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October 13, 2006

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 R7-2004-0103
WDID No. 7B 36 2033 001
PG&E Topock Compressor Station, Needles, California
Interim Measure No. 3 Groundwater Treatment System
Discharge to Injection Wells
September 2006 and Third Quarter 2006 Monitoring Report

Dear Mr. Perdue:

Enclosed is the September 2006 and Third Quarter 2006 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 by the Colorado River Basin Regional Water Quality Control Board (Water Board) under Board Order R7-2004-0103.

WDRs under Board Order R7-2004-0103 apply to IM No. 3 Treatment System discharge by subsurface injection wells only. In addition, the Water Board issued WDRs for IM No. 3 Treatment System discharge to the Colorado River (Board Order R7-2004-0100) and IM No. 3 Treatment System discharge to the PG&E Compressor Station (Board Order R7-2004-0080). Reporting of Board Order R7-2004-0080 and Board Order R7-2004-0100 activities are submitted under separate covers.

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

Sincerely,

Curt Russell
Topock Onsite Project Manager

Enclosures:

September 2006 and Third Quarter 2006 Monitoring Report for the IM No. 3 Groundwater Treatment System under Board Order R7-2004-0103.

cc: José Cortez, Water Board
Liann Chavez, Water Board
Tom Vandenberg, Water Board
Aaron Yue, DTSC

September 2006 and Third Quarter 2006 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Waste Discharge Requirements
Board Order R7-2004-0103
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 13, 2006

CH2MHILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

September 2006 and Third Quarter 2006 Monitoring Report
Interim Measure No. 3 Groundwater Treatment System
Waste Discharge Requirements Order R7-2004-0103
PG&E Topock Compressor Station
Needles, California

Prepared for
Pacific Gas and Electric Company

October 13, 2006

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

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

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Acronyms and Abbreviations

HMI	human-machine interface
IM	Interim Measure
MRP	Monitoring and Reporting Program
PG&E	Pacific Gas and Electric Company
PLC	programmable logic controller
STL	Severn Trent Laboratories, Inc.
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. R7-2004-0103 authorizes PG&E to inject treated groundwater into injection wells located on San Bernardino County Assessor's Parcel No. 650-151-06. 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 2006 and the Third Quarter 2006. Third Quarter 2006 monitoring activities are included by reference to the July 2006 Monitoring Report (submitted August 15, 2006) and the August 2006 Monitoring Report (submitted September 15, 2006).

In addition to Board Order R7-2004-0103, the Water Board issued Waste Discharge Requirements (WDRs) for IM No. 3 treatment system discharge to the Colorado River (Board Order R7-2004-0100) and IM No. 3 treatment system discharge to the PG&E Compressor Station (Board Order R7-2004-0080). To date, there has been no IM No. 3 treatment system discharge to the Colorado River or the PG&E Compressor Station. PG&E has no plans to discharge IM No. 3 treatment system effluent to the Colorado River or the PG&E Compressor Station at this time. Reporting of Board Order R7-2004-0080 and Board Order R7-2004-0100 activities will be submitted under separate cover.

2.0 Sampling Station Locations

Table 1 lists the locations of sampling stations. (All tables are located at the end of this report.) Sampling station locations are 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 the WDRs. Full-time operation of the treatment system commenced in August 2005.

During September 2006, groundwater was pumped from extraction wells TW-2D, TW-3D and PE-1. The target groundwater extraction system pump rate was 135 gallons per minute during September 2006 (excluding planned and unplanned downtime, which is described in Section 4.0).

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

- **Treated Effluent**: Treated water that is discharged to the injection wells.
- **Reverse Osmosis Concentrate**: 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 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 2006 treatment system monthly average flow rates are presented in Table 2. 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).

In addition to extracted groundwater, the IM No. 3 facility treated approximately 1,200 gallons of water generated from monitoring well development and aquifer testing during September 2006. Treatment of this water at the IM No. 3 facility was approved by the Water Board on January 26, 2006, and permitted in Board Order R7-2006-0060. One container of sludge solids (approximately 12 cubic yards) was transported from the IM No. 3 facility to the Chemical Waste Management facility at Kettleman Hills, California during September 2006.

The operational run time for the IM groundwater extraction system (combined or individual pumping from TW-3D and PE-1) was approximately 97 percent during the September 2006 reporting period. Periods of planned and unplanned extraction system that resulted in three percent downtime during September 2006 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 1, 2006 (unplanned):** The extraction well system was shut down from 2:48 a.m. until 2:55 a.m. due to a false high water level alarm in the chromium reduction tank (T-300). The water level indicator was cleaned and put back in service**.** Extraction system downtime was 7 minutes.
- **September 2, 2006 (unplanned):** The extraction well system was shut down from 2:59 p.m. until 10:47 p.m. due to a failure of the primary programmable logic controller (PLC) at the IM-3 Facility. Onsite personnel and offsite experts identified the PLC failure and put the backup PLC into service before bringing the extraction well system and facility back into service. Extraction system downtime was 7 hours 48 minutes.
- **September 3, 2006 (unplanned):** The extraction well system was shut down from 4:59 a.m. until 5:23 a.m. due to an unplanned microfilter shutdown that created a high water level in influent tank T-100. Extraction system downtime was 24 minutes.
- **September 6, 2006 (unplanned):** The extraction well system was shut down from 8:52 a.m. until 5:15 p.m. due to a failure of the high pressure pump on the rental Reverse Osmosis (RO) unit currently in operation. The RO unit vendor, US Filter, was

immediately contacted and sent a service man to the site with a replacement pump the same day. Extraction system downtime was 8 hours 22 minutes.

- **September 7, 2006 (unplanned):** The extraction well system was shut down from 7:23 a.m. until 7:27 a.m. and 8:24 p.m. until 8:29 p.m. due to weather-caused power failure and switching to generator power. Extraction system downtime was 9 minutes.
- **September 8, 2006 (unplanned):** The extraction well system was shut down from 5:02 a.m. until 5:10 a.m. to return operations to Needles power. Extraction system downtime was 8 minutes.
- **September 13, 2006 (unplanned):** The extraction well system was shut down from 6:10 p.m. until 6:24 p.m. to switch to generator power after a weather-caused power failure. Extraction system downtime was 14 minutes.
- **September 13, 2006 (unplanned):** The extraction well system was shut down from 9:38 p.m. until 9:44 p.m. to return operations to Needles power. Extraction system downtime was 6 minutes.
- **September 16, 2006 (planned):** The extraction well system was shut down from 2:00 p.m. until 2:25 p.m. while switching to the offline bank of cleaned microfilter modules. Extraction system downtime was 25 minutes.
- **September 27, 2006 (unplanned):** The extraction well system was shut down from 3:20 p.m. until 3:41 p.m. while cleaning a flow switch (FSL-201) in the chemical mixing loop. Extraction system downtime was 21 minutes.
- **September 28 and 29, 2006 (planned):** The extraction well system was shut down periodically on September 28 (3:01 p.m. until 3:05 p.m., 4:18 p.m. until 6:20 p.m., and 9:58 p.m. until 10:53 p.m.) and September 29 (8:31 a.m. until 8:46 a.m., 9:21 a.m. until 9:48 a.m., and from 12:39 p.m. until 12:47 p.m.). The periodic shutdowns were required during the installation and initial testing of newly fabricated pipe and fittings for the facility RO unit. The extraction system downtime to complete this work was 3 hours 47 minutes.
- **September 30, 2006 (unplanned):** The extraction well system was shut down from 8:51 a.m. until 8:55 a.m. due to a false high water level alarm in the chromium reduction tank (T-300). The water level indicator was cleaned and put back in service. Extraction system downtime was 4 minutes.

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) or Severn Trent Laboratories, Inc. (STL). 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 or STL via courier service 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. STL is certified by the California Department of Health Services (Certification No. 1118) under the Environmental Laboratory Accreditation Program. Truesdail forwarded the sludge sample to MBC Laboratory. MBC Laboratory conducted the sludge bioassay test, and is certified by the California Department of Health Services (Certification No. 1788) 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 procedures and schedules approved in the *Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area* submitted to the Water Board June 17, 2005. Quarterly groundwater monitoring analytical results for the injection area are reported in a separate document, in conjunction with groundwater level maps of the same monitoring wells.

6.0 Analytical Results

Laboratory reports prepared by the certified analytical laboratories are presented in Appendix A. The 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; sample date September 7, 2006.
- The effluent was sampled weekly; sample dates September 7, 13, 20, and 27, 2006.
- The reverse osmosis concentrate was sampled monthly; sample date September 7, 2006.
- The sludge was sampled monthly; sample date September 7, 2006. WDR requirements state that sludge is to be sampled each time it is transported offsite unless sludge is transported offsite more frequently than monthly, in which case the sampling frequency shall be monthly.
- The sludge is required to have an aquatic bioassay test quarterly; the 3rd Quarter 2006 aquatic bioassay test was conducted with a sludge sample from the July 5, 2006 sampling event; the results were presented in the July 2006 Report.

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

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

PG&E submitted a signature delegation letter to the Water Board on September 12, 2005. The letter delegated PG&E signature authority to Mr. Curt Russell and Ms. Yvonne Meeks for correspondence regarding Board Order R7-2004-0103.

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 13, 2006

Tables

TABLE 1
Sampling Station Descriptions
September 2006 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:
[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 2006 Report for Interim Measure No. 3 Groundwater Treatment System

Parameter	System Influent[a,b]	System Effluent[c,b]	Reverse Osmosis Concentrate[d,b]
Average Monthly Flowrate (gpm)	131.8	121.0	10.4

Notes:
gpm: gallons per minute.
[a]Extraction wells TW-3D and PE-1 were operated during September 2006.
[b]The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates is less than 0.3 percent, which is within the range of acceptable accuracy considering the margin of error for onsite instrumentation, the water contained within the sludge, 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 well IW-03 during September 2006. Injection well IM-02 was operated for approximately 3 hours on September 21, 2006 to test automated valves at the injection wellhead.
[d]Reverse Osmosis Concentrate flow meter reading from FIT-701.

