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March 14, 2008

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

Subject: Board Order R7-2006-0060

PG&E Topock Compressor Station, Needles, California Interim Measure No. 3 Groundwater Treatment System

Discharge to Injection Wells February 2008 Monitoring Report

Dear Mr. Perdue:

Enclosed is the February 2008 Monitoring Report for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station, Interim Measure (IM) No. 3 Groundwater Treatment System.

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

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

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

Sincerely,

Curt Russell

Topock Onsite Project Manager

Enclosures:

February 2008 Monitoring Report for the IM No. 3 Groundwater Treatment System

cc: Abdi Haile, Water Board Cliff Raley, Water Board

Tom Vandenberg, State Water Resources Control Board

Aaron Yue, DTSC

February 2008 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

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

Prepared for

California Regional Water Quality Control Board Colorado River Basin Region

on behalf of

Pacific Gas and Electric Company

March 14, 2008

CH2MHILL 155 Grand Avenue, Suite 1000 Oakland, CA 94612

February 2008 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System Waste Discharge Requirements Order No. R7-2006-0060 PG&E Topock Compressor Station Needles, California

Prepared for Pacific Gas and Electric Company

March 14, 2008

No. C68986

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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A February 2008 Laboratory Analytical Reports

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Acronyms and Abbreviations

BTEX benzene, toluene, ethylbenzene, and xylenes

EPA U.S. Environmental Protection Agency

gpm gallons per minute

IM Interim Measure

MRP Monitoring and Reporting Program

PG&E Pacific Gas and Electric Company

PST Pacific Standard Time

TOC total organic carbon

Truesdail Laboratories, Inc.

Water Board California Regional Water Quality Control Board, Colorado River

Basin Region

WDR Waste Discharge Requirements

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1.0 Introduction

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

California Regional Water Quality Control Board, Colorado River Basin Region (Water Board) Board Order No. R7-2006-0060 authorizes PG&E to inject treated groundwater into injection wells located on San Bernardino County Assessor's Parcel No. 650-151-06. Order No. R7-2006-0060 was issued September 20, 2006, and is the successor to Order No. R7-2004-0103. The Monitoring and Reporting Program (MRP) under the order requires monthly monitoring reports to be submitted by the fifteenth day of the following month.

This report covers monitoring activities related to operation of the IM No. 3 groundwater treatment system during February 2008. The groundwater monitoring results for wells OW-1S/M/D, OW-2S/M/D, OW-5S/M/D, CW-1M/D, CW-2M/D, CW-3M/D, and CW-4M/D will be submitted under separate cover, as part of the Compliance Monitoring Program.

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2.0 Sampling Station Locations

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

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3.0 Description of Activities

The treatment system was initially operated between July 25 and July 28, 2005 for the WDR-mandated startup phase. Discharge to the injection wells was initiated July 31, 2005 after successfully completing the startup phase in accordance with Order R7-2004-0103. Full-time operation of the treatment system commenced in August 2005.

Influent to the treatment facility, permitted by Order R7-2006-0060 (successor to Order R7-2004-0103), includes the following components:

- Groundwater from extraction wells TW-2S, TW-2D, TW-3D, and PE-1.
- Purged groundwater and water generated from rinsing field equipment during monitoring events.
- Groundwater generated during well installation, well development, and aquifer testing.

During February 2008, extraction wells TW-3D and PE-1 operated at a target pump rate of 135 gallons per minute (gpm) excluding periods of planned and unplanned downtime. Extraction wells TW-2S and TW-2D were not operated during February 2008. The operational run time for the IM groundwater extraction system (combined or individual pumping) was 99 percent during the February 2008 reporting period.

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

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

During February 2008, PG&E conducted well rehabilitation activities on injection well IW-2 in an attempt to restore the specific injectivity of the injection well to acceptable levels. The well rehabilitation work was conducted while IW-2 was offline and IW-3 was in service. The well rehabilitation efforts included pumping tests, wire brushing, and well surging to remove sediments. The water produced during these activities was trucked to the IM No. 3 treatment plant for processing. The initial results of this maintenance work on IW-2 is some improvement in performance, but additional well rehabilitation work will continue in March to further improve the well performance. The only unusual occurrence during this activity was the detection (by smell) of a petroleum odor in a transport container after a batch of water was added to the treatment plant. An additional sample of the treatment plant effluent was collected and analyzed to determine if the treatment plant effectiveness had been compromised. No petroleum-based compounds were detected in the effluent.

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4.0 Groundwater Treatment System Flow Rates

The February 2008 treatment system monthly average flow rates (influent, effluent, and reverse osmosis concentrate) are presented in Table 2.

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

The IM No. 3 facility treated approximately 5,569,588 gallons of extracted groundwater during February 2008. The IM No. 3 facility also treated approximately 14,900 gallons of water generated from the groundwater monitoring program and 19,600 of injection well development water. There were no containers of solids transported offsite from the IM No. 3 facility during February 2008.

Periods of planned and unplanned extraction system down time (that together resulted in 1 percent of downtime during February 2008) 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.

- **February 13, 2008 (planned):** The extraction well system was offline from 9:15 am until 3:54 pm to complete electrical testing, maintenance on the microfilter unit, servicing the air compressor, and replacing/cleaning select inline instrumentation. Extraction system downtime was 6 hours 39 minutes.
- **February 20, 2008 (unplanned):** The extraction well system was offline from 2:59 pm until 3:08 pm and 3:21 pm to until 3:28 pm due to temporary loss of City of Needles power. Extraction system downtime was 16 minutes.
- **February 21, 2008 (unplanned):** The extraction well system was offline from 9:49 am until 9:50 am while transferring operations to generator power and 12:15 pm until 12:21 pm to return operations to City of Needles power. Extraction system downtime was 7 minutes.
- **February 24, 2008 (unplanned):** The extraction well system was offline from 7:03 am until 7:09 am to transfer operations to generator power and 8:14 am to until 8:20 am to return operations to City of Needles power. Extraction system downtime was 12 minutes.

