mendoza
					TLI	SW 7199	CR6	9/20/2007	David Blackburn

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.

TLI = Truesdail Laboratories, Inc.
STL = Severn Trent Laboratories, Inc.
MBC = MBC Applied Environmental Sciences

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

Figures

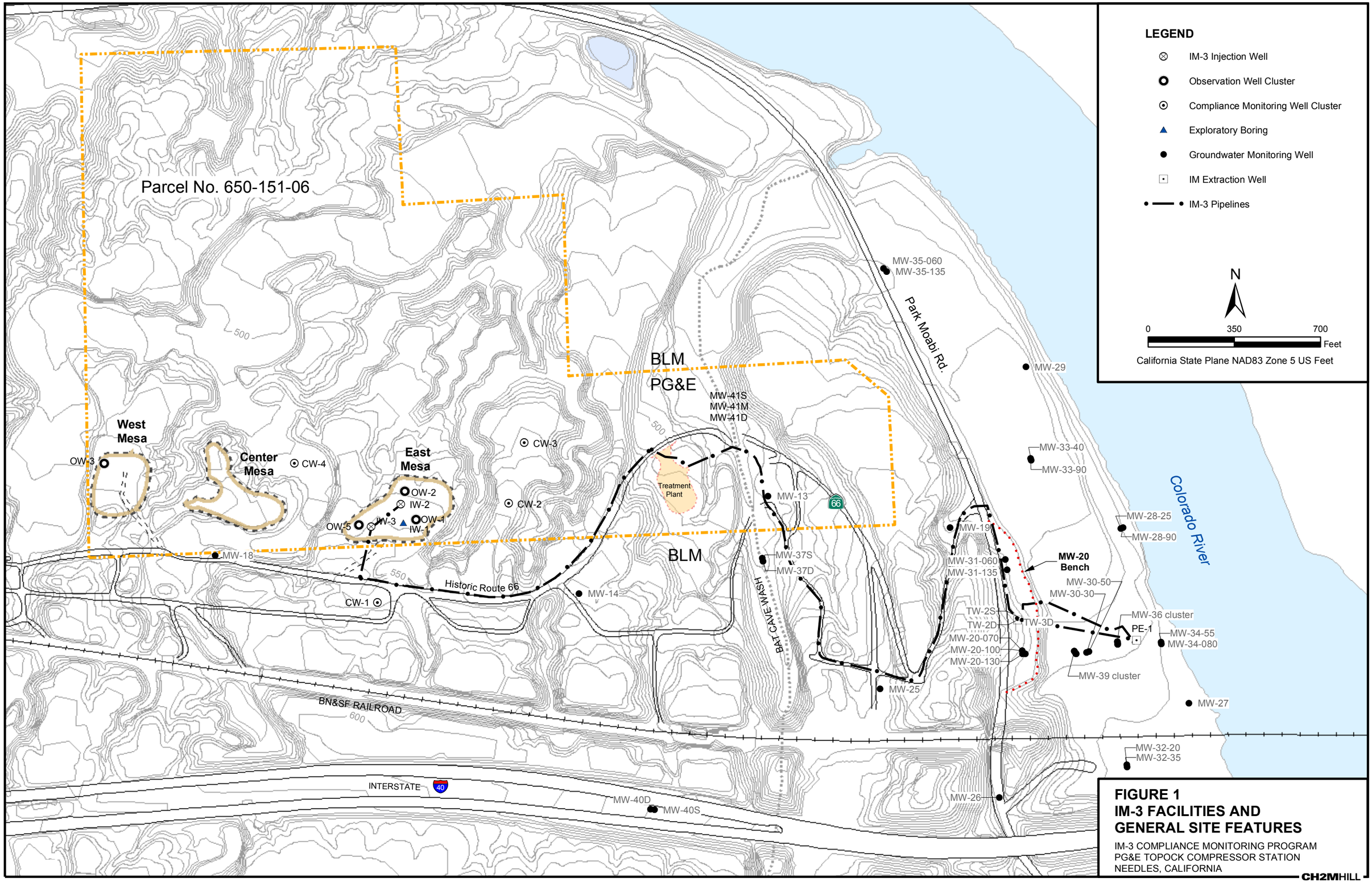


FIGURE 1
IM-3 FACILITIES AND GENERAL SITE FEATURES

IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

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

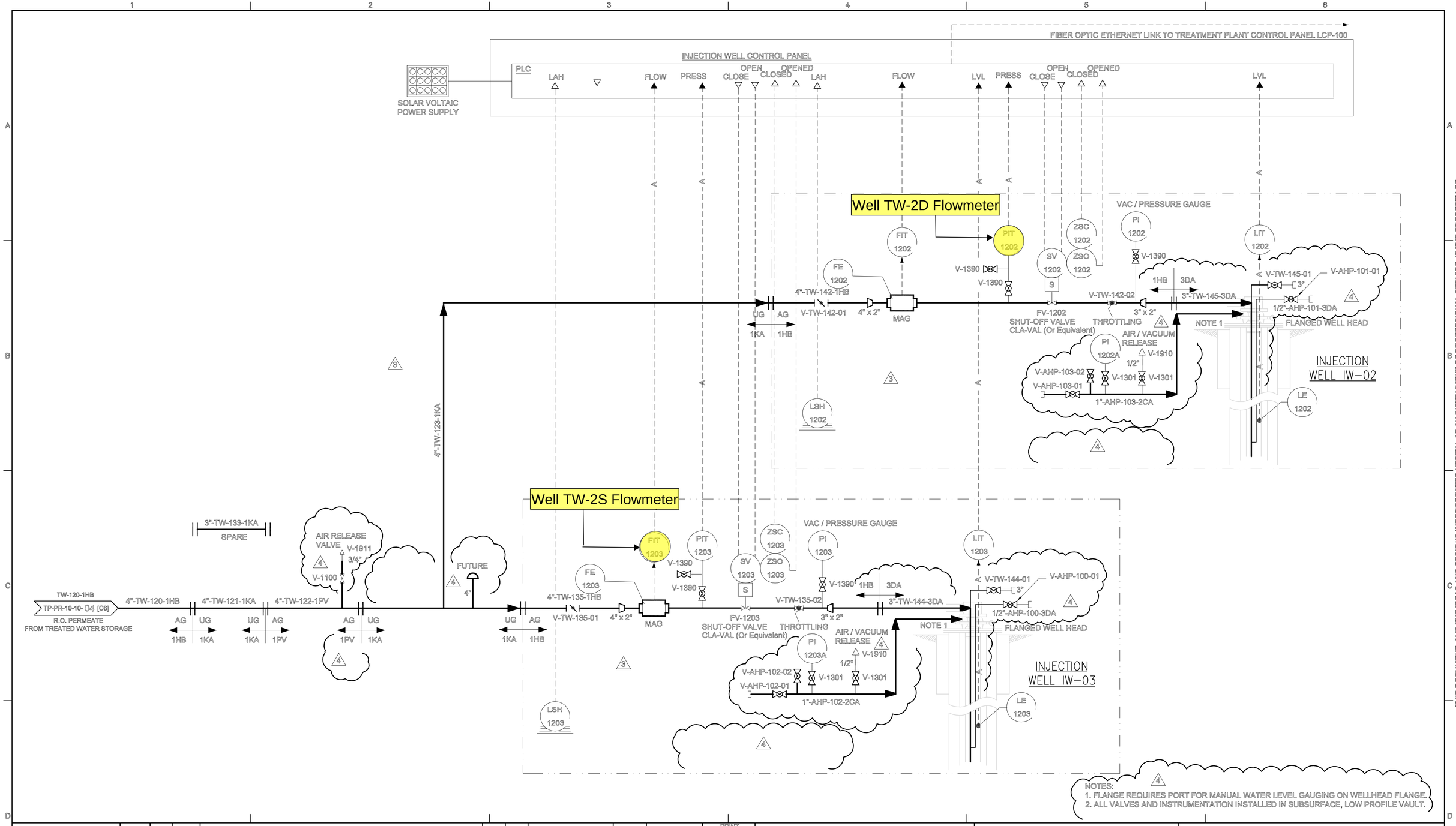
CH2MHILL

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
tppr101003.dwg 12/07/2005 01:06:58 PM