TABLE 3
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Influent Monitoring Results [a]
September 2006 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency		Monthly																						
Sample ID	Date / Analytes / Units [b]	TDS mg/L	Turbidity NTU	Specific Conductance µmhos/cm	pH pHunits	Chromium µg/L	Hexavalent Chromium µg/L	Aluminium µg/L	Ammonia (as N) mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Boron mg/L	Copper µg/L	Fluoride mg/L	Lead µg/L	Manganese µg/L	Molybdenum µg/L	Nickel µg/L	Nitrate (as N) mg/L	Nitrite (as N) mg/L	Sulfate mg/L	Iron µg/L	Zinc µg/L
SC-100B-WDR-063	9/7/2006	5940	0.858	10200	7.32	1940	1720	ND (52)	ND (0.5)	ND (3.0)	ND (5.0)	ND (300)	1.28	46.1	2.18	4.20	ND (500)	25.8	ND (20)	2.99	0.0106	640	ND (300)	ND (20)

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 reporting limit
J = concentration or reporting limits estimated by laboratory or validation
MDL = method detection limit
RL = reporting limit

[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

TABLE 4
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Effluent Monitoring Results[a]
September 2006 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**																
Sample ID	**Analytes / Units[c] / Date**	TDS mg/L	Turbidity NTU	Specific Conductance µmhos/cm	pH pHunits	Chromium µg/L	Hexavalent Chromium µg/L	Aluminium µg/L	Ammonia (as N) mg/L	Antimony µg/L	Arsenic µg/L	Barium µg/L	Boron mg/L	Copper µg/L	Fluoride mg/L	Lead µg/L	Manganese µg/L	Molybdenum µg/L	Nickel µg/L	Nitrate (as N) mg/L	Nitrite (as N) mg/L	Sulfate mg/L	Iron µg/L	Zinc µg/L
SC-700B-WDR-063	9/7/2006	4420	ND (0.1)	7350	8.00	ND (1.0)	ND (1.0)	ND (52)	ND (0.5)	ND (3.0)	ND (5.0)	ND (300)	0.964	45.4	1.93	ND (2.0)	ND (500)	13.6	ND (20)	2.50	0.0066	486	ND (300)	149
SC-700B-WDR-064	9/13/2006	4300	ND (0.1)	9540	8.13	2.30	ND (1.0)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-065	9/20/2006	4480	ND (0.1)	8270	8.09	1.90	ND (0.2)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-700B-WDR-066	9/27/2006	4460	ND (0.1)	8520	8.03	ND (1.0)	ND (1.0)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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 reporting limit
J = concentration or reporting limits estimated by laboratory or validation
MDL = method detection limit
RL = reporting limit

[a] 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)

[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

TABLE 5
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Reverse Osmosis Concentrate Results [a]
September 2006 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency		Monthly																						
Sample ID	Date / Analytes / Units [b]	TDS mg/L	Specific Conductance µmhos/cm	pH pHunits	Chromium mg/L	Hexavalent Chromium mg/L	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Cobalt mg/L	Copper mg/L	Fluoride mg/L	Lead mg/L	Molybdenum mg/L	Mercury mg/L	Nickel mg/L	Selenium mg/L	Silver mg/L	Thallium mg/L	Vanadium mg/L	Zinc mg/L
SC-701-WDR-063	9/7/2006	21500	34600	7.98	ND (0.001)	ND (0.002)	ND (0.01)	ND (0.01)	ND (0.3)	ND (0.0052)	ND (0.0052)	ND (0.01)	ND (0.01)	10.7	ND (0.0052)	0.061	ND (0.0002)	ND (0.02)	ND (0.021)	ND (0.01)	ND (0.0052)	ND (0.01)	ND (0.02)

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 reporting limit
J = concentration or reporting limits estimated by laboratory or validation
MDL = method detection limit
RL = 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

TABLE 6
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Sludge Monitoring Results[a]
September 2006 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	Fluoride	Lead	Molybdenum	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
Units [b]		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Sample ID	**Date**																			
SC-Sludge-WDR-063	9/7/2006	15000	84.0	ND (61)	15.0	97.0	ND (5.1)	ND (5.1)	ND (51)	140	15.8	ND (5.1)	ND (40)	2.00	42.0	11.0	ND (10)	ND (10)	82.0	ND (20)

NOTES:

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

[a] Sampling Location for all Sludge Samples is the Sludge Collection Tanks (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.

TABLE 7
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Monitoring Information
September 2006 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-063	David Chaney	9/7/2006	10:00:00 AM	TLI	EPA 120.1	SC	9/8/2006	Tina Acquiat
					TLI	EPA 150.1	PH	9/8/2006	Tina Acquiat
					TLI	EPA 160.1	TDS	9/14/2006	Tina Acquiat
					TLI	EPA 180.1	TRB	9/8/2006	Gautam Savani
					TLI	EPA 200.7	NI	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	ZN	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	MN	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	FET	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	CRT	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	BA	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	B	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	AL	9/12/2006	Riddhi Patel
					TLI	EPA 200.8	CU	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	MO	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	PB	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	SB	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	AS	9/14/2006	Riddhi Patel
					TLI	EPA 300.0	SO4	9/12/2006	Giawad Ghenniwa
					TLI	EPA 300.0	FL	9/8/2006	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	9/8/2006	Giawad Ghenniwa
					TLI	EPA 350.2	NH3N	9/8/2006	Iordan Stavrev
					TLI	EPA 354.1	NO2N	9/8/2006	Tina Acquiat
					TLI	EPA Method 218.6	CR6	9/7/2006	Stanley Hsieh
SC-700B	SC-700B-WDR-063	David Chaney	9/7/2006	10:05:00 AM	TLI	EPA 120.1	SC	9/8/2006	Tina Acquiat
					TLI	EPA 150.1	PH	9/8/2006	Tina Acquiat
					TLI	EPA 160.1	TDS	9/14/2006	Tina Acquiat
					TLI	EPA 180.1	TRB	9/8/2006	Gautam Savani
					TLI	EPA 200.7	ZN	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	FET	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	MN	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	NI	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	AL	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	CRT	9/11/2006	Riddhi Patel
					TLI	EPA 200.7	B	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	BA	9/12/2006	Riddhi Patel
					TLI	EPA 200.8	CU	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	MO	9/14/2006	Riddhi Patel

TABLE 7
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Monitoring Information
September 2006 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-063	David Chaney	9/7/2006	10:05:00 AM	TLI	EPA 200.8	PB	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	SB	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	AS	9/14/2006	Riddhi Patel
					TLI	EPA 300.0	FL	9/8/2006	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	9/8/2006	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	9/8/2006	Giawad Ghenniwa
					TLI	EPA 350.2	NH3N	9/8/2006	Iordan Stavrev
					TLI	EPA 354.1	NO2N	9/8/2006	Tina Acquiat
					TLI	EPA Method 218.6	CR6	9/7/2006	Stanley Hsieh
SC-700B	SC-700B-WDR-064	Leroy Hughes	9/13/2006	12:15:00 PM	TLI	EPA 120.1	SC	9/14/2006	Tina Acquiat
					TLI	EPA 150.1	PH	9/14/2006	Tina Acquiat
					TLI	EPA 160.1	TDS	9/14/2006	Tina Acquiat
					TLI	EPA 180.1	TRB	9/14/2006	Gautam Savani
					TLI	EPA 200.8	CRT	9/22/2006	Riddhi Patel
					TLI	EPA Method 218.6	CR6	9/13/2006	Stanley Hsieh
SC-700B	SC-700B-WDR-065	Chris Knight	9/20/2006	12:50:00 PM	TLI	EPA 120.1	SC	9/21/2006	Tina Acquiat
					TLI	EPA 150.1	PH	9/21/2006	Tina Acquiat
					TLI	EPA 160.1	TDS	9/25/2006	Tina Acquiat
					TLI	EPA 180.1	TRB	9/21/2006	Gautam Savani
					TLI	EPA 200.8	CRT	9/22/2006	Riddhi Patel
					TLI	EPA Method 218.6	CR6	9/20/2006	Stanley Hsieh
SC-700B	SC-700B-WDR-066	Gary Sibble	9/27/2006	11:55:00 AM	TLI	EPA 120.1	SC	9/28/2006	Tina Acquiat
					TLI	EPA 150.1	PH	9/28/2006	Tina Acquiat
					TLI	EPA 160.1	TDS	9/28/2006	Tina Acquiat
					TLI	EPA 180.1	TRB	9/27/2006	Gautam Savani
					TLI	EPA 200.7	CRT	10/2/2006	Stanley Hsieh
					TLI	EPA Method 218.6	CR6	9/28/2006	Roger Chen
SC-701	SC-701-WDR-063	David Chaney	9/7/2006	10:10:00 AM	TLI	EPA 120.1	SC	9/8/2006	Tina Acquiat
					TLI	EPA 150.1	PH	9/8/2006	Tina Acquiat
					TLI	EPA 160.1	TDS	9/14/2006	Tina Acquiat
					TLI	EPA 200.7	ZN	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	CRT	9/11/2006	Riddhi Patel
					TLI	EPA 200.7	NI	9/12/2006	Riddhi Patel
					TLI	EPA 200.7	BA	9/12/2006	Riddhi Patel
					TLI	EPA 200.8	SE	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	AG	9/14/2006	Riddhi Patel

TABLE 7
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Monitoring Information
September 2006 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-063	David Chaney	9/7/2006	10:10:00 AM	TLI	EPA 200.8	TL	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	SB	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	PB	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	MO	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	AS	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	CO	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	CD	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	V	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	BE	9/14/2006	Riddhi Patel
					TLI	EPA 200.8	CU	9/14/2006	Riddhi Patel
					TLI	EPA 245.1	HG	9/13/2006	Aksiniya Dimitrova
					TLI	EPA 300.0	FL	9/11/2006	Giawad Ghenniwa
					TLI	EPA Method 218.6	CR6	9/7/2006	Stanley Hsieh
SC-Sludge	SC-Sludge-WDR-063	David Chaney	9/7/2006	10:16:00 AM	STL	EPA 160.3	MOIST	9/13/2006	Florian Zimmermann
					TLI	EPA 300.0	FL	9/11/2006	Giawad Ghenniwa
					STL	EPA 6010B	NI	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	V	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	TL	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	SE	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	SB	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	PB	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	ZN	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	MO	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	CU	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	CRT	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	CO	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	CD	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	BE	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	BA	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	AG	9/21/2006	Josephine Asuncion
					STL	EPA 6010B	AS	9/21/2006	Josephine Asuncion
					STL	EPA 7471A	HG	9/14/2006	Hao Ton
					STL	SW 7199	CR6	9/13/2006	Yuriy Zakhrabov

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)

TLI = Truesdail Laboratories, Inc.
STL = Severn Trent Laboratories, Inc.