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5.0 Sampling and Analytical Procedures

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

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

Truesdail is certified by the California Department of Health Services (Certification No. 1237) under the State of California's Environmental Laboratory Accreditation Program.

California certified laboratory analyses were performed in accordance with the latest edition of the "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 Code of Federal Regulations Part 136), promulgated by the United States Environmental Protection Agency (EPA).

During February 2008, analysis of pH was conducted at Truesdail for each sample. Starting November 20, 2007, analysis of pH was also conducted by field method pursuant to the Water Board letter dated October 16, 2007 (subject: Clarification of Monitoring and Reporting Program Requirements) authorizing pH measurements to be conducted in the field. The field method pH samples were collected at the designated sampling locations and field tested within 15 minutes of sampling.

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

Influent, effluent, reverse osmosis concentrate, and sludge sampling were conducted in accordance with the sampling frequency required by the MRP. The sampling analytical results are shown in Tables 3, 4, 5, and 6, respectively.

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

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6.0 Analytical Results

Laboratory reports for samples collected in February 2008 were prepared by certified analytical laboratories, and are presented in Appendix A.

The February 2008 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 was followed:

- The influent was sampled monthly; the sampling date was February 6, 2008. Results are presented in Table 3.
- The effluent was sampled weekly; the sample dates were February 6, 14, 20 and 27, 2008. Results are presented in Table 4.
- The reverse osmosis concentrate was sampled monthly; the sample date was February 6, 2008. Results are presented in Table 5.
- The sludge was sampled monthly; the sample date was February 20, 2008. In accordance with the WDRs, sludge is required to be sampled each time it is transported offsite (unless sludge is transported offsite more frequently than monthly, in which case the sampling frequency is monthly). Results are presented in Table 6.
- The sludge is required to have an aquatic bioassay test quarterly; the First Quarter 2008 aquatic bioassay test was performed on a sludge sample collected January 3, 2008.
 Results were presented in the January 2008 Monitoring Report submitted to the Water Board February 15, 2008.

Table 7 identifies the laboratory that performed each analysis and lists the following required information:

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

In addition to the WDR required parameters, one effluent sample (collected February 6, 2008, as described in Section 3.0) was analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX), and other volatile organic hydrocarbons. The additional analyses were completed for IM No. 3 facility evaluation. Results were non-detect for BTEX and all other

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organics analyzed (concentrations were below laboratory reporting limits). The laboratory report is included in Appendix A. $\frac{1}{2} \int_{\mathbb{R}^{n}} \left(\frac{1}{2} \int_{\mathbb{R}^{n}} \left($

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7.0 Conclusions

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

In addition, no incidents of non-compliance were identified during the reporting period, 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.

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8.0 Certification

On August 12, 2005, PG&E submitted a signature delegation letter to the Water Board, delegating PG&E signature authority to Mr. Curt Russell and Ms. Yvonne Meeks for correspondence regarding Board Order R7-2004-0103. Order R7-2006-0600 is the successor to Order R7-2004-0103; an additional signature authority delegation is not required, as confirmed in an email from Jose Cortez dated December 12, 2006.

Certification Statement:

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

Signature:	behum
Name:	Curt Russell
Company: _	Pacific Gas and Electric Company
Title:	Topock Onsite Project Manager
Date:	March 14, 2008

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TABLE 1 Sampling Station Descriptions February 2008 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

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

Note:

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^{### =} Sequential sample identification number at each sample station.

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

TABLE 2 Flow Monitoring Results

February 2008 Monitoring Report for Interim Measure No. 3 Groundwater Treatment System

Parameter	System Influent ^{a,b} (gpm)	System Effluent ^{b,c} (gpm)	Reverse Osmosis Concentrate ^b (gpm)
February 2008 Average Monthly Flowrate	133.4	126.5	7.9

Notes:

gpm: gallons per minute.

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Extraction wells TW-3D and PE-1 were operated during February 2008.

^b The difference between influent flow rate and the sum of the effluent and reverse osmosis concentrate flow rates during February 2008 is less that 0.8 percent, which is within the range of acceptable accuracy (considering the margin of error for onsite instrumentation, the water contained within the sludge, purge water and injection well development water treated at the IM No. 3 facility; in addition to the water from extraction wells, and differences in the inventory of water in the treatment system between the beginning and end of the reporting period).

^c Effluent was discharged into injection well IW-03 during February 2008.

TABLE 3
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Influent Monitoring Results ^a
February 2008 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency											N	onthly												
Analytes Units ^b	TDS mg/L	Turbidity NTU	Specific Conductance µmhos/cm	Lab ^c pH	Field ^d pH pHunits		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	e Lead µg/L	Manganese μg/L	Molybdenum μg/L	Nickel μg/L		Nitrite (as N) mg/L	Sulfate mg/L	Iron μg/L	Zinc μg/L
Sample ID Date	50.4	0.0070	0.153	0.0700		0.27	2.9	0.26	0.0710	0.022	0.015	0.016	0.0048		0.0250	0.018	0.016	0.017	0.13	0.0350	0.0010	0.600	2.4	0.12
SC-100B-WDR-137 2/6/2008 RL	5410 250	ND (0.100) 0.100	7870 2.00	7.41 J 2.00	7.70	1390 1.0	1420 20.0	ND (50.0) 50.0	ND (0.500) 0.500	ND (3.0)	ND (5.0) 5.0	ND (300)	0.985 1 0.200	ND (10.0) 10.0	2.72 0.500	ND (2.0) 2.0	ND (20.0) 20.0	19.8 5.0	ND (20.0) 20.0	3.34 N	ID (0.0050 0.0050) 582 N 12.5	ID (20.0) 20.0	ND (20.0) 20.0

NOTES:

(---) = not required by the WDR Monitoring and Reporting Program

μg/L = micrograms per liter

mg/L = milligrams per liter

NTU = nephelometric turbidity units

µmhos/cm = micromhos per centimeter

ND = parameter not detected at the listed value

J = concentration or reporting limits estimated by laboratory or validation

MDL = method detection limit

RL = project reporting limit

N = nitrogen

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

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

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

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

TABLE 4 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs) Effluent Monitoring Results a February 2008 Monthly Report for Interim Measures No.3 Groundwater Treatment System