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



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

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

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

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

SCALE NONE

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

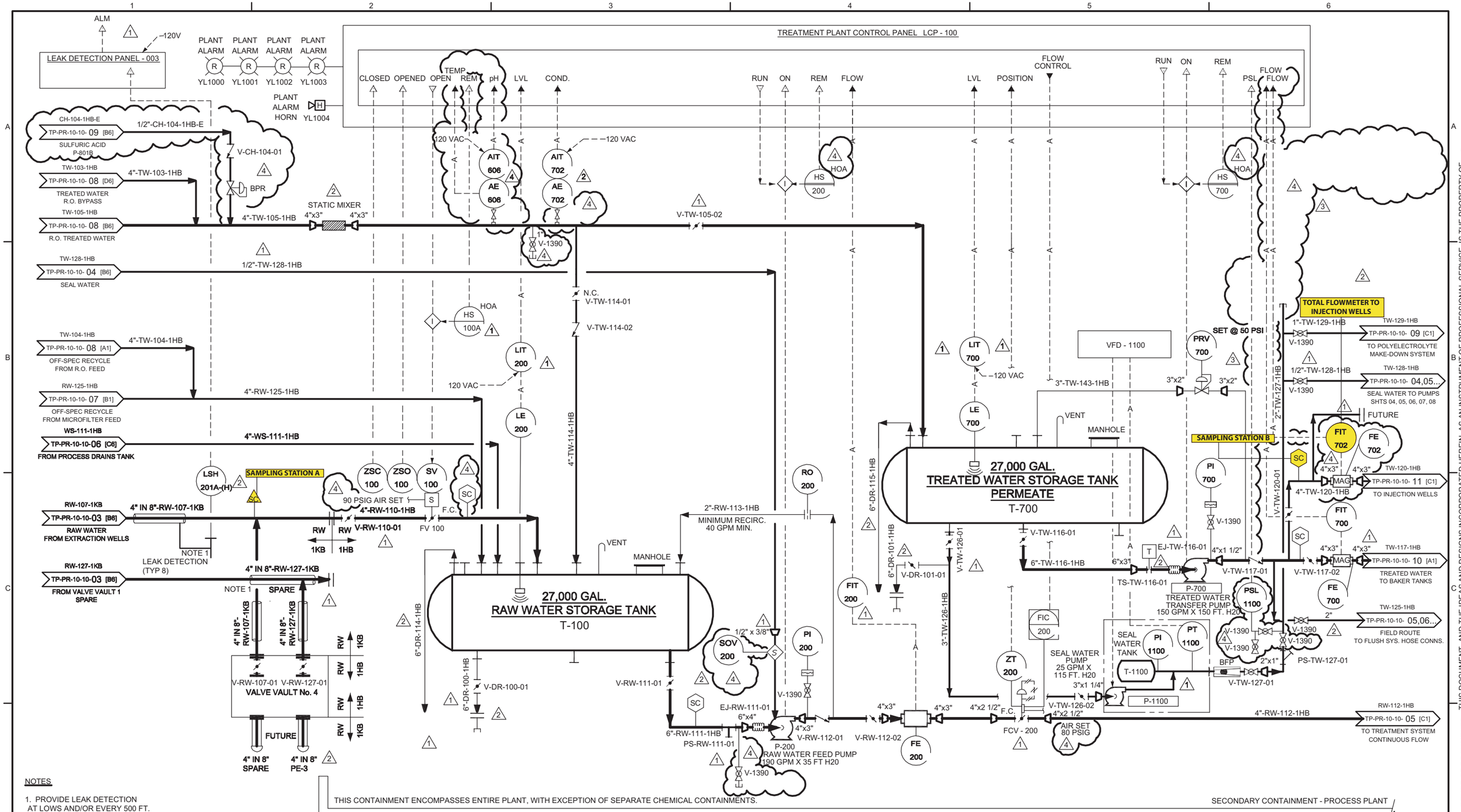
CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 11
INJECTION WELLS

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

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

BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"



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

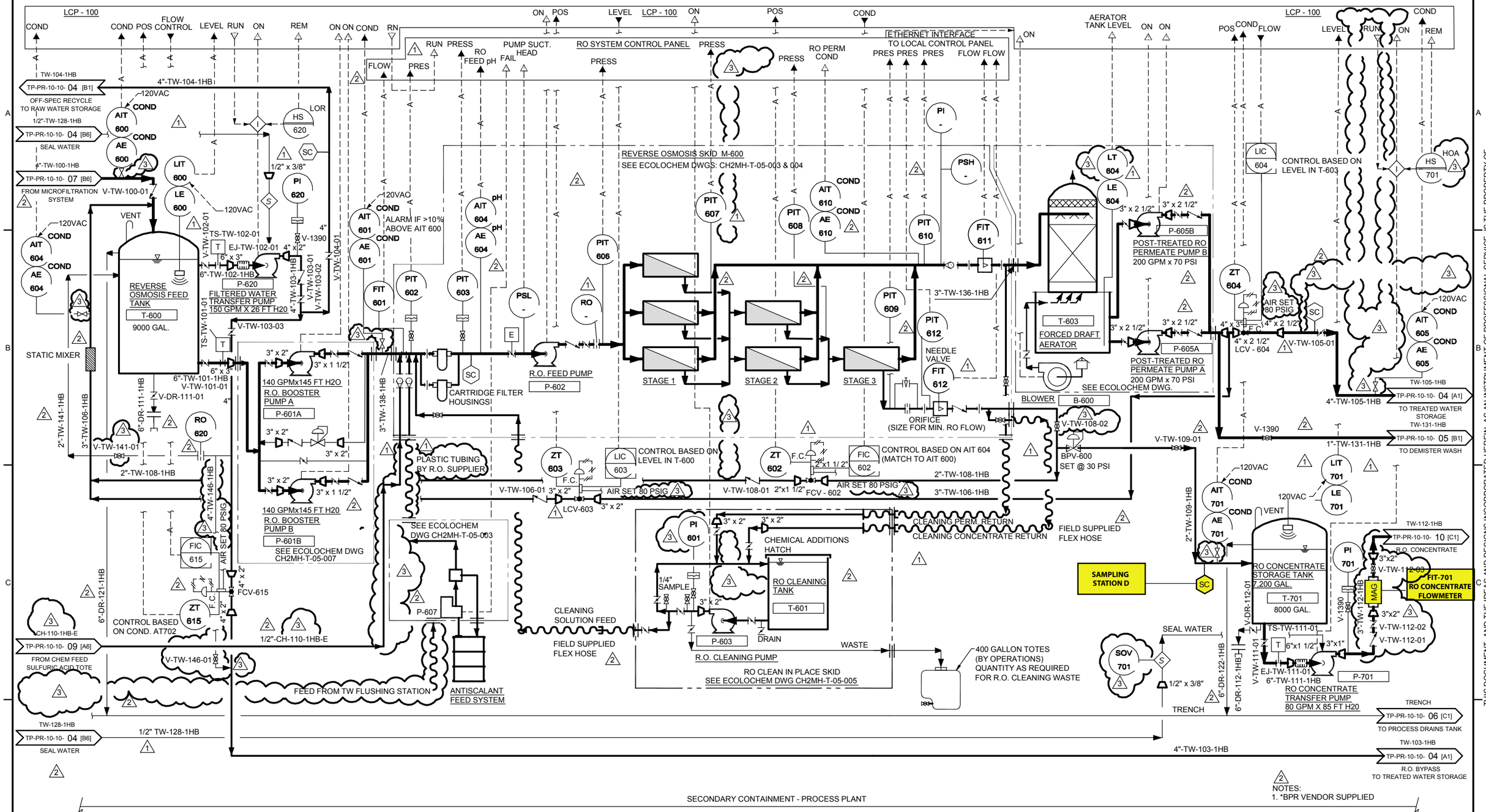
CH2MHILL

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

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

BAR IS ONE INCH ON ORIGINAL DRAWING

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
September 2007 Laboratory Analytical Reports

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

October 5, 2007

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-115 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 969288

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-115 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 5, 2007, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Total Chromium for sample SC-100B-WDR-115 was reanalyzed due to discrepancy between the Total Chromium and Hexavalent Chromium results. The result from the reanalysis is reported.