SC =	specific conductance	MO =	molybdenum
PH =	pH	NI =	nickel
TDS =	total dissolved solids	PB =	lead
TRB =	turbidity	HG =	mercury
CRT =	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

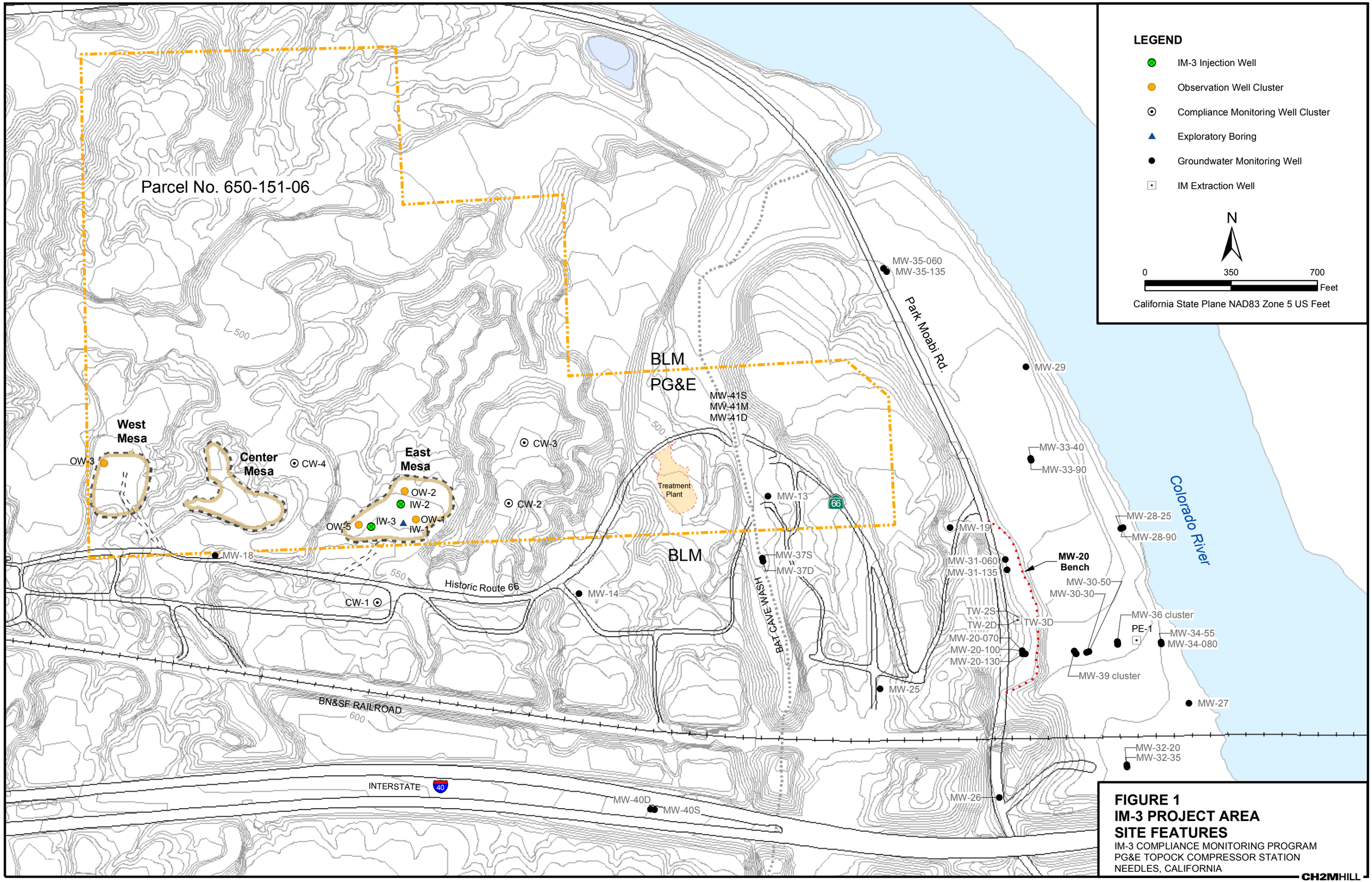
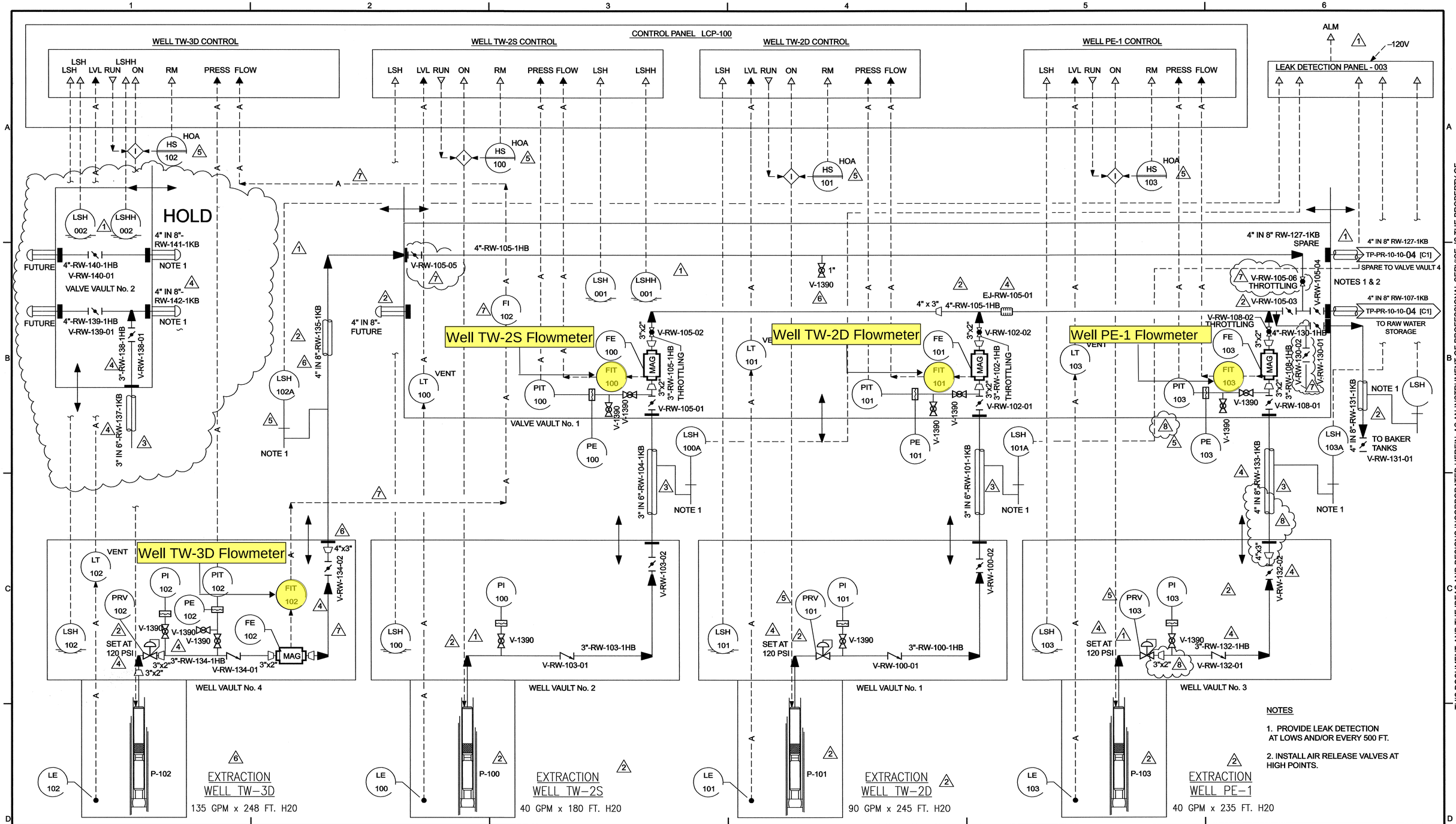


FIGURE 1
IM-3 PROJECT AREA
SITE FEATURES
IM-3 COMPLIANCE MONITORING PROGRAM
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

BAO \\ZINFANDEL\PROJ\PACIFICGASELECTRICCO\TOPOCKPROGRAM\GIS\MXD\2006\IM3_PROJECT_AREA.MXD IM3_PROJECT_AREA.PDF 3/9/2006 15:54:15



NOTES

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

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REGISTERED PROFESSIONAL ENGINEER — KENNETH L. MARTINS — No. CH4976 — Exp. 6-30-05 — CHEMICAL — STATE OF CALIFORNIA

RESPONSIBLE ENGINEER: Kenneth L. Martins
PE# CH4976 Exp. 6-30-05

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				
ISSUED	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	7	12/19/05	AJ for KLM	AJ

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 03
EXTRACTION WELLS
PE-1, TW-2D, TW-2S AND TW-3D

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

BAR IS ONE INCH
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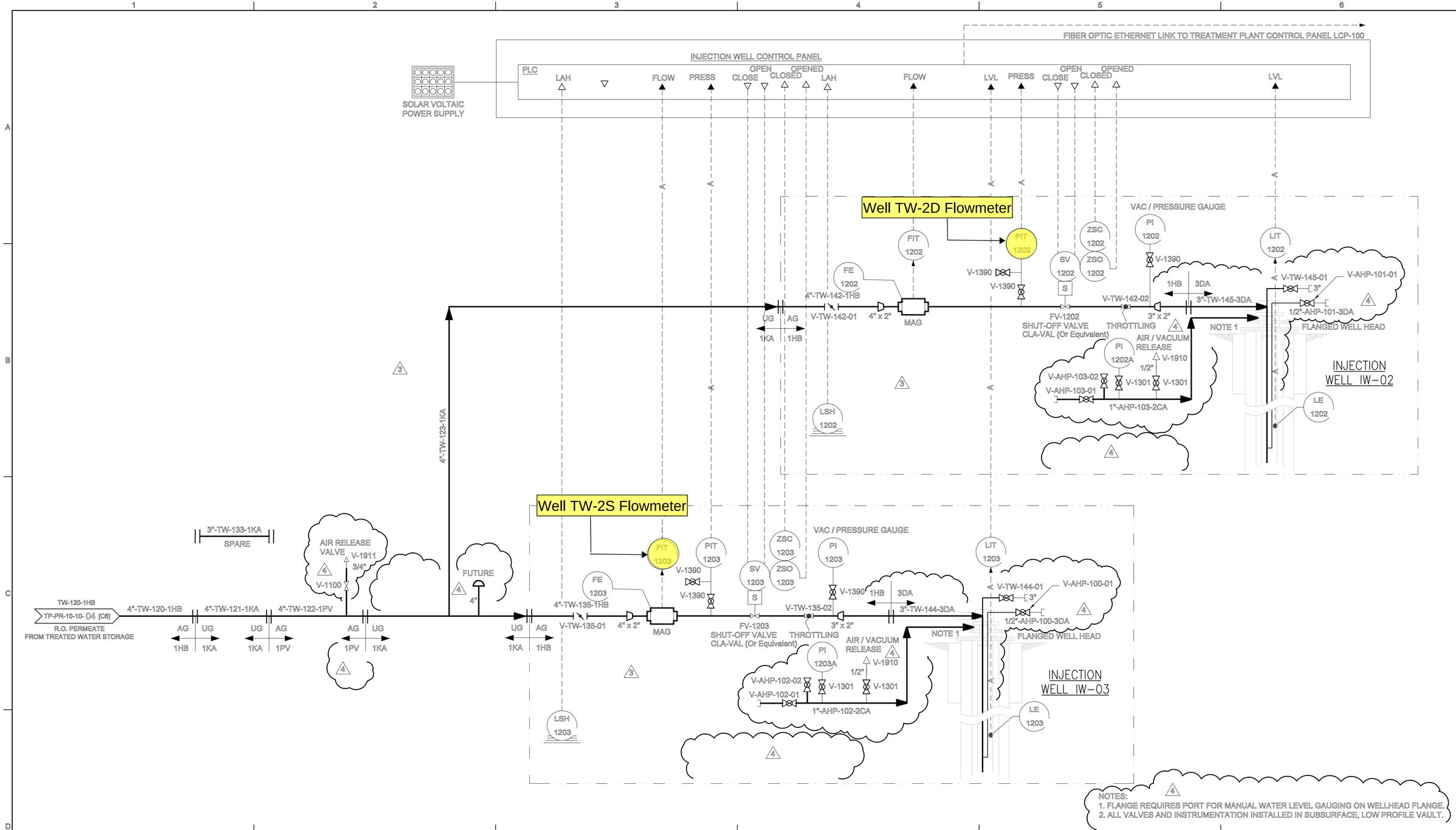
FILENAME: tppr101003.dwg PLOT DATE: 19-OCT-2005 PLOT TIME:



NO.	DATE	REVISION	BY	CHK	REVISION APPROVAL		REV 4	DATE 03/10/05	PRINT DISTRIBUTION	
A	07/28/04	FOR INTERNAL REVIEW	EFC	AJ	DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED	DATE	
0	09/03/04	APPROVED FOR CONSTRUCTION	EFC	AJ	CIVIL		ELECTRICAL		STATUS	
1	10/13/04	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ	STRUCTURAL		INST & CONTROL		REV.	
2	01/23/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ	MECHANICAL		ARCHITECTURAL		CLIENT	
3	02/14/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ	PROCESS		ENVIRONMENTAL		FIELD	
4	03/10/05	REMOVED HOLD AND APPROVED FOR CONSTRUCTION	EFC	AJ	PIPING		GEN. ARRANG.		INTRA CO.	