WDRs Effluent	Ave. Monthly	NA	NA	NA	6.5-8.4	6.5-8.4	25	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Limits ^b	Max Daily	NA	NA	NA	6.5-8.4	6.5-8.4	50	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Required Sampl	ing Frequency			We	eekly												Monthly	y							
	Analytes	TDS	Turbidity	Specific Conductance	Lab ^e e pH	Field ^f pH	Chromium	Hexavalent Chromium	Aluminium	Ammonia (as N)	Antimony	Arsenic	Barium	Boron	Copper	Fluoride	Lead	Manganese	Molybdenum	Nickel	Nitrate (as N)	Nitrite (as N)	Sulfate	Iron	Zinc
	Units ^c	mg/L	NTU	µmhos/cm	pHunits	pHunits	μg/L	μg/L	μg/L	mg/L	μg/L	μg/L	μg/L	mg/L	μg/L	mg/L	μg/L	μg/L	μg/L	μg/L	mg/L	mg/L	mg/L	μg/L	μg/L
1	MDLd	50.4	0.0070	0.153	0.0700		0.053	0.14	0.26	0.0710	0.022	0.015	0.016	0.0048	0.13	0.0250	0.018	0.016	0.017	0.13	0.0350	0.0010	0.600	2.4	0.12
Sample ID	Date																								
SC-700B-WDR-13	37 2/6/2008	4300	ND (0.100	6740	8.09 J	8.20	ND (1.0)	ND (1.0)	ND (50.0)	ND (0.500)	ND (3.0)	ND (5.0)	ND (300	0.964	ND (10.0) 2.15	ND (2.0)	96.4	12.5	ND (20.0)	2.73	ND (0.0050)	472	ND (20.0)) ND (20.0)
RL		250	0.100	2.00	2.00		1.0	1.0	50.0	0.500	3.0	5.0	300	0.200	10.0	0.500	2.0	20.0	5.0	20.0	1.00	0.0050	12.5	20.0	20.0
SC-700B-WDR-1	38 2/14/2008	4400	ND (0.100	7040	8.14 J	7.80	ND (1.0)	ND (0.20)																	
RL		250	0.100	2.00	2.00		1.0	0.20																	
SC-700B-WDR-1	39 2/20/2008	4220	ND (0.100	6990	8.01 J	7.90	ND (1.0)	ND (0.20)																	
RL		250	0.100	2.00	2.00		1.0	0.20																	
SC-700B-WDR-14	40 2/27/2008	4140	ND (0.100) 6820	7.97 J	8.00	ND (1.0)	ND (0.20)																	
RL		250	0.100	2.00	2.00		1.0	0.20																	

NOTES:

(---) = not required by the WDR Monitoring and Reporting Program

NA = not applicable

μg/L = micrograms per liter

mg/L = milligrams per liter

NTU = nephelometric turbidity units

µmhos/cm = micromhos per centimeter

ND = parameter not detected at the listed value

J = concentration or reporting limits estimated by laboratory or validation

RL = project reporting limit

MDL = method detection limit

N = nitrogen

^a Sampling location for all Effluent Samples is tap on pipe downstream from tank T-700 to injection wells (see attached P&ID TP-PR-10-10-04)

b In addition to the listed effluent limits, the WDRs state that the effluent shall not contain heavy metals, chemicals, pesticides or other constituents in concentrations toxic to human health

^c Units reported in this table are those units required in the WDRs

d MDL listed is the target MDL by analysis method; however, the MDL may change for each sample analysis due to the dilution required by the matrix to meet the method QC requirements. The target MDL for each method/analyte combination is calculated annually.

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

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

TABLE 5 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs) Reverse Osmosis Concentrate Results ^a

February 2008 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequence	у											Monthly											
Analytes Units ^b		Specific Conductand µmhos/cm 0.153	Lab ^c pH pHunits 0.0700	рН	Chromium mg/L 0.00027	Hexavalent Chromium mg/L 0.00014		Arsenic mg/L 0.000075	Barium mg/L 0.000016	Beryllium mg/L 0.00019	Cadmium mg/L 0.000058	Cobalt mg/L 0.000025	Copper mg/L 0.00065	Fluoride mg/L 0.0250	Lead mg/L 0.000018	Molybdenum mg/L 3 0.000084	mg/L	Nickel mg/L 0.00064	Selenium mg/L 0.000080	Silver mg/L 0.00011	Thallium mg/L 0.000018	Vanadium mg/L 0.000062	Zinc mg/L 0.00012
Sample ID Date	1 30.4	0.100	0.0700		0.00021	0.00014	0.000022	0.000073	0.000010	0.00013	0.00000	0.000023	0.00000	0.0200	0.000010	0.000004	0.000000	0.00004	0.000000	0.00011	0.000010	0.000002	0.00012
SC-701-WDR-137 2/6/2008	2280	27600	7.95 J	7.90	ND (0.0010)) ND (0.0010)	ND (0.0030)	ND (0.0050)	ND (0.300)	ND (0.0010)	ND (0.0020)	ND (0.0050) ND (0.010	00) 8.49	ND (0.0020	0) 0.0538	ND (0.00020)	ND (0.0200) 0.0132	0.0058	ND (0.0010) ND (0.0050)	ND (0.0200)
RL	250	2.00	2.00		0.0010	0.0010	0.0030	0.0050	0.300	0.0010	0.0020	0.0050	0.0100	0.500	0.0020	0.0050	0.00020	0.0200	0.0050	0.0050	0.0010	0.0050	0.0200

NOTES:

(---) = not required by the WDR Monitoring and Reporting Program

μg/L = micrograms per liter

mg/L = milligrams per liter

µmhos/cm = micromhos per centimeter

ND = parameter not detected at the listed value

J = concentration or reporting limits estimated by laboratory or validation

MDL = method detection limit

RL = project reporting limit

^a Sampling Location for all Reverse Osmosis Samples is tap on pipe T-701 (see attached P&ID TP-PR-10-10-08)