Sample SC-Sludge-WDR-115 is being reported on a separate SDG per Mr. Shawn Duffy's request.

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.

Sean Condon

for Mona Nassimi
Manager, Analytical Services

Ali Khaneja

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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 4500-H B	pH	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 5310C	Total Organic Carbon	Hope Trinidad
SM2130B	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	Daisy Duyan
EPA 200.8	Metals by ICP/MS	Michel Mendoza
EPA 245.1	Mercury	Stanley Hsieh
EPA 218.6	Hexavalent Chromium	Jean Paul Gleeson

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 6, 2007
Analytical Batch: 09PH07C

Investigation: pH by SM 4500-H B

Analytical Results pH

TLI I.D.	Field I.D.	Run Time	Units	MDL	RL	Results
969288-1	SC-100B-WDR-115	09:50	pH Units	0.0700	2.00	7.53
969288-2	SC-700B-WDR-115	09:55	pH Units	0.0700	2.00	8.08
969288-3	SC-701-WDR-115	10:00	pH Units	0.0700	2.00	7.84

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	969288-3	7.84	7.84	0.00	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.04	7.00	0.04	± 0.100 Units	Yes
LCS #1	7.05	7.00	0.05	± 0.100 Units	Yes
LCS #2	7.05	7.00	0.05	± 0.100 Units	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Conlon
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.: 969288

Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 6, 2007
Analytical Batch: 09EC07C

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
969288-1	SC-100B-WDR-115	µmhos/cm	EPA 120.1	1.00	2.00	7180
969288-2	SC-700B-WDR-115	µmhos/cm	EPA 120.1	1.00	2.00	6510
969288-3	SC-701-WDR-115	µmhos/cm	EPA 120.1	1.00	2.00	28900

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969288-3	28900	28900	0.00%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
CCS	683	706	96.7%	90% - 110%	Yes
CVS#1	960	999	96.1%	90% - 110%	Yes
CVS#2	961	999	96.2%	90% - 110%	Yes
LCS	682	706	96.6%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 6, 2007
Analytical Batch: 09TDS07B

Investigation: Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
969288-1	SC-100B-WDR-115	mg/L	SM 2540C	250	4620
969288-2	SC-700B-WDR-115	mg/L	SM 2540C	250	4170
969288-3	SC-701-WDR-115	mg/L	SM 2540C	500	22000

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	969289-2	4940	4980	0.40%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	495	500	99.0%	90% - 110%	Yes
LCS 2	495	500	99.0%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Sean Condon
Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 6, 2007
Analytical Batch: 09TUC07F

Investigation: **Turbidity by Method SM2130B**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
969288-1	SC-100B-WDR-115	15:10	NTU	1.00	0.100	0.118
969288-2	SC-700B-WDR-115	15:10	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	969280-29	ND	ND	0.00%	< 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	7.52	8.00	94.0%	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.

Sean Condon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00
Prep. Batch: 09CrH07B

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 5 - 6, 2007
Analytical Batch: 09CrH07B

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
969288-1	SC-100B-WDR-115	15:10	22:43	mg/L	100	0.0200	1.63
969288-2	SC-700B-WDR-115	15:10	04:40	mg/L	1.05	0.00020	ND
969288-3	SC-701-WDR-115	15:10	07:06	mg/L	5.00	0.0010	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969288-1	1.63	1.63	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	969288-1	1.63	100	0.0200	2.00	3.56	3.63	96.5%	90-110%	Yes
MS	969288-2	0.00	1.06	0.00100	0.00106	0.00109	0.00106	103%	90-110%	Yes
MS	969288-3	0.00	1.06	0.00100	0.00106	0.00	0.00106	0.00%	90-110%	No
MS	969288-3	0.00	5.00	0.00100	0.00500	0.00501	0.00500	100%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00500	0.00500	100%	90% - 110%	Yes
MRCVS#1	0.0101	0.0100	101%	95% - 105%	Yes
MRCVS#2	0.0102	0.0100	102%	95% - 105%	Yes
MRCVS#3	0.0102	0.0100	102%	95% - 105%	Yes
MRCVS#4	0.0102	0.0100	102%	95% - 105%	Yes
MRCVS#5	0.0101	0.0100	101%	95% - 105%	Yes
LCS	0.00499	0.00500	99.8%	90% - 110%	Yes
LCSD	0.00500	0.00500	100%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 10, 2007
Analytical Batch: 09NH3-E07B

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
969288-1	SC-100B-WDR-115	15:10	SM 4500-NH3 D	mg/L	1.00	0.500	ND
969288-2	SC-700B-WDR-115	15:10	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	969304-1	7.91	8.15	2.99%	≤ 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	969304-1	7.91	1.00	6.00	6.00	13.6	13.9	94.8%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	10.8	10.0	108%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Sean Conlon
Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 6, 2007
Analytical Batch: 09AN07C

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
969288-1	SC-100B-WDR-115	15:10	11:36	mg/L	5.00	0.500	2.86
969288-2	SC-700B-WDR-115	15:10	11:47	mg/L	5.00	0.500	2.28
969288-3	SC-701-WDR-115	15:10	11:59	mg/L	5.00	0.500	12.8

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969227-1	0.608	0.688	12.3%	≤ 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	969227-1	0.608	1.00	2.00	2.00	2.76	2.61	108%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	4.17	4.00	104%	90% - 110%	Yes
MRCVS#1	3.13	3.00	104%	90% - 110%	Yes
MRCVS#2	3.11	3.00	104%	90% - 110%	Yes
LCS	4.18	4.00	105%	90% - 110%	Yes
LCSD	4.16	4.00	104%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 6, 2007
Analytical Batch: 09AN07C

Investigation: **Sulfate by Method EPA 300.0**

Analytical Results Sulfate

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
969288-1	SC-100B-WDR-115	15:10	13:19	mg/L	50.0	25.0	597
969288-2	SC-700B-WDR-115	15:10	13:30	mg/L	100	50.0	492

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969227-2	220	221	0.45%	≤ 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	969227-2	220	100	4.00	400	617	620	99.3%	85-115%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	20.0	20.0	100%	90% - 110%	Yes
MRCVS#1	15.1	15.0	101%	90% - 110%	Yes
MRCVS#2	15.0	15.0	100%	90% - 110%	Yes
MRCVS#3	15.0	15.0	100%	90% - 110%	Yes
MRCVS#4	15.0	15.0	100%	90% - 110%	Yes
LCS	20.0	20.0	100%	90% - 110%	Yes
LCSD	20.0	20.0	100%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Conlon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 6, 2007
Analytical Batch: 09AN07C

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
969288-1	SC-100B-WDR-115	15:10	11:36	mg/L	5.00	1.00	3.30
969288-2	SC-700B-WDR-115	15:10	11:47	mg/L	5.00	1.00	2.95

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969279-1	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	969279-1	0.00	1.00	2.00	2.00	2.09	2.00	105%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	4.03	4.00	101%	90% - 110%	Yes
MRCVS#1	3.01	3.00	100%	90% - 110%	Yes
MRCVS#2	2.98	3.00	99.3%	90% - 110%	Yes
MRCVS#3	2.98	3.00	99.3%	90% - 110%	Yes
LCS	4.02	4.00	101%	90% - 110%	Yes
LCSD	4.02	4.00	101%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 7, 2007
Analytical Batch: 09NO207D