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

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	/ /		

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:

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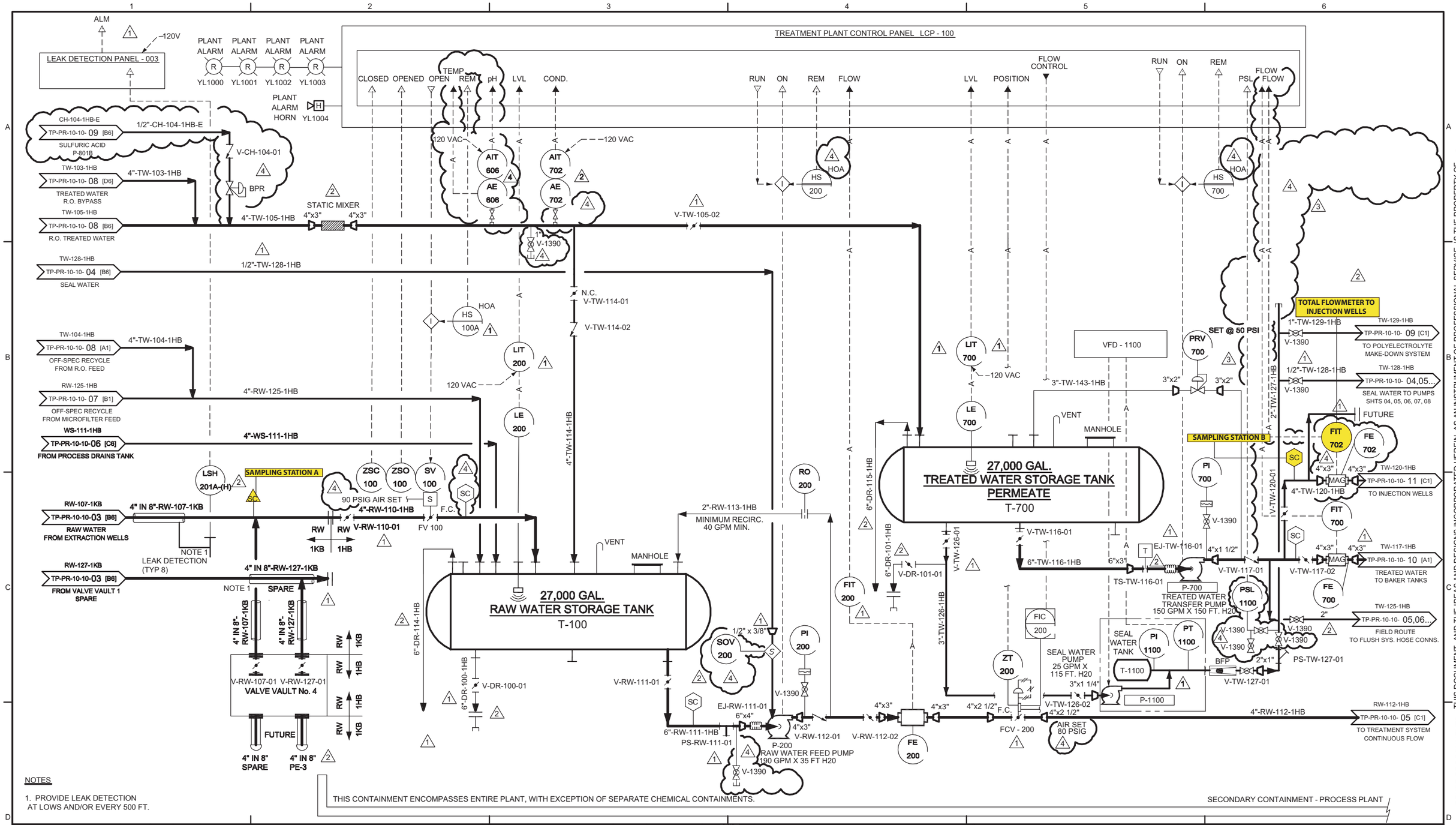

NOTES

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

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

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

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

STATUS				
ISSUED	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	4	/ /		

SCALE NONE

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

PROJ NO. 315994

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PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 04
STORAGE AREA

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

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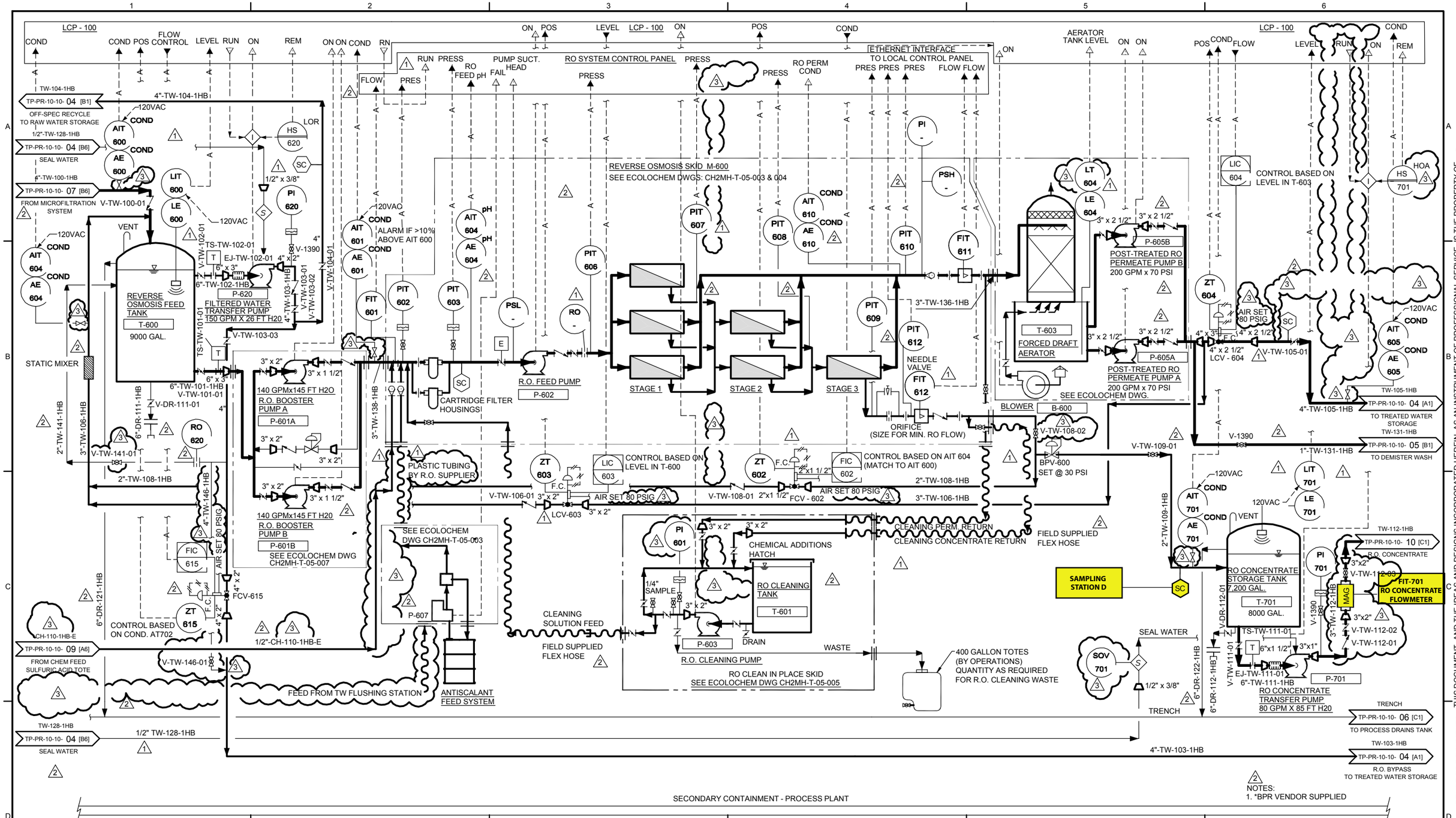

NOTES:
1. *BPR VENDOR SUPPLIED

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	09/21/05	REVISED PER AS-BUILT CONDITIONS	EFC	AJ

REVISION APPROVAL		REV 3	DATE 09/21/05
DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED
CIVIL		ELECTRICAL	
STRUCTURAL		INST & CONTROL	
MECHANICAL		ARCHITECTURAL	
PROCESS		ENVIRONMENTAL	
PIPING		GEN. ARRANG.	

PRINT DISTRIBUTION: DATE, STATUS, REV., 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	3	/ /		

SCALE NONE

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

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

PROJ NO. 315994

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PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 08
REVERSE OSMOSIS SYSTEM

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

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

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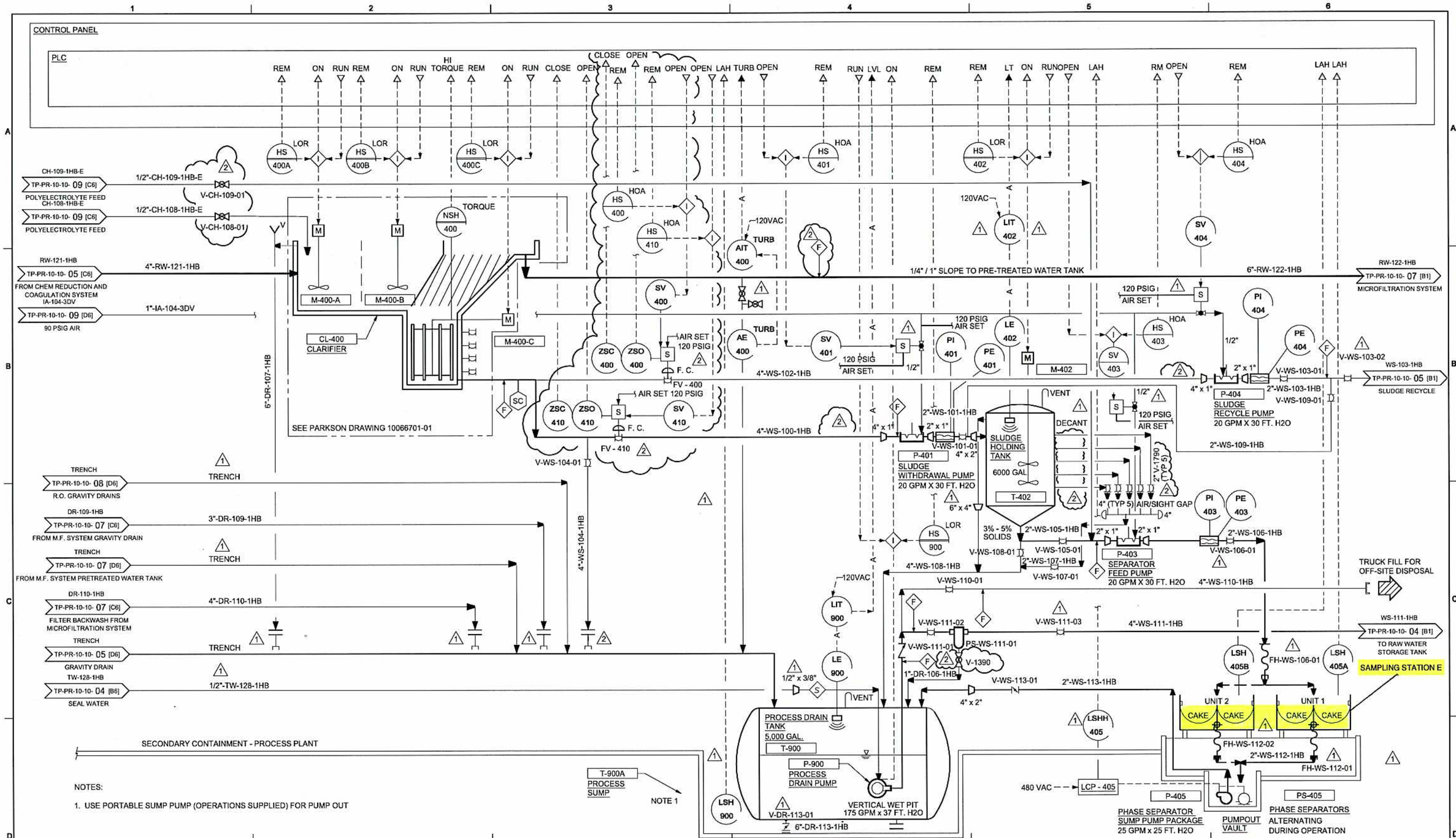