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

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

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

TABLE 6 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs) Sludge Monitoring Results^a

February 2008 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency										Monthly ⁰	C								
Analytes Units b MDL Sample ID Date	Chromium mg/kg 0.358	Hexavalent Chromium mg/kg 0.00029	Antimony mg/kg 3.33	Arsenic mg/kg 2.44	Barium mg/kg 0.417	Beryllium mg/kg 0.348	Cadmium mg/kg 0.268	Cobalt mg/kg 0.0422	Copper mg/kg 1.39	Fluoride mg/kg 0.100	Lead mg/kg 1.73	Molybdenum mg/kg 0.116	Mercury mg/kg 0.0030	Nickel mg/kg 0.731	Selenium mg/kg 5.37	Silver mg/kg 0.210	Thallium mg/kg 0.119	Vanadium mg/kg 0.378	Zinc mg/kg 0.959
SC-Sludge-WDR-137 2/20/2008	33200 37.4	703 30.1	812 74.8	247 37.4	195 37.4	341 37.4	75.2 74.8	21.3 3.74	1350 37.4	104 15.0	136 74.8	ND (3.74) 3.74	ND (0.149) 0.149	66.2 37.4	850 187	25.4 15.0	ND (7.47) 7.47	195 37.4	2260 187

NOTES:

(---) = not required by the WDR Monitoring and Reporting Program

ND = parameter not detected at the listed value

J = concentration or reporting limits estimated by laboratory or validation

mg/kg = milligrams per killogram

mg/L = milligrams per liter MDL = method detection limit

RL = project reporting limit

^a Sampling Location for all Sludge Samples is the Sludge Collection Bin (see attached P&ID TP-PR-10-10-06)

b Units reported in this table are those units required in the WDR

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

TABLE 7 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
February 2008 Monthly Report for Interim Measures No.3 Groundwater Treatment System

_ocation	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-100B	SC-100B-WDR-137	Ron Phelps	2/6/2008	9:00:00 AM	TLI	EPA 120.1	SC	2/7/2008	Tina Acquiat
					TLI	EPA 200.7	FE	2/11/2008	Michel Mendoza
					TLI	EPA 200.7	В	2/11/2008	Michel Mendoza
					TLI	EPA 200.8	ZN	2/11/2008	Linda Saetem
					TLI	EPA 200.8	SB	2/11/2008	Linda Saetem
					TLI	EPA 200.8	РВ	2/11/2008	Linda Saetem
					TLI	EPA 200.8	NI	2/11/2008	Linda Saetem
					TLI	EPA 200.8	MO	2/11/2008	Linda Saetem
					TLI	EPA 200.8	MN	2/11/2008	Linda Saetem
					TLI	EPA 200.8	CU	2/11/2008	Linda Saetem
					TLI	EPA 200.8	CR	2/11/2008	Linda Saetem
					TLI	EPA 200.8	BA	2/11/2008	Linda Saetem
					TLI	EPA 200.8	AS	2/11/2008	Linda Saetem
					TLI	EPA 200.8	AL	2/11/2008	Linda Saetem
					TLI	EPA 218.6	CR6	2/7/2008	Jean-Paul Gleeson
					TLI	EPA 300.0	FL	2/7/2008	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	2/7/2008	Giawad Ghenniwa
					TLI	EPA 300.0	NO3N	2/7/2008	Giawad Ghenniwa
					FIELD	HACH	PH	2/6/2008	Ron Phelps
					TLI	SM2130B	TRB	2/7/2008	Gautam Savani
					TLI	SM2540C	TDS	2/7/2008	Tina Acquiat
					TLI	SM4500-HB	PH	2/7/2008	Tina Acquiat
					TLI	SM4500NH3D	NH3N	2/11/2008	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	2/7/2008	Tina Acquiat
SC-700B	SC-700B-WDR-137	Ron Phelps	2/6/2008	9:00:00 AM	TLI	EPA 120.1	SC	2/7/2008	Tina Acquiat
					TLI	EPA 200.7	В	2/11/2008	Michel Mendoza
					TLI	EPA 200.7	FE	2/11/2008	Michel Mendoza
					TLI	EPA 200.8	AS	2/11/2008	Linda Saetem
					TLI	EPA 200.8	ZN	2/11/2008	Linda Saetem
					TLI	EPA 200.8	SB	2/11/2008	Linda Saetem
					TLI	EPA 200.8	PB	2/11/2008	Linda Saetem
					TLI	EPA 200.8	NI	2/11/2008	Linda Saetem
					TLI	EPA 200.8	MO	2/11/2008	Linda Saetem
					TLI	EPA 200.8	MN	2/11/2008	Linda Saetem
					TLI	EPA 200.8	CU	2/11/2008	Linda Saetem
					TLI	EPA 200.8	CR	2/11/2008	Linda Saetem

TABLE 7 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
February 2008 Monthly Report for Interim Measures No.3 Groundwater Treatment System