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
969288-1	SC-100B-WDR-115	15:10	10:27	mg/L	1.00	0.0050	ND
969288-2	SC-700B-WDR-115	15:10	10:28	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	969288-2	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	969288-2	0.00	1.00	0.0200	0.0200	0.0192	0.0200	96.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0225	0.0230	97.8%	90% - 110%	Yes
MRCVS#1	0.0201	0.0200	101%	90% - 110%	Yes
LCS	0.0291	0.0290	100%	90% - 110%	Yes
LCSD	0.0293	0.029	101%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Conlon

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 7, 2007
Analytical Batch: 09TOC07B

Investigation: Total Organic Carbon using SM 5310C

Analytical Results Total Organic Carbon

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
969288-1	SC-100B-WDR-115	15:10	18:01	mg/L	1.00	0.300	0.519

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969277	3.77	3.84	1.84%	≤ 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	969277	3.77	1.00	10.0	10.0	12.6	13.8	88.3%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	9.49	10.0	94.9%	90% - 110%	Yes
MRCVS#1	9.40	10.0	94.0%	90% - 110%	Yes
MRCVS#2	9.25	10.0	92.5%	90% - 110%	Yes
LCS	18.5	20.0	92.5%	90% - 110%	Yes
LCSD	18.4	20.0	92.0%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00
Prep. Batch: 092707B

Laboratory No.: 969288
Date: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 27, 2007
Analytical Batch: 092707B
Revision1

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

Analytical Results Total Dissolved Manganese

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
969288-1	SC-100B-WDR-115	15:10	11:20	mg/L	1.00	0.0010	0.0014

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969902-2	0.0457	0.0457	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	969902-2	0.0457	1.00	0.0500	0.0500	0.101	0.0957	111%	70-130%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0496	0.0500	99.2%	95% - 105%	Yes
MRCVS#1	0.0502	0.0500	100%	90% - 110%	Yes
MRCVS#2	0.0479	0.0500	95.8%	90% - 110%	Yes
ICS	0.0514	0.0500	103%	80% - 120%	Yes
LCS	0.0483	0.0500	96.6%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

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

Samples: Three (3) Groundwaters
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00
Investigation: Total Metal Analyses as Requested

Laboratory No.: 969288
Reported: October 5, 2007
Collected: September 5, 2007
Received: September 5, 2007
Analyzed: Sep 18 - Oct 5, 2007
Revision1

Analytical Results

SAMPLE ID: SC-100B-WDR-115 **Time Collected:** 15:10 **LAB ID:** 969288-1

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	1.00	mg/L	0.0500	092807A	09/28/07	12:02
Antimony	EPA 200.8	ND	1.00	mg/L	0.0030	092507A	09/25/07	11:20
Arsenic	EPA 200.8	ND	1.00	mg/L	0.0050	092507A	09/25/07	11:20
Barium	EPA 200.8	ND	1.00	mg/L	0.300	092507A	09/25/07	11:20
Chromium	EPA 200.8	1.54	10.0	mg/L	0.0020	100507A	10/05/07	12:21
Copper	EPA 200.8	ND	1.00	mg/L	0.0100	092507A	09/25/07	11:20
Lead	EPA 200.8	ND	1.00	mg/L	0.0020	092507A	09/25/07	11:20
Manganese	EPA 200.8	0.0014	1.00	mg/L	0.0010	092507A	09/25/07	11:20
Molybdenum	EPA 200.8	0.0200	1.00	mg/L	0.0050	092707A	09/27/07	15:46
Nickel	EPA 200.8	ND	1.00	mg/L	0.0200	092507A	09/25/07	11:20
Zinc	EPA 200.8	ND	1.00	mg/L	0.0200	092507A	09/25/07	11:20
Boron	EPA 200.7	1.26	1.00	mg/L	0.200	091807A	09/18/07	15:26
Iron	EPA 200.7	0.0292	1.00	mg/L	0.0200	091807A	09/18/07	15:26

SAMPLE ID: SC-700B-WDR-115 **Time Collected:** 15:10 **LAB ID:** 969288-2

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.8	ND	1.00	mg/L	0.0500	092807A	09/28/07	12:27
Antimony	EPA 200.8	ND	1.00	mg/L	0.0030	092507A	09/25/07	11:26
Arsenic	EPA 200.8	ND	1.00	mg/L	0.0050	092507A	09/25/07	11:26
Barium	EPA 200.8	ND	1.00	mg/L	0.300	092507A	09/25/07	11:26
Chromium	EPA 200.8	ND	1.00	mg/L	0.0010	092507A	09/25/07	11:26
Copper	EPA 200.8	ND	1.00	mg/L	0.0100	092507A	09/25/07	11:26
Lead	EPA 200.8	ND	1.00	mg/L	0.0020	092507A	09/25/07	11:26
Manganese	EPA 200.8	0.0357	1.00	mg/L	0.0010	092507A	09/25/07	11:26
Molybdenum	EPA 200.8	0.0153	1.00	mg/L	0.0050	092707A	09/27/07	15:52
Nickel	EPA 200.8	ND	1.00	mg/L	0.0200	092507A	09/25/07	11:26
Zinc	EPA 200.8	ND	1.00	mg/L	0.0200	092507A	09/25/07	11:26
Boron	EPA 200.7	1.28	1.00	mg/L	0.200	091807A	09/18/07	15:30
Iron	EPA 200.7	ND	1.00	mg/L	0.0200	091807A	09/18/07	15:30

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

SAMPLE ID: SC-701-WDR-115 **Time Collected:** 15:10 **LAB ID:** 969288-3

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Antimony	EPA 200.8	ND	1.00	mg/L	0.0030	092507A	09/25/07	12:03
Arsenic	EPA 200.8	ND	1.00	mg/L	0.0050	092507A	09/25/07	12:03
Barium	EPA 200.8	ND	1.00	mg/L	0.300	092507A	09/25/07	12:03
Beryllium	EPA 200.8	ND	1.00	mg/L	0.0010	092507A	09/25/07	12:03
Cadmium	EPA 200.8	ND	1.00	mg/L	0.0020	092507A	09/25/07	12:03
Chromium	EPA 200.8	0.0013	1.00	mg/L	0.0010	092507A	09/25/07	12:03
Cobalt	EPA 200.8	ND	1.00	mg/L	0.0050	092507A	09/25/07	12:03
Copper	EPA 200.8	ND	1.00	mg/L	0.0100	092507A	09/25/07	12:03
Lead	EPA 200.8	ND	1.00	mg/L	0.0020	092507A	09/25/07	12:03
Mercury	EPA 245.1	ND	1.00	mg/L	0.00020	09HG07Aa	09/20/07	22:21
Molybdenum	EPA 200.8	0.0907	1.00	mg/L	0.0050	092707A	09/27/07	15:59
Nickel	EPA 200.8	ND	1.00	mg/L	0.0200	092507A	09/25/07	12:03
Selenium	EPA 200.8	0.0116	1.00	mg/L	0.0050	092507A	09/25/07	12:03
Silver	EPA 200.8	0.0078	1.00	mg/L	0.0050	092507A	09/25/07	12:03
Thallium	EPA 200.8	ND	1.00	mg/L	0.0010	092507A	09/25/07	12:03
Vanadium	EPA 200.8	ND	1.00	mg/L	0.0050	092507A	09/25/07	12:03
Zinc	EPA 200.8	ND	1.00	mg/L	0.0200	092507A	09/25/07	12:03

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon
f.r. Mona Nassimi, Manager
Analytical Services

969288

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-115]

Rec'd 09/05/07
969288

COC Number

TURNAROUND TIME 10 Days

DATE 9-5-07 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 358342.TM.02.00 TEAM 1