NOTES:

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	REVIEWED	REV 2	DATE 01/23/05	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.

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

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

SCALE NONE

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

PROJ NO. 315994

CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 06
CLARIFICATION AND SLUDGE REMOVAL

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

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

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Appendix A
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

September 21, 2006

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-063 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 958595

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-063 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, pH, Anions, Ammonia, Total Dissolved Solids, and Title 22 Metals. 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 7, 2006, 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.

Results for Hexavalent Chromium by EPA 218.6 are reported in the matrix spike calculations although they are below the reporting limit due to the small amount of Hexavalent Chromium present in the samples.

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.

Alex C Hill
for Mona Nassimi

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
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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
EPA 150.1	pH	Tina Acquiat
EPA 160.1	Total Dissolved Solids	Tina Acquiat
EPA 180.1	Turbidity	Gautam Savani
EPA 300.0	Anions	Giawad Ghenniwa
EPA 350.2	Ammonia	Iordan Stavrev
EPA 354.1	Nitrite as N	Tina Acquiat
EPA 200.7	Metals by ICP	Riddhi Patel
EPA 200.8	Metals by ICP/MS	Riddhi Patel
EPA 245.1	Mercury	Aksiniya Dimitrova
EPA 218.6	Hexavalent Chromium	Stanley Hsieh

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Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 8, 2006
Analytical Batch: 09PH06E

Investigation: **pH by EPA 150.1**

Analytical Results pH

TLI I.D.	Field I.D.	Run Time	Units	MDL	RL	Results
958595-1	SC-100B-WDR-063	08:52	pH Units	0.0570	2.00	7.32
958595-2	SC-700B-WDR-063	08:54	pH Units	0.0570	2.00	8.00
958595-3	SC-701-WDR-063	08:56	pH Units	0.0570	2.00	7.98

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	958596-2	7.40	7.40	0.00	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.00	7.00	0.00	± 0.100 Units	Yes
LCS #1	7.00	7.00	0.00	± 0.100 Units	Yes
LCS #2	7.01	7.00	0.01	± 0.100 Units	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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Attention: Shawn Duffy

Laboratory No.: 958595

Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 8, 2006
Analytical Batch: 09EC06C

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
958595-1	SC-100B-WDR-063	µmhos/cm	EPA 120.1	10.0	20.0	10200
958595-2	SC-700B-WDR-063	µmhos/cm	EPA 120.1	10.0	20.0	7350
958595-3	SC-701-WDR-063	µmhos/cm	EPA 120.1	10.0	20.0	34600

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958595-3	34600	34700	0.29%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
CCS	696	706	98.6%	90% - 110%	Yes
CVS#1	998	1000	99.8%	90% - 110%	Yes
LCS	696	706	98.6%	90% - 110%	Yes

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Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 14, 2006
Analytical Batch: 09TDS06C

Investigation: **Total Dissolved Solids by EPA 160.1**

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
958595-1	SC-100B-WDR-063	mg/L	EPA 160.1	312	5940
958595-2	SC-700B-WDR-063	mg/L	EPA 160.1	250	4420
958595-3	SC-701-WDR-063	mg/L	EPA 160.1	625	21500

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	958595-1	5940	5720	1.89%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	491	500	98.2%	90% - 110%	Yes

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

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Mona Nassimi, Manager
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P.O. No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 8, 2006
Analytical Batch: 09TUC06G

Investigation: **Turbidity by Method EPA 180.1**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
958595-1	SC-100B-WDR-063	10:00	NTU	1.00	0.100	0.858
958595-2	SC-700B-WDR-063	10:05	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	958581-4	0.161	0.158	1.88%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	7.32	8.00	91.5%	90% - 110%	Yes
LCS	7.30	8.00	91.3%	90% - 110%	Yes
LCS	7.38	8.00	92.3%	90% - 110%	Yes

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

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Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2
Prep. Batch: 09CrH06E

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 7, 2006
Analytical Batch: 09CrH06E

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
958595-1	SC-100B-WDR-063	10:00	18:42	mg/L	100	0.0200	1.72
958595-2	SC-700B-WDR-063	10:05	19:27	mg/L	5.00	0.0010	ND
958595-3	SC-701-WDR-063	10:10	20:15	mg/L	10.0	0.0020	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Sample Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958595-1	1.72	1.72	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	958595-1	1.72	100	0.0200	2.00	3.71	3.72	99.5%	90-110%	Yes
MS	958595-2	0.00074	5.00	0.00100	0.00500	0.00576	0.00574	100%	90-110%	Yes
MS	958595-3	0.00095	10.0	0.00100	0.0100	0.0115	0.0110	106%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00514	0.00500	103%	90% - 110%	Yes
MRCVS#1	0.0102	0.0100	102%	95% - 105%	Yes
LCS	0.00544	0.00500	109%	90% - 110%	Yes
LCSD	0.00540	0.00500	108%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassim, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
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Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 8, 2006
Analytical Batch: 09NH306A

Investigation: **Ammonia as N by Method EPA 350.2**

Analytical Results Ammonia as N

TLI I.D.	Field I.D.	Sample Time	Method	Units	DF	RL	Results
958595-1	SC-100B-WDR-063	10:00	EPA 350.2	mg/L	1.00	0.500	ND
958595-2	SC-700B-WDR-063	10:05	EPA 350.2	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	958595-1	ND	ND	0.0%	≤ 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	958595-2	0.00	1.00	10.0	10.0	9.76	10.0	97.6%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	9.90	10.0	99.0%	90% - 110%	Yes

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P.O. No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 8, 2006
Analytical Batch: 09AN06E

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
958595-1	SC-100B-WDR-063	10:00	11:07	mg/L	1.00	0.200	2.18
958595-2	SC-700B-WDR-063	10:05	11:19	mg/L	1.00	0.200	1.93

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958595-2	1.93	2.00	3.56%	≤ 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	958595-2	1.93	1.00	4.00	4.00	5.38	5.93	86.3%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	4.11	4.00	103%	90% - 110%	Yes
MRCVS#1	3.14	3.00	105%	90% - 110%	Yes
LCS	4.14	4.00	104%	90% - 110%	Yes
LCSD	4.11	4.00	103%	90% - 110%	Yes

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Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 11, 2006
Analytical Batch: 09AN06F

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
958595-3	SC-701-WDR-063	10:10	14:51	mg/L	10.0	2.00	10.7

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958597	0.792	0.773	2.43%	≤ 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	958597	0.792	1.00	2.00	2.00	2.83	2.79	102%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	4.10	4.00	103%	90% - 110%	Yes
MRCVS#1	3.10	3.00	103%	90% - 110%	Yes
LCS	4.11	4.00	103%	90% - 110%	Yes
LCSD	4.10	4.00	103%	90% - 110%	Yes

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Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 12, 2006
Analytical Batch: 09AN06G

Investigation: **Sulfate by Method EPA 300.0**

Analytical Results Sulfate

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
958595-1	SC-100B-WDR-063	10:00	14:00	mg/L	50.0	25.0	640

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958595-1	640	639	0.16%	≤ 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	958595-2	640	50.0	20.0	1000	1630	1640	99.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	19.6	20.0	98.0%	90% - 110%	Yes
MRCVS#1	15.1	15.0	101%	90% - 110%	Yes
LCS	19.8	20.0	99.0%	90% - 110%	Yes
LCSD	19.7	20.0	98.5%	90% - 110%	Yes

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Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 8, 2006
Analytical Batch: 09AN06E

Investigation: **Sulfate by Method EPA 300.0**

Analytical Results Sulfate

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
958595-2	SC-700B-WDR-063	10:05	12:16	mg/L	50.0	25.0	486

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958595-2	486	485	0.21%	≤ 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	958595-2	486	50.0	20.0	1000	1470	1486	98.4%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	19.7	20.0	98.5%	90% - 110%	Yes
MRCVS#1	15.0	15.0	100%	90% - 110%	Yes
LCS	19.8	20.0	99.0%	90% - 110%	Yes
LCSD	19.7	20.0	98.5%	90% - 110%	Yes

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DF: Dilution Factor.