_ocation	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-137	Ron Phelps	2/6/2008	9:00:00 AM	TLI	EPA 200.8	AL	2/11/2008	Linda Saetem
					TLI	EPA 200.8	BA	2/11/2008	Linda Saetem
					TLI	EPA 218.6	CR6	2/7/2008	Jean-Paul Gleeson
					TLI	EPA 300.0	NO3N	2/7/2008	Giawad Ghenniwa
					TLI	EPA 300.0	SO4	2/7/2008	Giawad Ghenniwa
					TLI	EPA 300.0	FL	2/7/2008	Giawad Ghenniwa
					FIELD	HACH	PH	2/6/2008	Ron Phelps
					TLI	SM2130B	TRB	2/7/2008	Gautam Savani
					TLI	SM2540C	TDS	2/7/2008	Tina Acquiat
					TLI	SM4500-HB	PH	2/7/2008	Tina Acquiat
					TLI	SM4500NH3D	NH3N	2/11/2008	Iordan Stavrev
					TLI	SM4500NO2B	NO2N	2/7/2008	Tina Acquiat
SC-700B	SC-700B-WDR-138	Joe Aide	2/14/2008	8:30:00 AM	TLI	EPA 120.1	SC	2/15/2008	Tina Acquiat
					TLI	EPA 200.8	CR	2/15/2008	Linda Saetem
					TLI	EPA 218.6	CR6	2/15/2008	Jean-Paul Gleeson
					FIELD	HACH	PH	2/14/2008	Joe Aide
					TLI	SM2130B	TRB	2/15/2008	Gautam Savani
					TLI	SM2540C	TDS	2/15/2008	Tina Acquiat
					TLI	SM4500-HB	PH	2/15/2008	Tina Acquiat
SC-700B	SC-700B-WDR-139	Ron Phelps	2/20/2008	11:40:00 AM	TLI	EPA 120.1	SC	2/21/2008	Tina Acquiat
					TLI	EPA 200.8	CR	3/4/2008	Linda Saetem
					TLI	EPA 218.6	CR6	2/20/2008	Jean-Paul Gleeson
					FIELD	HACH	PH	2/20/2008	Ron Phelps
					TLI	SM2130B	TRB	2/21/2008	Gautam Savani
					TLI	SM2540C	TDS	2/21/2008	Tina Acquiat
					TLI	SM4500-HB	PH	2/21/2008	Tina Acquiat
SC-700B	SC-700B-WDR-140	John Deetz	2/27/2008	1:00:00 PM	TLI	EPA 120.1	SC	2/28/2008	Tina Acquiat
					TLI	EPA 200.8	CR	2/28/2008	Linda Saetem
					TLI	EPA 218.6	CR6	2/28/2008	Jean-Paul Gleeson
					FIELD	HACH	PH	2/27/2008	John Deetz
					TLI	SM2130B	TRB	2/28/2008	Gautam Savani
					TLI	SM2540C	TDS	2/28/2008	Tina Acquiat
					TLI	SM4500-HB	PH	2/28/2008	Tina Acquiat
SC-701	SC-701-WDR-137	Ron Phelps	2/6/2008	9:00:00 AM	TLI	EPA 120.1	SC	2/7/2008	Tina Acquiat
					TLI	EPA 200.8	CR	2/12/2008	Linda Saetem

TABLE 7 Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
February 2008 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-137	Ron Phelps	2/6/2008	9:00:00 AM	TLI	EPA 200.8	РВ	2/11/2008	Linda Saetem
					TLI	EPA 200.8	ZN	2/11/2008	Linda Saetem
					TLI	EPA 200.8	V	2/11/2008	Linda Saetem
					TLI	EPA 200.8	TL	2/11/2008	Linda Saetem
					TLI	EPA 200.8	CD	2/11/2008	Linda Saetem
					TLI	EPA 200.8	SB	2/11/2008	Linda Saetem
					TLI	EPA 200.8	NI	2/11/2008	Linda Saetem
					TLI	EPA 200.8	MO	2/12/2008	Linda Saetem
					TLI	EPA 200.8	CU	2/12/2008	Linda Saetem
					TLI	EPA 200.8	CO	2/11/2008	Linda Saetem
					TLI	EPA 200.8	BE	2/11/2008	Linda Saetem
					TLI	EPA 200.8	BA	2/11/2008	Linda Saetem
					TLI	EPA 200.8	AS	2/11/2008	Linda Saetem
					TLI	EPA 200.8	AG	2/11/2008	Linda Saetem
					TLI	EPA 200.8	SE	2/11/2008	Linda Saetem
					TLI	EPA 218.6	CR6	2/7/2008	Jean-Paul Gleeson
					TLI	EPA 245.1	HG	2/13/2008	Michel Mendoza
					TLI	EPA 300.0	FL	2/7/2008	Giawad Ghenniwa
					FIELD	HACH	PH	2/6/2008	Ron Phelps
					TLI	SM2540C	TDS	2/7/2008	Tina Acquiat
					TLI	SM4500-HB	PH	2/7/2008	Tina Acquiat
nase Seperator	SC-Sludge-WDR-137	Ron Phelps	2/20/2008	11:30:00 AM	TLI	EPA 300.0	FL	2/22/2008	Giawad Ghenniwa
					TLI	EPA 6010B	NI	2/28/2008	Michel Mendoza
					TLI	EPA 6010B	ZN	2/28/2008	Michel Mendoza
					TLI	EPA 6010B	V	2/29/2008	Michel Mendoza
					TLI	EPA 6010B	TL	3/3/2008	Michel Mendoza
					TLI	EPA 6010B	SE	2/29/2008	Michel Mendoza
					TLI	EPA 6010B	AS	2/28/2008	Michel Mendoza
					TLI	EPA 6010B	PB	2/29/2008	Michel Mendoza
					TLI	EPA 6010B	MO	3/3/2008	Michel Mendoza
					TLI	EPA 6010B	CU	2/28/2008	Michel Mendoza
					TLI	EPA 6010B	CR	2/28/2008	Michel Mendoza
					TLI	EPA 6010B	CO	3/3/2008	Michel Mendoza
					TLI	EPA 6010B	CD	2/28/2008	Michel Mendoza
					TLI	EPA 6010B	BE	2/28/2008	Michel Mendoza
					TLI	EPA 6010B	BA	2/28/2008	Michel Mendoza

TABLE 7
Board Order No. R7-2006-0060 Waste Discharge Requirements (WDRs)
Monitoring Information
February 2008 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
Phase Seperator	SC-Sludge-WDR-137	Ron Phelps	2/20/2008	11:30:00 AM	TLI	EPA 6010B	SB	2/29/2008	Michel Mendoza
					TLI	EPA 7471A	HG	2/28/2008	Michel Mendoza
					TLI	SW 6020A	AG	2/28/2008	Linda Saetem
					TLI	SW 7199	CR6	2/28/2008	David Blackburn

NOTES:

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

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

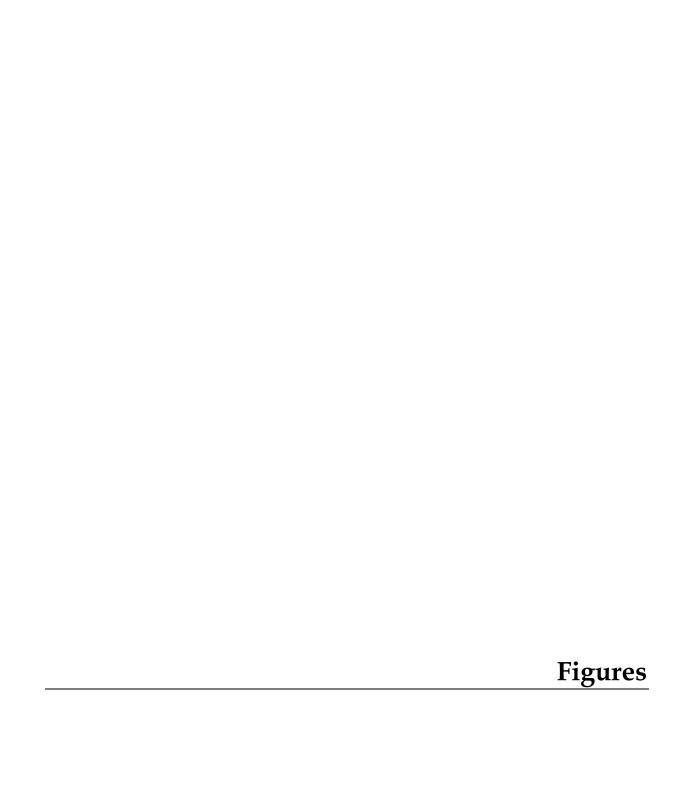
SC-701 = Sampling Location for all Reverse Osmosis Samples is tap on pipe T-701 (see attached P&ID TP-PR-10-10-08)

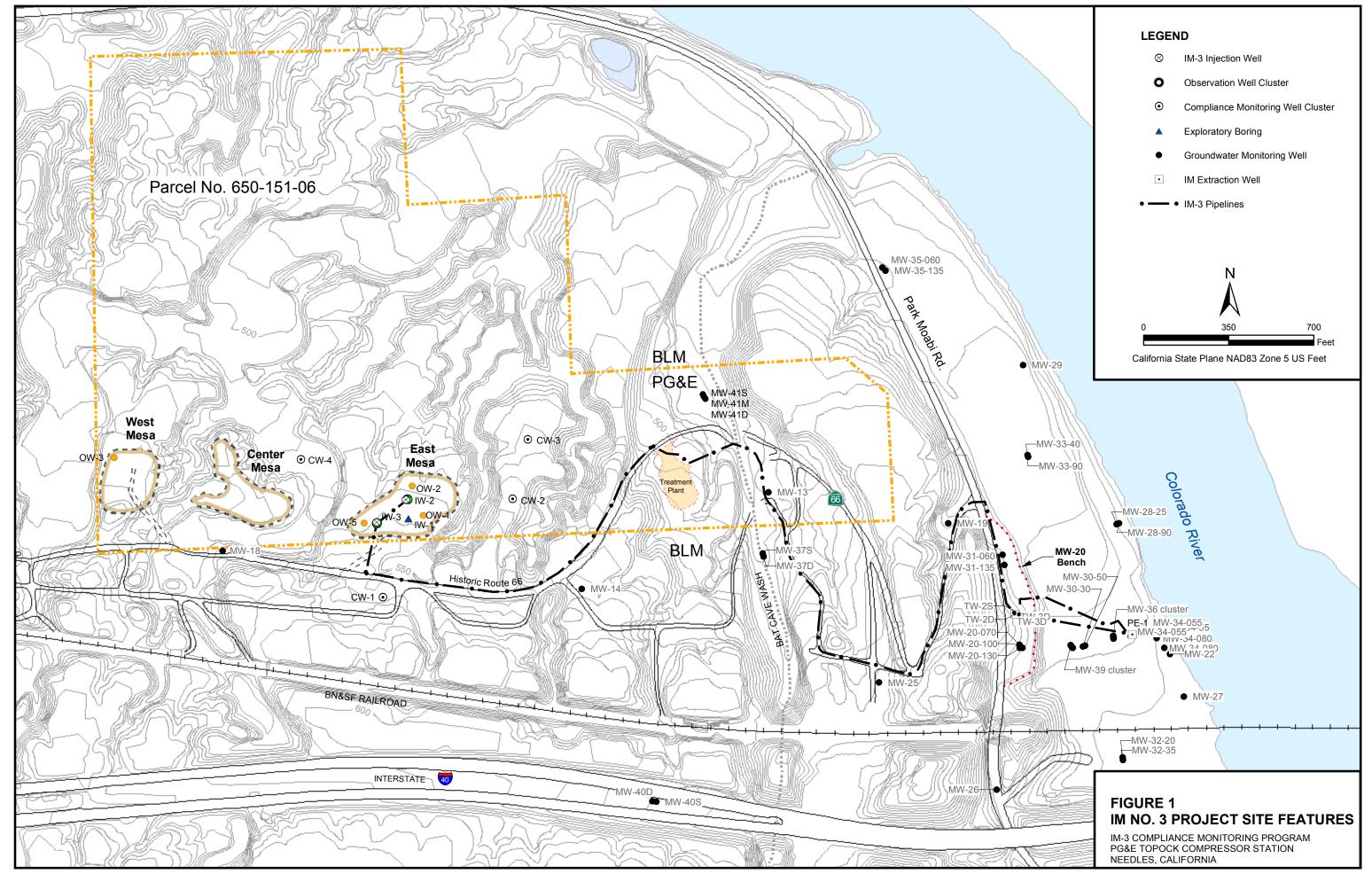
Prior to April 11, 2007 the analytical methods listed in the 40 CFR Part 136 for pH and TDS were E150.1 and E160.1, respectively. Per EPA and Department of Health Services guidelines, the analytical methods listed in the current 40 CFR Part 136 have changed to SM4500-H B and SM2540C as shown on the table.