SAMPLERS (SIGNATURE [signature]

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Al,As,Ba,B,Cr,Cu,Pb,Mn,Mo,Ni,Sb,Fe,Zn	Manganese (200.7) Field Filtered Mn	Total Metals (200.7) Title 22, Mercury	Specific Conductance (120.1)	TDS (SM2540C)	PH (SM4500HB)	Anions (300.0) Fl	Anions (300.0) Fl, SO4, NO2, NO3	Cr6 (7199)	Metals (6010B) Title 22, Mercury	Turbidity (SM2130)	Ammonia (SM4500NH3)	TOC (SM5310C)	NUMBER OF CONTAINERS	COMMENTS
-1	SC-100B-WDR-115	9-5-07	1510	Water	x	x	x		x	x	x		x			x	x	x	[illegible]	pH=2
-2	SC-700B-WDR-115	9-5-07	1510	Water	x	x			x	x	x		x			x	x		5	pH=2
-3	SC-701-WDR-115	9-5-07	1510	Water	x			x	x	x	x	x							4	pH=2
-4	SC-Sludge-WDR-115	9-5-07	1541	Sludge								x		x	x				4	~~pH~~ (DS)
																			[illegible]	TOTAL NUMBER OF CONTAINERS

For Sample Conditions See Form Attached

ALERT !!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) [signature]	Printed Name David Chan	Company/ Agency CH2M Hill OMI	Date/ Time 9-5-07 1555
Signature (Received) Rafael Davila	Printed Name Rafael	Company/ Agency T-L-I	Date/ Time 9-5-07 3:55
Signature (Relinquished) Rafael Davila	Printed Name Rafael	Company/ Agency T-L-I	Date/ Time 9-5-07 20:30
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 ☐ ____ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

September 24, 2007

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-116 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 969524

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-116 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, pH, Total Dissolved Solids, and Total Organic Carbon. 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 12, 2007, 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 requested to change the project name from IM3Plant-WDR-114 to IM3Plant-WDR-116, the sample I.D from SC-100B-WDR-114 to SC-100B-WDR-116 and from SC-700B-WDR-114 to SC-700B-WDR-116 as on chain of custody.

Due to the large number of samples in-house, the sample for Total Dissolved Chromium analysis was analyzed by method EPA 200.8, rather than EPA 200.7 as requested 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.

Sean Condon

for, Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00

Laboratory No.: 969624
Date: September 24, 2007
Collected: September 12, 2007
Received: September 12, 2007
Revision1

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 4500-H B	pH	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM2130B	Turbidity	Gautam Savani
SM 5310C	Total Organic Carbon	Hope Trinidad
EPA 200.8	Total Chromium	Michel Mendoza
EPA 218.6	Hexavalent Chromium	Jean-Paul Gleeson

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969524
Date: September 24, 2007
Collected: September 12, 2007
Received: September 12, 2007
Prep/ Analyzed: September 13, 2007
Analytical Batch: 09PH07K

Investigation: pH by SM 4500-H B

Analytical Results pH

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	MDL	RL	Results
969524-2	SC-700B-WDR-116	13:35	10:16	pH Units	0.0570	2.00	8.20

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	969524-2	8.20	8.20	0.00	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.04	7.00	0.04	± 0.100 Units	Yes
LCS #1	7.04	7.00	0.04	± 0.100 Units	Yes
LCS #2	7.05	7.00	0.05	± 0.100 Units	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969524
Date: September 24, 2007
Collected: September 12, 2007
Received: September 12, 2007
Prep/ Analyzed: September 13, 2007
Analytical Batch: 09TUC07I
Revision1

Investigation: **Turbidity by Method SM2130B**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
969524-2	SC-700B-WDR-116	13:35	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	969509-18	0.103	0.104	0.97%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	8.13	8.00	102%	90% - 110%	Yes
LCS	8.10	8.00	101%	90% - 110%	Yes
LCS	8.00	8.00	100%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969524
Date: September 24, 2007
Collected: September 12, 2007
Received: September 12, 2007
Prep/ Analyzed: September 13, 2007
Analytical Batch: 09TDS07F

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
969524-2	SC-700B-WDR-116	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	969524-2	4310	4250	0.70%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	499	500	99.8%	90% - 110%	Yes
LCS 2	501	500	100%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon
for- Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969524
Date: September 24, 2007
Collected: September 12, 2007
Received: September 12, 2007
Prep/ Analyzed: September 13, 2007
Analytical Batch: 09EC07G

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
969524-2	SC-700B-WDR-116	µmhos/cm	EPA 120.1	1.00	2.00	6920

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969477-10	936	936	0.00%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
CCS	687	706	97.3%	90% - 110%	Yes
CVS#1	940	999	94.1%	90% - 110%	Yes
CVS#2	935	999	93.6%	90% - 110%	Yes
LCS	687	706	97.3%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00
Prep. Batch: 09TOC07D

Laboratory No.: 969524

Date: September 24, 2007
Collected: September 12, 2007
Received: September 12, 2007
Prep/ Analyzed: September 14, 2007
Analytical Batch: 09TOC07D

Investigation: Total Organic Carbon by SM 5310C

Analytical Results Total Organic Carbon

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
969524-1	SC-100B-WDR-116	mg/L	SM 5310C	15:49	1.00	0.300	0.468

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969524-1	0.468	0.458	2.16%	≤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	969517	4.73	1.00	20.0	20.0	22.2	24.7	87.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	9.46	10.0	94.6%	90% - 110%	No
MRCVS#1	9.31	10.0	93.1%	90% - 110%	Yes
MRCVS#2	9.26	10.0	92.6%	90% - 110%	Yes
LCS	18.9	20.0	94.5%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

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.: 969524

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Date: September 24, 2007
Collected: September 12, 2007
Received: September 12, 2007
Prep/ Analyzed: September 13, 2007
Analytical Batch: 09CrH07L

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
969524-2	SC-700B-WDR-116	13:35	08:04	mg/L	1.05	0.00020	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969524-2	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	969524-2	0.00	1.06	0.00100	0.00106	0.000998	0.00106	94.2%	90-110%	Yes
MS	969524-2	0.00	1.06	0.00100	0.00106	0.000982	0.00106	92.6%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00477	0.00500	95.4%	90% - 110%	Yes
MRCVS#1	0.00966	0.0100	96.6%	95% - 105%	Yes
LCS	0.00472	0.00500	94.4%	90% - 110%	Yes
LCSD	0.00477	0.00500	95.4%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

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.: 969524

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00
Prep. Batch: 091307A

Date: September 24, 2007
Collected: September 12, 2007
Received: September 12, 2007
Prep/ Analyzed: September 13, 2007
Analytical Batch: 091307A

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
969524-2	SC-700B-WDR-116	mg/L	EPA 200.7	15:10	1.00	0.0010	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	968953-16	0.00522	0.00531	1.71%	≤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	968953-16	0.00522	1.00	0.0500	0.0500	0.0468	0.0552	83.2%	70-130%	Yes
MSD	968953-16	0.00522	1.00	0.0500	0.0500	0.0478	0.0552	85.2%	70-130%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0475	0.0500	95.0%	90% - 110%	Yes
MRCVS#1	0.0462	0.0500	92.4%	90% - 110%	Yes
ICS	0.0484	0.0500	96.8%	80% - 120%	Yes
LCS	0.0473	0.0500	94.6%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Conder

for Mona Nassimi, Manager
Analytical Services

969524

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-11/16

COC Number

TURNAROUND TIME 5 Days

DATE 9-12-07 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 358342.TM.02.00 TEAM 1

SAMPLERS (SIGNATURE David Chay

Rec'd 09/12/07
Lab.# 969524

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	PH (SM4500H8)	Turbidity (SM2130)	TOC (SM5310C)	NUMBER OF CONTAINERS	COMMENTS
-1	SC-100B-WDR-11/16	9-12-07	13:30	Water							x	3	
-2	SC-700B-WDR-11/16	9-12-07	13:35	Water	x	x	x	x	x	x		3	pH=2
												6	TOTAL NUMBER OF CONTAINERS

For Sample Conditions See Form Attached

ALERT !!
Level III QC

RUSH

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished) David Chay	David Chay	CH2MHill OMI	~~9-12-07~~ 9-12-07 15:34
Signature (Received) Hipolito Loy	Hipolito	TLI	9/12/07 15:34
Signature (Relinquished)			
Signature (Received)	David S	TLI	9/12/07 2230
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

Established 1931

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

September 28, 2007

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-117PROJECT, GROUNDWATER MONITORING,

TLI NO.: 969722

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-117 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, pH, Total Dissolved Solids, and Total Organic Carbon. 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 19, 2007, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal..