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Mona Nassimi, Manager
Analytical Services

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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: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 8, 2006
Analytical Batch: 09AN06E

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
958595-1	SC-100B-WDR-063	10:00	11:07	mg/L	1.00	0.200	2.99
958595-2	SC-700B-WDR-063	10:05	11:19	mg/L	1.00	0.200	2.50

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958595-1	2.99	3.00	0.33%	≤ 20%	Yes

QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	958595-1	2.99	1.00	4.00	4.00	6.98	6.99	99.8%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	3.99	4.00	99.8%	90% - 110%	Yes
MRCVS#1	3.00	3.00	100%	90% - 110%	Yes
MRCVS#2	2.99	3.00	99.7%	90% - 110%	Yes
MRCVS#3	2.98	3.00	99.3%	90% - 110%	Yes
LCS	4.02	4.00	101%	90% - 110%	Yes
LCSD	3.99	4.00	99.8%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi

Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958595
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 8, 2006
Analytical Batch: 09NO206D

Investigation: **Nitrite as N by Method EPA 354.1**

Analytical Results for Nitrite as N

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	DF	RL	Results
958595-1	SC-100B-WDR-063	10:00	15:38	mg/L	1.00	0.0050	0.0106
958595-2	SC-700B-WDR-063	10:05	15:39	mg/L	1.00	0.0050	0.0066

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958595-2	0.0066	0.0063	4.65%	≤ 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	958595-2	0.0066	1.00	0.100	0.100	0.109	0.107	102%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0896	0.0900	99.6%	90% - 110%	Yes
MRCVS#1	0.0968	0.100	96.8%	90% - 110%	Yes
LCS	0.177	0.180	98.3%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Attention: Shawn Duffy

Samples: Three (3) Groundwater Samples
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2
Investigation: Total Metal Analyses as Requested

Laboratory No.: 958595
Reported: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Analyzed: September 11 - 14, 2006

Analytical Results

SAMPLE ID: SC-100B-WDR-063 **Time Collected:** 10:00 **LAB ID:** 958595-1

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.7	ND	1.04	mg/L	0.0520	091206A	09/12/06	13:41
Antimony	EPA 200.8	ND	2.08	mg/L	0.0030	091406A	09/14/06	11:44
Arsenic	EPA 200.8	ND	2.08	mg/L	0.0050	091406A	09/14/06	11:44
Barium	EPA 200.7	ND	1.04	mg/L	0.300	091206A	09/12/06	13:41
Chromium	EPA 200.7	1.94	1.04	mg/L	0.0104	091206A	09/12/06	13:41
Copper	EPA 200.8	0.0461	2.08	mg/L	0.0100	091406A	09/14/06	11:44
Lead	EPA 200.8	0.0042	2.08	mg/L	0.0020	091406A	09/14/06	11:44
Manganese	EPA 200.7	ND	1.04	mg/L	0.500	091206A	09/12/06	13:41
Molybdenum	EPA 200.8	0.0258	2.08	mg/L	0.0050	091406A	09/14/06	11:44
Nickel	EPA 200.7	ND	1.04	mg/L	0.0200	091206A	09/12/06	13:41
Zinc	EPA 200.7	ND	1.04	mg/L	0.0200	091206A	09/12/06	13:41
Boron	EPA 200.7	1.28	1.04	mg/L	0.200	091206A	09/12/06	13:41
Iron	EPA 200.7	ND	1.04	mg/L	0.300	091206A	09/12/06	13:41

SAMPLE ID: SC-700B-WDR-063 **Time Collected:** 10:05 **LAB ID:** 958595-2

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Aluminum	EPA 200.7	ND	1.04	mg/L	0.0520	091206A	09/12/06	13:54
Antimony	EPA 200.8	ND	2.08	mg/L	0.0030	091406A	09/14/06	11:50
Arsenic	EPA 200.8	ND	2.08	mg/L	0.0050	091406A	09/14/06	11:50
Barium	EPA 200.7	ND	1.04	mg/L	0.300	091206A	09/12/06	13:54
Chromium	EPA 200.7	ND	1.04	mg/L	0.0010	091106A	09/11/06	10:39
Copper	EPA 200.8	0.0454	2.08	mg/L	0.0100	091406A	09/14/06	11:50
Lead	EPA 200.8	ND	2.08	mg/L	0.0020	091406A	09/14/06	11:50
Manganese	EPA 200.7	ND	1.04	mg/L	0.500	091206A	09/12/06	13:54
Molybdenum	EPA 200.8	0.0136	2.08	mg/L	0.0050	091406A	09/14/06	11:50
Nickel	EPA 200.7	ND	1.04	mg/L	0.0200	091206A	09/12/06	13:54
Zinc	EPA 200.7	0.149	1.04	mg/L	0.0200	091206A	09/12/06	13:54
Boron	EPA 200.7	0.964	1.04	mg/L	0.200	091206A	09/12/06	13:54
Iron	EPA 200.7	ND	1.04	mg/L	0.300	091206A	09/12/06	13:54

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TRUESDAIL LABORATORIES, INC.

Report Continued

SAMPLE ID: SC-701-WDR-063 **Time Collected:** 10:10 **LAB ID:** 958595-3

Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Antimony	EPA 200.8	ND	10.4	mg/L	0.0104	091406A	09/14/06	11:56
Arsenic	EPA 200.8	ND	10.4	mg/L	0.0104	091406A	09/14/06	11:56
Barium	EPA 200.7	ND	1.04	mg/L	0.300	091206A	09/12/06	13:59
Beryllium	EPA 200.8	ND	10.4	mg/L	0.0052	091406A	09/14/06	11:56
Cadmium	EPA 200.8	ND	10.4	mg/L	0.0052	091406A	09/14/06	11:56
Chromium	EPA 200.7	ND	1.04	mg/L	0.0010	091106A	09/11/06	10:52
Cobalt	EPA 200.8	ND	10.4	mg/L	0.0104	091406A	09/14/06	11:56
Copper	EPA 200.8	ND	10.4	mg/L	0.0104	091406A	09/14/06	11:56
Lead	EPA 200.8	ND	10.4	mg/L	0.0052	091406A	09/14/06	11:56
Mercury	EPA 245.1	ND	1.00	mg/L	0.00020	09HG06E	09/13/06	13:27
Molybdenum	EPA 200.8	0.0610	10.4	mg/L	0.0104	091406A	09/14/06	11:56
Nickel	EPA 200.7	ND	1.04	mg/L	0.0200	091206A	09/12/06	13:59
Selenium	EPA 200.8	ND	10.4	mg/L	0.0208	091406B	09/14/06	18:46
Silver	EPA 200.8	ND	10.4	mg/L	0.0104	091406A	09/14/06	11:56
Thallium	EPA 200.8	ND	10.4	mg/L	0.0052	091406A	09/14/06	11:56
Vanadium	EPA 200.8	ND	10.4	mg/L	0.0104	091406A	09/14/06	11:56
Zinc	EPA 200.7	ND	1.04	mg/L	0.0200	091206A	09/02/06	13:59

ND: Not detected,or below limit of detection.

DF: Dilution factor.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-063]

COC Number 958595

TURNAROUND TIME 10 Days

DATE 9-7-06 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: 346129.1M.02.E2

SAMPLERS (SIGNATURE): David Chase

	SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (218.6) Lab Filtered	Total Metals (200.7) Title 22	Total Metals (200.7) Total Al,As,Ba,B,Cr,Cu,Pb,Mo,Mn,Ni,Sb,Se,Zn	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)	Anions (300) Fl	Anions (300) Fl, SO4, NO2, NO3	Ammonia (350.2)	Turbidity (180.1)					NUMBER OF CONTAINERS	COMMENTS
-1	SC-100B-WDR-063	9-7-06	10:00	Groundwater	x		x	x	x	x		x	x	x					4	pH=2
-2	SC-700B-WDR-063	9-7-06	10:05	Groundwater	x		x	x	x	x		x	x	x					4	pH=2
-3	SC-701-WDR-063	9-7-06	10:10	Groundwater	x	x		x	x	x	x								3	pH=2
																			7	TOTAL NUMBER OF CONTAINERS

Rec'd 09/07/06 958595

For Sample Conditions See Form Attached

ALERT!! Level III QC

093

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/Agency	Date/Time
Relinquished	David Chase	David Chase	ONT	9-7-06 15:30
Received	L. Shekunine	L. Shekunine	TLI	9/7/06 18:05
Relinquished				
Received				
Relinquished				
Received				

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

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September 26, 2006

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-064 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 958786

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-064 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, pH, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 13, 2006, 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 instrument problems, the Total Chromium was analyzed by EPA 200.8 rather than EPA 200.7 as requested on the chain of custody.

Due to contamination within the instrument, Hexavalent Chromium was found throughout the run, including the instrument blanks, first method blank (0.241 ug/L), and first calibration blank (0.271 ug/L) which were above the reporting limit of 0.2 ug/L. Therefore, the sample result for the straight run of SDG 958786 (0.210 ug/L) should be considered as Non-Detected (below the reporting limit).

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

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

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi

Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

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

TRUESDAIL LABORATORIES, INC.

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2

Laboratory No.: 958786
Date: September 26, 2006
Collected: September 13, 2006
Received: September 13, 2006

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
EPA 150.1	pH	Tina Acquiat
EPA 160.1	Total Dissolved Solids	Tina Acquiat
EPA 180.1	Turbidity	Gautam Savani
EPA 200.7	Total Chromium	Riddhi Patel
EPA 218.6	Hexavalent Chromium	Stanley Hsieh

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2
Prep. Batch: 092206B

Laboratory No.: 958786

Date: September 26, 2006
Collected: September 13, 2006
Received: September 13, 2006
Prep/ Analyzed: September 22, 2006
Analytical Batch: 092206B

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Mass Spectrometer using SW 6020**

Analytical Results Total Chromium

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
958786	SC-700B-WDR-064	mg/L	EPA 200.8	16:39	2.08	0.0021	0.0023

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	959026	0.0019	0.0018	5.41%	≤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	959026	0.0019	2.08	0.0500	0.104	0.117	0.106	111%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0519	0.0500	104%	90% - 110%	Yes
MRCVS#1	0.0516	0.0500	103%	90% - 110%	Yes
ICS	0.106	0.100	106%	80% - 120%	Yes
LCS	0.0515	0.0500	103%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958786

Date: September 26, 2006
Collected: September 13, 2006
Received: September 13, 2006
Prep/ Analyzed: September 13, 2006
Analytical Batch: 09CrH06K

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
958786	SC-700B-WDR-064	12:15	20:41	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	958786	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	958786	0.00	5.00	0.00100	0.00500	0.00488	0.00500	97.6%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00520	0.00500	104%	90% - 110%	Yes
MRCVS#1	0.0103	0.0100	103%	95% - 105%	Yes
LCS	0.00514	0.00500	103%	90% - 110%	Yes
LCSD	0.00516	0.00500	103%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958786
Date: September 26, 2006
Collected: September 13, 2006
Received: September 13, 2006
Prep/ Analyzed: September 14, 2006
Analytical Batch: 09TUC06K

Investigation: **Turbidity by Method EPA 180.1**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
958786	SC-700B-WDR-064	12:15	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	958756	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	7.53	8.00	94.1%	90% - 110%	Yes
LCS	7.51	8.00	93.9%	90% - 110%	Yes
LCS	7.37	8.00	92.1%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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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) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958786
Date: September 26, 2006
Collected: September 13, 2006
Received: September 13, 2006
Prep/ Analyzed: September 14, 2006
Analytical Batch: 09PH06H

Investigation:

pH by EPA 150.1

Analytical Results pH

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	MDL	RL	Results
958786	SC-700B-WDR-064	12:15	10:22	pH Units	0.0570	2.00	8.13

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	958786	8.13	8.14	0.01	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.01	7.00	0.01	± 0.100 Units	Yes
LCS #1	7.01	7.00	0.01	± 0.100 Units	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958786
Date: September 26, 2006
Collected: September 13, 2006
Received: September 13, 2006
Prep/ Analyzed: September 14, 2006
Analytical Batch: 09EC06F

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
958786	SC-700B-WDR-064	µmhos/cm	EPA 120.1	10.0	20.0	9540

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958786	9540	9690	1.56%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
CCS	697	706	98.7%	90% - 110%	Yes
CVS#1	975	1000	97.5%	90% - 110%	Yes
LCS	697	706	98.7%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958786
Date: September 26, 2006
Collected: September 13, 2006
Received: September 13, 2006
Prep/ Analyzed: September 14, 2006
Analytical Batch: 09TDS06C

Investigation: **Total Dissolved Solids by EPA 160.1**

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
958786	SC-700B-WDR-064	mg/L	EPA 160.1	250	4300

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	958786	4300	4460	1.83%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	489	500	97.8%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-064]

COC Number
TURNAROUND TIME 5 Days
DATE 9-13-06 PAGE 1 OF 1

958786

RUSH

Rec'd 09/13/06
Sa 958786

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	346129.1m.02.E2
SAMPLERS (SIGNATURE	LeRoy Hughes

SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)	Turbidity (180.1)									NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-064	9-13-06	1245	Groundwater	X	X	X	X	X	X									3	pH-2
																		3	TOTAL NUMBER OF CONTAINERS

ALERT !!
Level III QC

For Sample Conditions
See Form Attached

022

CHAIN OF CUSTODY SIGNATURE RECORD

Signature (Relinquished) LeRoy Hughes	Printed Name LeRoy Hughes	Company/ Agency OMI	Date/ Time 9-13-06 1245
Signature (Received) Mongarra	Printed Name Mongarra	Company/ Agency T.L.I	Date/ Time 9/13/06 12:30
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

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September 28, 2006

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-065 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 959026

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-065 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, pH, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 20, 2006, 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 instrument problems, the Total Chromium was analyzed by 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.

Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

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

TRUESDAIL LABORATORIES, INC.

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2

Laboratory No.: 959026
Date: September 28, 2006
Collected: September 20, 2006
Received: September 20, 2006

ANALYST LIST

		ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
EPA 150.1	pH	Tina Acquiat
EPA 160.1	Total Dissolved Solids	Tina Acquiat
EPA 180.1	Turbidity	Gautam Savani
EPA 200.7	Total Chromium	Riddhi Patel
EPA 218.6	Hexavalent Chromium	Stanley Hsieh

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2
Prep. Batch: 092206B

Laboratory No.: 959026

Date: September 28, 2006
Collected: September 20, 2006
Received: September 20, 2006
Prep/ Analyzed: September 22, 2006
Analytical Batch: 092206B

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
959026	SC-700B-WDR-065	mg/L	EPA 200.8	16:42	2.08	0.0010	0.0019

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	959026	0.0019	0.0018	5.41%	≤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	959026	0.0019	2.08	0.0500	0.104	0.117	0.106	111%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0519	0.0500	104%	95% - 105%	Yes
MRCVS#1	0.0516	0.0500	103%	90% - 110%	Yes
ICS	0.106	0.100	106%	80% - 120%	Yes
LCS	0.0515	0.0500	103%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Laboratory No.: 959026

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Date: September 28, 2006
Collected: September 20, 2006
Received: September 20, 2006
Prep/ Analyzed: September 20, 2006
Analytical Batch: 09CrH06N

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
959026	SC-700B-WDR-065	12:56	21:23	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	958971	0.00346	0.00348	0.58%	< 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	959026	0.00	1.06	0.00100	0.00106	0.00103	0.00106	97.2%	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	0.0100	0.0100	100%	95% - 105%	Yes
MRCVS#2	0.00993	0.0100	99.3%	95% - 105%	Yes
LCS	0.00502	0.00500	100%	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.

Mona Nassimi, Manager
Analytical Services

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REPORT

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Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959026
Date: September 28, 2006
Collected: September 20, 2006
Received: September 20, 2006
Prep/ Analyzed: September 21, 2006
Analytical Batch: 09TUC06Q

Investigation: **Turbidity by Method EPA 180.1**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
959026	SC-700B-WDR-065	12:56	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	959021-16	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	7.70	8.00	96.3%	90% - 110%	Yes
LCS	7.72	8.00	96.5%	90% - 110%	Yes
LCS	7.60	8.00	95.0%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi

Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959026
Date: September 28, 2006
Collected: September 20, 2006
Received: September 20, 2006
Prep/ Analyzed: September 21, 2006
Analytical Batch: 09PH06K

Investigation:

pH by EPA 150.1

Analytical Results pH

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	MDL	RL	Results
959026	SC-700B-WDR-065	12:56	08:32	pH Units	0.0570	2.00	8.09

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	959026	8.09	8.11	0.02	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.01	7.00	0.01	± 0.100 Units	Yes
LCS #1	7.01	7.00	0.01	± 0.100 Units	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

John C. Hall
for Mona Nassimi

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959026
Date: September 28, 2006
Collected: September 20, 2006
Received: September 20, 2006
Prep/ Analyzed: September 21, 2006
Analytical Batch: 09EC06I

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
959026	SC-700B-WDR-065	µmhos/cm	EPA 120.1	10.0	20.0	8270

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	959026	8270	8280	0.12%	≤ 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	942	1000	94.2%	90% - 110%	Yes
LCS	689	706	97.6%	90% - 110%	Yes

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959026
Date: September 28, 2006
Collected: September 20, 2006
Received: September 20, 2006
Prep/ Analyzed: September 25, 2006
Analytical Batch: 09TDS06I

Investigation: **Total Dissolved Solids by EPA 160.1**

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
959026	SC-700B-WDR-065	mg/L	EPA 160.1	250	4480

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	959026	4480	4230	2.87%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	487	500	97.4%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

for Mona Nassimi

Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-065]

COC Number
TURNAROUND TIME 5 Days
DATE 9-20-06 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: 346129.1M.02.E2
SAMPLERS (SIGNATURE: Chris Knight

959026

Rec'd 09/20/06
sec 959026

RUS

SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)	Turbidity (180.1)									NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-065	9-20-06	12:56	Groundwater	x	x	x	x	x	x									3	p-7
																		3	TOTAL NUMBER OF CONTAINERS

For Sample Conditions See Form Attached

ALERT!!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	Chris Knight	Chris Knight	OMI	9-20-06 14:10
Signature (Received)	Makarova	Makarova	T-L I	9/20/06 20:45
Signature (Relinquished)				
Signature (Received)				
Signature (Relinquished)				
Signature (Received)				

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

SPECIAL REQUIREMENTS:

TRUESDAIL LABORATORIES, INC.

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

October 3, 2006

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-066 PROJECT, GROUNDWATER MONITORING,

TLI NO.: 959238

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-066 project groundwater monitoring for Hexavalent and Total Chromium, Turbidity, Specific Conductivity, pH, and Total Dissolved Solids. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on September 27, 2006, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

No violations or nonconformance actions occurred for this data package.

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

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

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

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2

Laboratory No.: 959238
Date: October 3, 2006
Collected: September 27, 2006
Received: September 27, 2006

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 120.1	Specific Conductivity	Tina Acquiat
EPA 150.1	pH	Tina Acquiat
EPA 160.1	Total Dissolved Solids	Tina Acquiat
EPA 180.1	Turbidity	Gautam Savani
EPA 200.7	Total Chromium	Stanley Hsieh
EPA 218.6	Hexavalent Chromium	Roger Chen

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2
Prep. Batch: 100206B

Laboratory No.: 959238

Date: October 3, 2006
Collected: September 27, 2006
Received: September 27, 2006
Prep/ Analyzed: October 2, 2006
Analytical Batch: 100206B

Investigation: **Total Dissolved Chromium by Inductively Coupled Argon Plasma Atomic Emission Spectrometer using EPA 200.7**

Analytical Results Total Chromium

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
959238	SC-700B-WDR-066	mg/L	EPA 200.7	14:07	1.04	0.0010	ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	959238	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	959238	0.000	1.04	0.0100	0.0104	0.00822	0.0104	79.0%	75-125%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00995	0.0100	99.5%	95% - 105%	Yes
MRCVS#1	0.0101	0.0100	101%	90% - 110%	Yes
ICS	0.0112	0.0100	112%	80% - 120%	Yes
LCS	0.00948	0.0100	94.8%	90% - 110%	Yes

ND: Not detected at reporting limit
DF: Dilution Factor

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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REPORT

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

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959238

Date: October 3, 2006
Collected: September 27, 2006
Received: September 27, 2006
Prep/ Analyzed: September 28, 2006
Analytical Batch: 09CrH06T

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
959238	SC-700B-WDR-066	11:55	09:07	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	959238	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	959238	0.00	1.06	0.00100	0.00106	0.00101	0.00106	95.3%	90-110%	Yes
MS	959238	0.00	5.00	0.00100	0.00500	0.00488	0.00500	97.6%	90-110%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00496	0.00500	99.2%	90% - 110%	Yes
MRCVS#1	0.00996	0.0100	99.6%	95% - 105%	Yes
MRCVS#2	0.00965	0.0100	96.5%	95% - 105%	Yes
LCS	0.00494	0.00500	98.8%	90% - 110%	Yes
LCSD	0.00493	0.00500	98.6%	90% - 110%	Yes

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

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959238
Date: October 3, 2006
Collected: September 27, 2006
Received: September 27, 2006
Prep/ Analyzed: September 27, 2006
Analytical Batch: 09TUC06T

Investigation: **Turbidity by Method EPA 180.1**

Analytical Results Turbidity

TLI I.D.	Field I.D.	Sample Time	Units	DF	RL	Results
959238	SC-700B-WDR-066	11:55	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	959196-4	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	7.35	8.00	91.9%	90% - 110%	Yes
LCS	7.30	8.00	91.3%	90% - 110%	Yes
LCS	7.38	8.00	92.3%	90% - 110%	Yes

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

Respectfully submitted,
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Mona Nassimi, Manager
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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959238
Date: October 3, 2006
Collected: September 27, 2006
Received: September 27, 2006
Prep/ Analyzed: September 28, 2006
Analytical Batch: 09PH06P

Investigation:

pH by EPA 150.1

Analytical Results pH

TLI I.D.	Field I.D.	Sample Time	Run Time	Units	MDL	RL	Results
959238	SC-700B-WDR-066	11:55	08:47	pH Units	0.0570	2.00	8.03

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	959239	8.14	8.17	0.03	± 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.00	7.00	0.00	± 0.100 Units	Yes
LCS #1	7.01	7.00	0.01	± 0.100 Units	Yes

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Mona Nassimi, Manager
Analytical Services

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959238
Date: October 3, 2006
Collected: September 27, 2006
Received: September 27, 2006
Prep/ Analyzed: September 28, 2006
Analytical Batch: 09EC06L

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	Field I.D.	Units	Method	DF	RL	Results
959238	SC-700B-WDR-066	µmhos/cm	EPA 120.1	10.0	20.0	8520

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	959238	8520	8540	0.23%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
CCS	690	706	97.7%	90% - 110%	Yes
CVS#1	962	1000	96.2%	90% - 110%	Yes
LCS	692	706	98.0%	90% - 110%	Yes

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Mona Nassimi, Manager
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REPORT

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Oakland, CA 94612
Attention: Shawn Duffy

Sample: One (1) Groundwater Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 959238
Date: October 3, 2006
Collected: September 27, 2006
Received: September 27, 2006
Prep/ Analyzed: September 28, 2006
Analytical Batch: 09TDS06L

Investigation: **Total Dissolved Solids by EPA 160.1**

Analytical Results Total Dissolved Solids

TLI I.D.	Field I.D.	Units	Method	RL	Results
959238	SC-700B-WDR-066	mg/L	EPA 160.1	250	4460

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	959238	4460	4680	2.41%	≤ 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	480	500	96.0%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-066]

959238

COC Number

TURNAROUND TIME 5 Days

DATE 9-27-06 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: 346129.1M.02.E2

SAMPLERS (SIGNATURE: [signature]

SAMPLE I.D.	DATE	TIME	DESCRIPTION	CR6 (218.6) Lab Filtered	Total Metals (200.7) Total Chromium	Specific Conductance (120.1)	pH (150.1)	TDS (160.1)	Turbidity (180.1)									NUMBER OF CONTAINERS	COMMENTS
SC-700B-WDR-066	9-27-06	1155	Groundwater	x	x	x	x	x	x									3	pH=d
																		3	TOTAL NUMBER OF CONTAINERS

Rec'd 09/27/06
959238

RUSH!