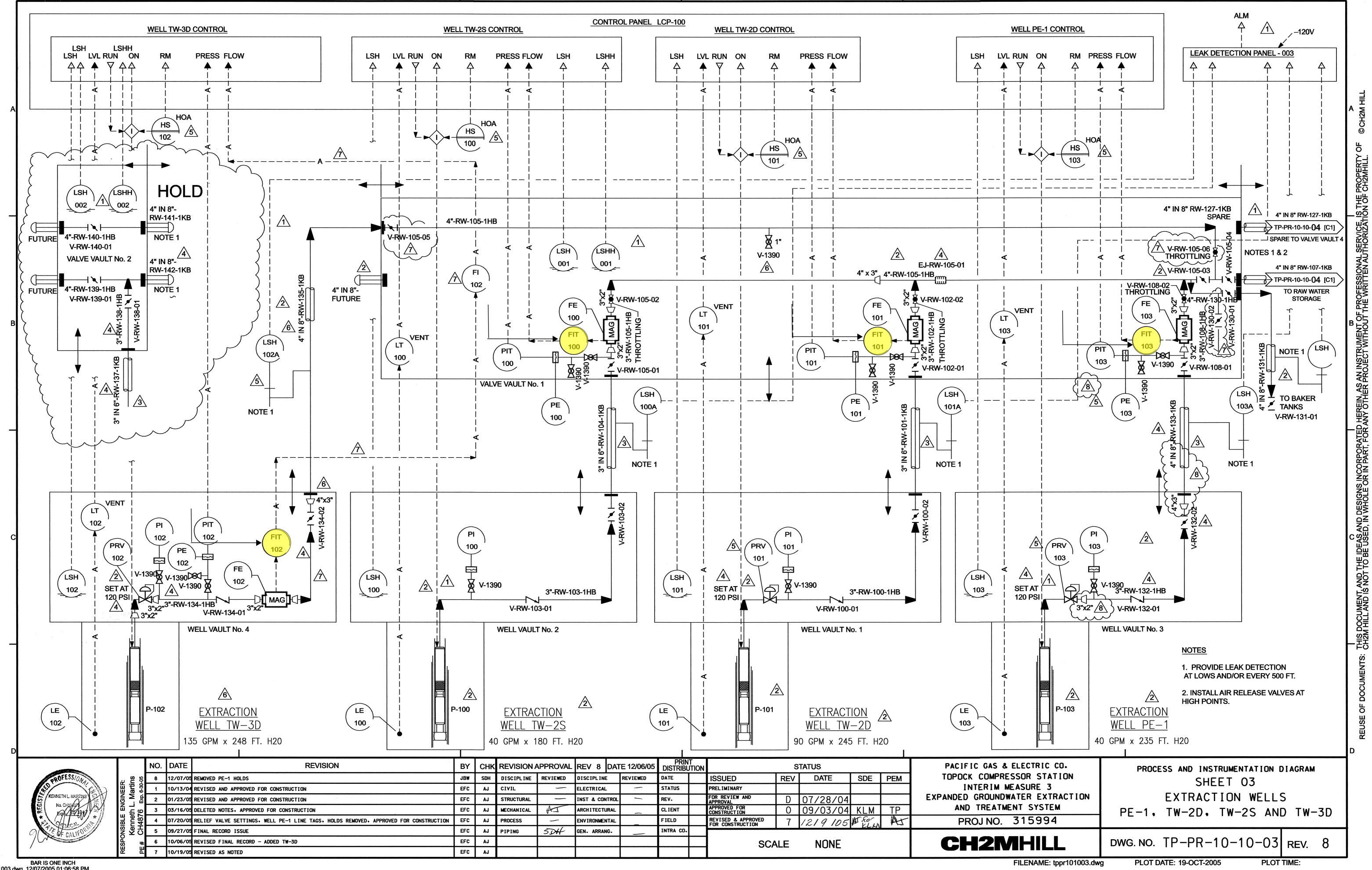
TLI = Truesdail Laboratories, Inc.