Due to the large number of samples in-house, the sample for Total Dissolved Chromium analysis was analyzed by method EPA 200.8, rather than EPA 200.7 as requested 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.

Sean Conlon

for Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00

Laboratory No.: 969722
Date: September 28, 2007
Collected: September 19, 2007
Received: September 19, 2007
Revision1

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 4500-H B	pH	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM2130B	Turbidity	Gautam Savani
SM 5310C	Total Organic Carbon	Hope Trinidad
EPA 200.8	Total Chromium	Michel Mendoza
EPA 218.6	Hexavalent Chromium	Jean-Paul Gleeson

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969722
Date: September 28, 2007
Collected: September 19, 2007
Received: September 19, 2007
Prep/ Analyzed: September 20, 2007
Analytical Batch: 09EC07L

Investigation: **Specific Conductivity by EPA 120.1**

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
969722-2	SC-700B-WDR-117	µmhos/cm	EPA 120.1	1.00	2.00	7020

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969722-2	7020	7020	0.00%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
CCS	688	706	97.5%	90% - 110%	Yes
CVS#1	957	998	95.9%	90% - 110%	Yes
LCS	687	706	97.3%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Conlon

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969722
Date: September 28, 2007
Collected: September 19, 2007
Received: September 19, 2007
Prep/ Analyzed: September 20, 2007
Analytical Batch: 09PH07Q

Investigation: pH by SM 4500-H B

Analytical Results pH

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	MDL	RL	Results
969722-2	SC-700B-WDR-117	10:50	08:34	pH Units	0.0570	2.00	8.16

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	969722-2	8.16	8.16	0.00	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.04	7.00	0.04	± 0.100 Units	Yes
LCS #1	7.03	7.00	0.03	± 0.100 Units	Yes
LCS #2	7.03	7.00	0.03	± 0.100 Units	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Conlon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969722
Date: September 28, 2007
Collected: September 19, 2007
Received: September 19, 2007
Prep/ Analyzed: September 24, 2007
Analytical Batch: 09TDS07L

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
969722-2	SC-700B-WDR-117	mg/L	SM 2540C	250	4530

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	969722-2	4530	4450	0.89%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	502	500	100%	90% - 110%	Yes
LCS 2	499	500	99.8%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon
for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969722
Date: September 28, 2007
Collected: September 19, 2007
Received: September 19, 2007
Prep/ Analyzed: September 19, 2007
Analytical Batch: 09TUC07O
Revision1

Investigation: **Turbidity by Method SM2130B**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
969722-2	SC-700B-WDR-117	10:50	NTU	1.00	0.100	0.165

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969715-20	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	8.25	8.00	103%	90% - 110%	Yes
LCS	7.82	8.00	97.8%	90% - 110%	Yes
LCS	7.70	8.00	96.3%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00
Prep. Batch: 09TOC07E

Laboratory No.: 969722
Date: September 28, 2007
Collected: September 19, 2007
Received: September 19, 2007
Prep/ Analyzed: September 24, 2007
Analytical Batch: 09TOC07E

Investigation: Total Organic Carbon by SM 5310C

Analytical Results Total Organic Carbon

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
969722-1	SC-100B-WDR-117	mg/L	SM 5310C	16:03	1.00	0.300	0.528

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969722-1	0.528	0.526	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	969705	3.87	1.00	10.0	10.0	12.9	13.9	90.3%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	9.64	10.0	96.4%	90% - 110%	Yes
MRCVS#1	9.38	10.0	93.8%	90% - 110%	Yes
LCS	19.2	20.0	96.0%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Coulter

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.: 969722

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Date: September 28, 2007
Collected: September 19, 2007
Received: September 19, 2007
Prep/ Analyzed: September 20, 2007
Analytical Batch: 09CrH07R

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
969722-2	SC-700B-WDR-117	10:50	07:26	mg/L	5.00	0.0010	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969722-1	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	969722-1	0.00	1.06	0.00100	0.00106	0.000897	0.00106	84.6%	90-110%	No
MS	969722-1	0.00	5.00	0.00100	0.00500	0.00462	0.00500	92.4%	90-110%	Yes
MS	969722-1	0.00	5.00	0.00100	0.00500	0.00470	0.00500	94.0%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00502	0.00500	100%	90% - 110%	Yes
MRCVS#1	0.00967	0.0100	96.7%	95% - 105%	Yes
LCS	0.00495	0.00500	99.0%	90% - 110%	Yes
LCSD	0.00492	0.00500	98.4%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

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.: 969722

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00
Prep. Batch: 092007A

Date: September 28, 2007
Collected: September 19, 2007
Received: September 19, 2007
Prep/ Analyzed: September 20, 2007
Analytical Batch: 092007A

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
969722-2	SC-700B-WDR-117	mg/L	EPA 200.7	18:17	1.00	0.0010	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969593-10	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	969593-10	0.00	1.00	0.0500	0.0500	0.0511	0.0500	102%	70-130%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0518	0.0500	104%	90% - 110%	Yes
MRCVS#1	0.0525	0.0500	105%	90% - 110%	Yes
MRCVS#2	0.0517	0.0500	103%	90% - 110%	Yes
ICS	0.0537	0.0500	107%	80% - 120%	Yes
LCS	0.0517	0.0500	103%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

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

969722

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-117]

COC Number

TURNAROUND TIME 10 Days

DATE 9-19-07 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	358342.TM.02.00 TEAM 1
SAMPLERS (SIGNATURE	Bonnie Pallen

Rec'd 09/19/07
Lab.# 969722

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	PH (SM4500HB)	Turbidity (SM2130)	TOC (SM5310C)	NUMBER OF CONTAINERS	COMMENTS
-1	SC-100B-WDR-117	9-19-07	10:45	Water							x	3	
-2	SC-700B-WDR-117	9-19-07	10:50	Water	x	x	x	x	x	x		3	PH-2
												6	TOTAL NUMBER OF CONTAI.

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Ron Phelps	CH2M Hill	9-19-07 3:30
Signature (Received)	Rafael Davila	T.L.I	9-19-07 3:30
Signature (Relinquished)	Rafael Davila	T.L.I	9-19-07 8:30
Signature (Received)			
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

Established 1931

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

October 3, 2007

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-118 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 969902

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-118 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, pH, Total Dissolved Solids, and Total Organic Carbon. 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 26, 2007, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal..

Due to the large number of samples in-house, the sample for Total Dissolved Chromium analysis was analyzed by method EPA 200.8, rather than EPA 200.7 as requested 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.