ALERT!!
Level III QC

032

CHAIN OF CUSTODY SIGNATURE RECORD

	Signature	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished)	[signature]	GREY SIBLE	ONT Topock / EM3	9-27-06 / 1210
Signature (Received)	L. Shabynina	L. Shabynina	TL	9/27/06 / 20:00
Signature (Relinquished)				
Signature (Received)				
Signature (Relinquished)				
Signature (Received)				

SAMPLE CONDITIONS

RECEIVED COOL ☐ WARM ☐ °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

For Sample Conditions See Form Attached

RECEIVED
OCT 02 2006
CH2M HILL
REDDING

SEVERN TRENT STL

STL Los Angeles
1721 South Grand Avenue
Santa Ana, CA 92705

Tel: 714 258 8610 Fax: 714 258 0921
www.stl-inc.com

September 28, 2006

STL LOT NUMBER: **E6I120308**
PO/CONTRACT: 346129.1M.02.E2

Chip Poalinelli
E2 Consulting Engineers, Inc
1900 Powell Street, Suite 250
Emeryville, CA 94608

Dear Mr. Poalinelli,

This report contains the analytical results for the sample received under chain of custody by STL Los Angeles on September 12, 2006. This sample is associated with your PG&E TOPOCK GWM project.

STL Los Angeles certifies that the test results provided in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in the case narrative. The case narrative is an integral part of the report. NELAP Certification Number for STL Los Angeles is 01118CA / E87652.

Any matrix related anomaly is footnoted within the report. A cooler receipt temperature between 2-6 degrees Celsius is within EPA acceptance criteria. The temperature(s) of the cooler received for this project can be found on the Project Receipt Checklist. Historical control limits for the LCS are used to define the estimate of uncertainty for a method. All applicable quality control procedures met method-specified acceptance criteria.

Preliminary results were sent via facsimile on September 22, 2006.

This report shall not be reproduced except in full, without the written approval of the laboratory.

This report contains 000232 pages.

E6I120308

Severn Trent Laboratories
1721 Grand Ave, Santa Ana, CA 92705
(714)258-8610

CHAIN OF CUSTODY RECORD

[Sludge Sample-12]

COC Number

TURNAROUND TIME 10 Days

DATE 9-7-06 PAGE 1 OF 1

COMPANY E2

PROJECT NAME PG&E Topock GWM

PHONE (530) 229-3303 FAX (530) 339-3303

ADDRESS 155 Grand Ave Ste 1000
Oakland, CA 94612

P.O. NUMBER 346129.1M.02.E2 TEAM 1

SAMPLERS (SIGNATURE Chris Knight

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Metals (6010B) Title 22	Metals (7199)	Mercury (7471A)											NUMBER OF CONTAINERS	COMMENTS
SC-Sludge-WDR-063	9-7-06	10:16	Soil	x	x	x											4	
																	4	TOTAL NUMBER OF CONTAINERS

0000003

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished) David Chaney	David Chaney	OMI	9-7-06 15:30
Signature (Received) Matt Ousset	Matt Ousset	STL	9-12-06 13:55
Signature (Relinquished) Matt Ousset	Matt Ousset	STL	9-12-06 14:10
Signature (Received) Albert Vargas	Albert Vargas	STL	9-12-06 14:10
Signature (Relinquished)	Printed Name	Company/ Agency	Date/ Time
Signature (Received)	Printed Name	Company/ Agency	Date/ Time

SAMPLE CONDITIONS

RECEIVED COOL ☒ WARM ☐ 5.0 °F

CUSTODY SEALED YES ☐ NO ☐

SPECIAL REQUIREMENTS:

METHOD / ANALYST SUMMARY

E6I120308

ANALYTICAL METHOD	ANALYST	ANALYST ID
MCAWW 160.3 MOD	FLORIAN ZIMMERMANN	000064
SW846 6010B	Josephine Asuncion	021088
SW846 7199	Yuriy Zakhrabov	000022
SW846 7471A	Hao Ton	000023

References:

MCAWW "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, March 1983 and subsequent revisions.

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

E2 Consulting Engineers, Inc

Client Sample ID: SC-SLUDGE-WDR-063

TOTAL Metals

Lot-Sample #...: E6I120308-001 **Matrix.....:** SO
Date Sampled...: 09/07/06 10:16 **Date Received..:** 09/12/06 14:10
% Moisture.....: 80

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Prep Batch #...: 6255490						
Arsenic	**15**	**10**	**mg/kg**	**SW846 6010B**	**09/13-09/21/06**	**JD5751AC**
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Antimony	ND G	61	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AD
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Barium	**97**	**20**	**mg/kg**	**SW846 6010B**	**09/13-09/21/06**	**JD5751AE**
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Cadmium	ND G	5.1	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AF
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Chromium	**15000**	**10**	**mg/kg**	**SW846 6010B**	**09/13-09/21/06**	**JD5751AG**
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Beryllium	ND G	5.1	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AH
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Lead	ND G	5.1	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AJ
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Selenium	**11**	**5.1**	**mg/kg**	**SW846 6010B**	**09/13-09/21/06**	**JD5751AK**
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Silver	ND G	10	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AL
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		

(Continued on next page)

E2 Consulting Engineers, Inc

Client Sample ID: SC-SLUDGE-WDR-063

TOTAL Metals

Lot-Sample #...: E6I120308-001 **Matrix.....:** SO

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD	PREPARATION-ANALYSIS DATE	WORK ORDER #
Cobalt	ND G	51	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AM
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Copper	**140**	**25**	**mg/kg**	**SW846 6010B**	**09/13-09/21/06**	**JD5751AN**
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Molybdenum	ND G	40	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AP
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Nickel	**42**	**40**	**mg/kg**	**SW846 6010B**	**09/13-09/21/06**	**JD5751AQ**
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Thallium	ND G	10	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AR
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Vanadium	**82**	**51**	**mg/kg**	**SW846 6010B**	**09/13-09/21/06**	**JD5751AT**
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		
Zinc	ND G	20	mg/kg	SW846 6010B	09/13-09/21/06	JD5751AU
		Dilution Factor: 2		Analysis Time..: 12:33	Analyst ID.....: 021088	
		Instrument ID..: M01		MS Run #.....: 6258172		

Prep Batch #...: 6256193

Mercury	**2.0**	**0.51**	**mg/kg**	**SW846 7471A**	**09/14/06**	**JD5751AV**
		Dilution Factor: 1		Analysis Time..: 14:50	Analyst ID.....: 000023	
		Instrument ID..: M04		MS Run #.....: 6258185		

NOTE(S):

Results and reporting limits have been adjusted for dry weight.

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

E2 Consulting Engineers, Inc

Client Sample ID: SC-SLUDGE-WDR-063

General Chemistry

Lot-Sample #...: E6I120308-001 Work Order #...: JD575 Matrix.....: SO
Date Sampled...: 09/07/06 10:16 Date Received..: 09/12/06 14:10
% Moisture.....: 80

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	84	5.1	mg/kg	SW846 7199	09/13/06	6256222
		Dilution Factor: 5		Analysis Time..: 12:41	Analyst ID.....: 000022	
		Instrument ID..: W18		MS Run #.....: 6256185		
Percent Moisture	80	0.10	%	MCAWW 160.3 MOD	09/12-09/13/06	6255525
		Dilution Factor: 1		Analysis Time..: 07:30	Analyst ID.....: 0000645	
		Instrument ID..: W15		MS Run #.....: 6255309		

NOTE(S):

RL Reporting Limit

Results and reporting limits have been adjusted for dry weight.

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 20, 2006

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

Dear Mr. Duffy:

SUBJECT: CASE NARRATIVE PG&E TOPOCK PROJECT, SLUDGE SAMPLE-12, TLI NO.: 958597

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock project, Sludge Sample-12. A summary table for this sample delivery group is included in Section 2. Complete laboratory report, 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 sample was received and delivered with the chain of custody on September 7, 2006, intact and in chilled condition. The sample will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

No violations or nonconformance actions occurred for this data package.

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

Respectfully Submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi
Manager, Analytical Services

K. R. P. Iyer

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

TRUESDAIL LABORATORIES, INC.

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Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2

Laboratory No.: 958597
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006

ANALYST LIST

METHOD	PARAMETER	ANALYST
EPA 300.0	Fluoride	Giawad Ghenniwa

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REPORT

Client: E2 Consulting Engineers, Inc.
155 Grand Ave. Suite 1000
Oakland, CA 94612
Attention: Shawn Duffy
Sample: One (1) Soil Sample
Project Name: PG&E Topock Project
Project No.: 346129.IM.02.E2
P.O. No.: 346129.IM.02.E2

Laboratory No.: 958597
Date: September 20, 2006
Collected: September 7, 2006
Received: September 7, 2006
Prep/ Analyzed: September 11, 2006
Analytical Batch: 09AN06F

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

Analytical Results Fluoride

TLI I.D.	Field I.D.	Units	Method	Run Time	DF	RL	Results
958597	SC-Sludge-WDR-063	mg/kg	EPA 300.0	13:25	20.0	4.00	15.8

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	958597	15.8	15.5	1.92%	≤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	958597	15.8	20.0	2.00	40.0	56.6	55.8	102%	85-115%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	4.10	4.00	103%	90% - 110%	Yes
MRCVS#1	3.10	3.00	103%	90% - 110%	Yes
LCS	4.11	4.00	103%	90% - 110%	Yes
LCSD	4.10	4.00	103%	90% - 110%	Yes

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

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager
Analytical Services

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

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

CHAIN OF CUSTODY RECORD

[Sludge Sample-12]

958597

COC Number
TURNAROUND TIME 10 Days
DATE 9-7-06 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: 346129.IM.02.E2
SAMPLERS (SIGNATURE: Chris Knight

Rec'd 09/07/06
958597

SAMPLE I.D.	DATE	TIME	DESCRIPTION	Arions (300.0) Fl	NUMBER OF CONTAINERS	COMMENTS
SC-Sludge-WDR-063	9-7-06	10:16	Soil	x	1	
					1	TOTAL NUMBER OF CONTAINERS

013

ALERT!!
Level III QC

CHAIN OF CUSTODY SIGNATURE RECORD

	Printed Name	Company/ Agency	Date/ Time
Signature (Relinquished) David Chaney	David Chaney	OMI	9-7-06 15:30
Signature (Received) L. Shakuniune	Shakuniune	TL	9/7/06 18:05
Signature (Relinquished)			
Signature (Received)			
Signature (Relinquished)			
Signature (Received)			

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

SPECIAL REQUIREMENTS:

For Sample Conditions
See Form Attached