Ali Khasay

for Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00

Laboratory No.: 969902
Date: October 3, 2007
Collected: September 26, 2007
Received: September 26, 2007

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 4500-H B	pH	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
SM 5310C	Total Organic Carbon	Hope Trinidad
EPA 200.8	Total Chromium	Michel Mendoza
EPA 218.6	Hexavalent Chromium	Jean-Paul Gleeson

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00
Prep. Batch: 092707A

Laboratory No.: 969902
Date: October 3, 2007
Collected: September 26, 2007
Received: September 26, 2007
Prep/ Analyzed: September 27, 2007
Analytical Batch: 092707A

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
969902-2	SC-700B-WDR-118	mg/L	EPA 200.7	15:10	1.00	0.0010	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969902-2	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	969902-2	0.00	1.00	0.0500	0.0500	0.0524	0.0500	105%	70-130%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0493	0.0500	98.6%	90% - 110%	Yes
MRCVS#1	0.0496	0.0500	99.2%	90% - 110%	Yes
ICS	0.0524	0.0500	105%	80% - 120%	Yes
LCS	0.0501	0.0500	100%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

A. Khanjy

For Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969902

Date: October 3, 2007
Collected: September 26, 2007
Received: September 26, 2007
Prep/ Analyzed: September 27, 2007
Analytical Batch: 09CrH07U

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
969902-2	SC-700B-WDR-118	09:30	04:16	mg/L	1.05	0.00020	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969902-2	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	969902-2	0.00	1.06	0.00100	0.00106	0.00101	0.00106	95.3%	90-110%	Yes
MS	969902-2	0.00	1.06	0.00100	0.00106	0.000994	0.00106	93.8%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00506	0.00500	101%	90% - 110%	Yes
MRCVS#1	0.0101	0.0100	101%	95% - 105%	Yes
MRCVS#2	0.0101	0.0100	101%	95% - 105%	Yes
MRCVS#3	0.0102	0.0100	102%	95% - 105%	Yes
LCS	0.00507	0.00500	101%	90% - 110%	Yes
LCSD	0.00509	0.00500	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.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969902
Date: October 3, 2007
Collected: September 26, 2007
Received: September 26, 2007
Prep/ Analyzed: September 27, 2007
Analytical Batch: 09PH07Y

Investigation:

pH by SM 4500-H B

Analytical Results pH

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	MDL	RL	Results
969902-2	SC-700B-WDR-118	09:30	08:04	pH Units	0.0570	2.00	8.11

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	969929	7.34	7.35	0.01	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.04	7.00	0.04	± 0.100 Units	Yes
LCS #1	7.07	7.00	0.07	± 0.100 Units	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969902
Date: October 3, 2007
Collected: September 26, 2007
Received: September 26, 2007
Prep/ Analyzed: September 28, 2007
Analytical Batch: 09TDS07M

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

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
969902-2	SC-700B-WDR-118	mg/L	SM 2540C	250	4360

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	969902-2	4360	4340	0.23%	≤ 5%	Yes

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

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969902
Date: October 3, 2007
Collected: September 26, 2007
Received: September 26, 2007
Prep/ Analyzed: September 28, 2007
Analytical Batch: 09EC07N

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
969902-2	SC-700B-WDR-118	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	969902-2	7040	7040	0.00%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
CCS	688	706	97.5%	90% - 110%	Yes
CVS#1	956	998	95.8%	90% - 110%	Yes
LCS	688	706	97.5%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

For Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00

Laboratory No.: 969902
Date: October 3, 2007
Collected: September 26, 2007
Received: September 26, 2007
Prep/ Analyzed: September 27, 2007
Analytical Batch: 09TUC07S

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

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
969902-2	SC-700B-WDR-118	09:30	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	969892-19	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	8.20	8.00	103%	90% - 110%	Yes
LCS	8.00	8.00	100%	90% - 110%	Yes
LCS	8.12	8.00	102%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

A. Khanaf

For Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: Two (2) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 358342.IM.02.00
P.O. No.: 358342.IM.02.00
Prep. Batch: 10TOC07B

Laboratory No.: 969902

Date: October 3, 2007
Collected: September 26, 2007
Received: September 26, 2007
Prep/ Analyzed: October 2, 2007
Analytical Batch: 10TOC07B

Investigation: Total Organic Carbon by SM 5310C

Analytical Results Total Organic Carbon

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
969902-1	SC-100B-WDR-118	mg/L	SM 5310C	21:19	1.00	0.300	0.476

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969887	3.63	3.58	1.39%	≤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	969887	3.63	1.00	10.0	10.0	13.4	13.6	97.7%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	9.62	10.0	96.2%	90% - 110%	Yes
MRCVS#1	9.72	10.0	97.2%	90% - 110%	Yes
MRCVS#2	9.40	10.0	94.0%	90% - 110%	Yes
LCS	20.3	20.0	102%	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.
14201 Franklin Avenue, Tustin, CA 92780-7008
(714)730-6239 FAX: (714) 730-6462
www.truesdail.com

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-118]

969902
COC Number

TURNAROUND TIME 5 Days

DATE 9-26-07 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: 358342.TM.02.00 TEAM: 1
SAMPLERS (SIGNATURE): [signature]

Rec'd 09/26/07
969902

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	TDS (SM2540C)	PH (SM4500HB)	Turbidity (SM2130)	TOC (SM5310C)	NUMBER OF CONTAINERS	COMMENTS
-1	SC-100B-WDR-118	9-26-07	09:30	Water							x	3	
-2	SC-700B-WDR-118	9-26-07	09:30	Water	x	x	x	x	x	x		3	PH-2
												6	TOTAL NUMBER OF CONTAINERS

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

RUSH!

CHAIN OF CUSTODY SIGNATURE RECORD

Signature	Printed Name	Company/Agency	Date/Time
(Relinquished) [signature]	Ron Phelps	CH2M Hill OMI	9-26-07
(Received) [signature]	Al Bourey	TLI	9/26/07 3:40
(Relinquished) [signature]	Al Bourey	TLI	9/26/07 9:30
(Received) [signature]	David S	TLI	9/26/07 2130
(Relinquished)			
(Received)			

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

October 9, 2007

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-115 PROJECT, SLUDGE MONITORING,

TLI NO.: 969385

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-115 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 5, 2007, 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.

Samples SC-100B-WDR-115, SC-700B-WDR-115, and SC-701-WDR-115 were reported, per Mr. Shawn Duffy's request, on a separate report (SDG 969288).

Sample SC-Sludge-WDR-115 is reported in all raw data as Truesdail I.D. 969288-4. This sample has been reported as Truesdail I.D. 969385 in all Analytical Results Summary pages and Final Report pages. This is a result of the chain of custody being split after the samples had been analyzed.

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

Results above the reporting limit were detected in the Sand Blank (Sand Control) and/or Blank Beads for Cadmium, Copper, Lead, Molybdenum, Silver and Zinc by SW 6020.

The recoveries for the LCS and/or the LCSD for Lead by SW 6020 exceed the acceptance limits due to the elevated levels found in the sand used for the Sand Blank (as described above), LCS, and LCSD.

The recoveries for the LCS and LCSD for Antimony by SW 6020 were outside the acceptance limits (87.4% and 83.9%, respectively).

The Insoluble Matrix Spike (IMS) recovery exceeded the expected value. This may have been due to an error during the preparation of the IMS.

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.

Sean Condon

fo – Mona Nassimi
Manager, Analytical Services

K.R.P. Iyer

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

002

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00

Laboratory No.: 969385
Date: October 8, 2007
Collected: September 5, 2007
Received: September 5, 2007

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 300.0	Fluoride	Giawad Ghenniwa
SM 2540 B	Total Solids	Gautam Savani
SW 6010B	Metals by ICP	Daisy Duyan
SW 6020	Metals by ICP/MS	Michel Mendoza
SW 7471A	Mercury	Stanley Hsieh
SW 7199	Hexavalent Chromium	David Blackburn

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

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.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00
Prep. Batch: 09CrH07W

Laboratory No.: 969385
Date: October 9, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 20, 2007
Analytical Batch: 09CrH07W
Revision 1

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
969385	SC-Sludge-WDR-115	15:41	20:28	mg/kg	100	2.62	222

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969288-4	222	187	17.1%	≤ 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	969288-4	222	100	2.62	262	464	484	92.4%	85-115%	Yes
IMS	969288-4	222	500	0.00	0.00	2500	222	NA	85-115%	No

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00503	0.00500	101%	90% - 110%	Yes
3060A MRCCS	0.00952	0.0100	95.2%	90% - 110%	Yes
MRCVS#1	0.0101	0.0100	101%	90% - 110%	Yes
MRCVS#2	0.00995	0.0100	99.5%	90% - 110%	Yes
LCS	0.00969	0.0100	96.9%	90% - 110%	Yes
LCSD	0.00968	0.0100	96.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

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

Sample: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969385
Date: October 8, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 10, 2007
Analytical Batch: 09SOLID07C

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

Analytical Results Total Solids

TLI I.D.	Field I.D.	Sample Time	Units	Results
969385	SC-Sludge-WDR-115	15:41	% Moisture	69.5

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969288-4	69.5	69.9	0.57%	< 20%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sean Condon

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

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

REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969385
Date: October 8, 2007
Collected: September 5, 2007
Received: September 5, 2007
Prep/ Analyzed: September 10, 2007
Analytical Batch: 09AN07G

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
969385	SC-Sludge-WDR-115	15:41	11:57	mg/kg	20.0	6.56	61.0

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	969288-4	61.0	66.5	8.63%	≤ 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	969288-4	61.0	20.0	6.56	131	203	192	108%	85-115%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	4.18	4.00	105%	90% - 110%	Yes
MRCVS#1	3.12	3.00	104%	90% - 110%	Yes
LCS	4.17	4.00	104%	90% - 110%	Yes
LCSD	4.16	4.00	104%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Sam Condon

for Mona Nassimi, Manager
Analytical Services

TRUESDAIL LABORATORIES, INC.
INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

Established 1931

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

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

Attention: Shawn Duffy
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00

Laboratory No.: 969385
Date Received: September 5, 2007

Analytical Results Summary

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

Lab I.D.	Sample ID	Date of Analysis: / Time Coll.	Antimony SW 6020 09/11/07 mg/kg	Arsenic SW 6020 10/03/07 mg/kg	Barium SW 6020 10/03/07 mg/kg	Beryllium SW 6010B 09/11/07 mg/kg	Cadmium SW 6020 09/07/07 mg/kg	Chromium SW 6020 10/03/07 mg/kg	Cobalt SW 6010B 09/11/07 mg/kg	Copper SW 6020 10/03/07 mg/kg	Lead SW 6020 09/07/07 mg/kg
969385	SC-Sludge-WDR-115	15:41	ND	48.3	115	91.9	ND	13000	ND	47.5	2.52

Lab I.D.	Sample ID	Date of Analysis: / Time Coll.	Mercury SW 7471A 09/18/07 mg/kg	Molybdenum SW 6020 09/07/07 mg/kg	Nickel SW 6020 10/03/07 mg/kg	Selenium SW 6020 09/07/07 mg/kg	Silver SW 6020 09/07/07 mg/kg	Thallium SW 6020 09/07/07 mg/kg	Vanadium SW 6010B 09/11/07 mg/kg	Zinc SW 6020 10/04/07 mg/kg
969385	SC-Sludge-WDR-115	15:41	0.327	27.7	15.5	ND	ND	ND	70.7	66.4

NOTES:
ND: Not detected, or below limit of detection

010

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

Samples: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 358342.TM.02.00
P.O. No.: 358342.TM.02.00
Investigation: Total Metal Analyses as Requested

Laboratory No.: 969385
Reported: October 8, 2007
Collected: September 5, 2007
Received: September 5, 2007
Analyzed: September 11 - October 4, 2007

Analytical Results

SAMPLE ID: SC-Sludge-WDR-115 **Time Collected:** 15:41 **LAB ID:** 969385

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Antimony	SW 6020	ND	236	mg/kg	0.774	091107A	09/11/07	12:34
Arsenic	SW 6020	48.3	544	mg/kg	1.78	100307A	10/03/07	12:09
Barium	SW 6020	115	544	mg/kg	1.78	100307A	10/03/07	12:09
Beryllium	SW 6010B	91.9	472	mg/kg	31.0	091107A	09/11/07	15:45
Cadmium	SW 6020	ND	236	mg/kg	0.774	090707A	09/07/07	15:42
Chromium	SW 6020	13000	2720	mg/kg	8.92	100307A	10/03/07	13:05
Cobalt	SW 6010B	ND	472	mg/kg	31.0	091107A	09/11/07	15:45
Copper	SW 6020	47.5	544	mg/kg	1.78	100307A	10/03/07	12:09
Lead	SW 6020	2.52	236	mg/kg	0.774	090707A	09/07/07	15:42
Mercury	SW 7471A	0.327	225	mg/kg	0.147	09HG07Ac	09/18/07	04:22
Molybdenum	SW 6020	27.7	236	mg/kg	0.774	090707A	09/07/07	15:42
Nickel	SW 6020	15.5	544	mg/kg	1.78	100307A	10/03/07	12:09
Selenium	SW 6020	ND	236	mg/kg	0.774	090707A	09/07/07	15:55
Silver	SW 6020	ND	236	mg/kg	0.774	090707A	09/07/07	15:42
Thallium	SW 6020	ND	236	mg/kg	0.774	090707A	09/07/07	15:42
Vanadium	SW 6010B	70.7	472	mg/kg	31.0	091107A	09/11/07	15:45
Zinc	SW 6020	66.4	544	mg/kg	1.78	100407A	10/04/07	13:44

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.

Sean Condon
for Mona Nassimi, Manager
Analytical Services

~~969385~~ ~~964288~~

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-115]

COC Number

TURNAROUND TIME 10 Days

DATE 9-5-07 PAGE 1 OF 1

Rec'd 09/05/07

~~9008~~

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	358342.TM.02.00 TEAM 1
SAMPLERS (SIGNATURE	

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Cr6 (218.6)	Lab Filtered Total Metals (200.7) Al,As,Ba,B,Cr,Cu,Pb,Mn,Mo,Ni,Sb,Fe,Zn	Manganese (200.7) Field Filtered Mn	Total Metals (200.7) Title 22, Mercury	Specific Conductance (120.1)	TDS (SM2540C)	PH (SM4500H)	Anions (300.0) Fl	Anions (300.0) Fl, SO4, NO2, NO3	Cr6 (7199)	Metals (6010B) Title 22, Mercury	Turbidity (SM2130)	Ammonia (SM4500NH3)	TOC (SM5310C)	NUMBER OF CONTAINERS	COMMENTS
~~1~~	~~GC-100B-WDR-115~~	~~9-5-07~~	~~1510~~	~~Water~~	~~x~~	~~x~~	~~x~~		~~x~~	~~x~~	~~x~~		~~x~~			~~x~~	~~x~~	~~x~~	~~5~~	~~pH<2~~
~~2~~	~~SC-700B-WDR-115~~	~~9-5-07~~	~~1510~~	~~Water~~	~~x~~	~~x~~			~~x~~	~~x~~	~~x~~		~~x~~			~~x~~	~~x~~		~~5~~	~~pH<2~~
~~3~~	~~SC-701-WDR-115~~	~~9-5-07~~	~~1510~~	~~Water~~	~~x~~			~~x~~	~~x~~	~~x~~	~~x~~	~~x~~							~~3~~	~~pH<2~~
~~4~~	SC-Sludge-WDR-115	9-5-07	1541	Sludge								x		x	x				4	~~pH<2~~ (DS)
																			20	TOTAL NUMBER OF CONTAINERS

For Sample Conditions See Form Attached

ALERT !!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished)	Printed Name David Chow	Company/ Agency CH2M Hill OMI	Date/ Time 9-5-07 1555
Signature (Received) Rafael Davila	Printed Name Rafael	Company/ Agency T-E-I	Date/ Time 9-5-07 3:55
Signature (Relinquished) Rafael Davila	Printed Name Rafael	Company/ Agency T-E-I	Date/ Time 9-5-07 20:30
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 ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

950