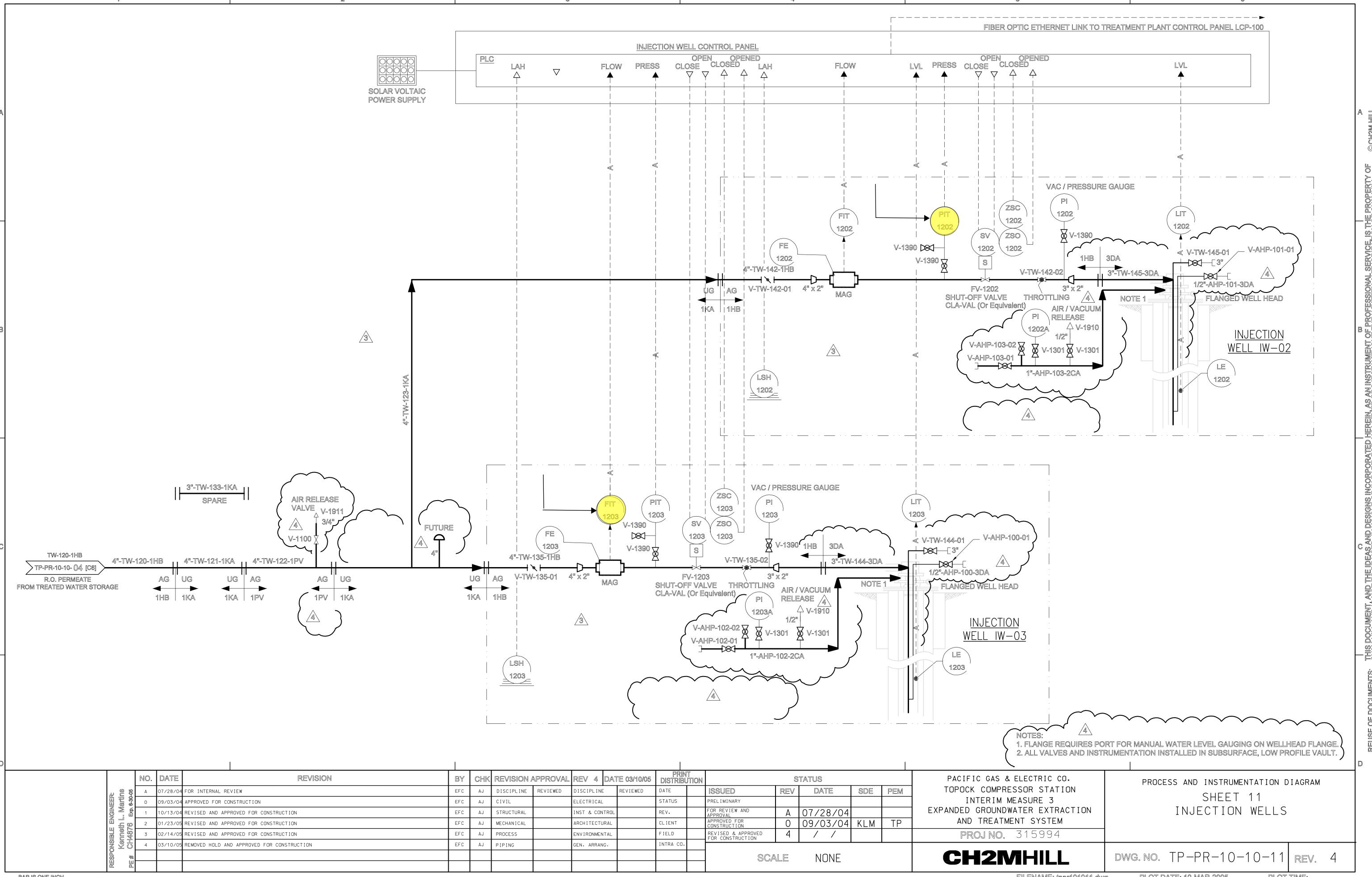
ATL = Aquatic Testing Laboratories

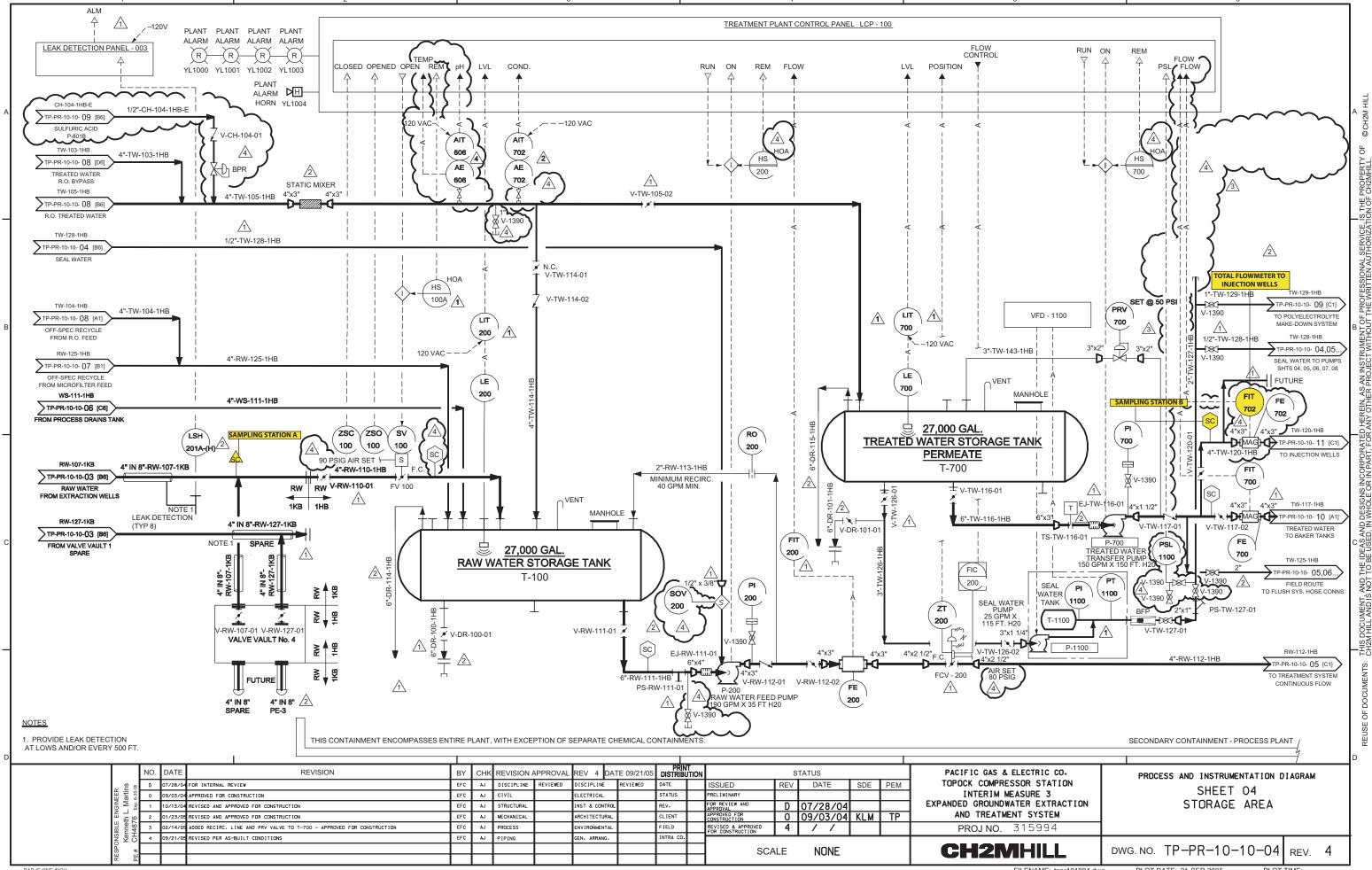
specific conductance	MO =	molybdenum
рН	NI =	nickel
total dissolved solids	PB =	lead
turbidity	HG =	mercury
chromium	SE =	selenium
hexavalent chromium	TL =	thallium
fluoride	CO =	cobalt
aluminum	CD =	cadmium
boron	BE =	beryllium
iron	AG =	silver
manganese	V =	vanadium
zinc	NO3N =	nitrate (as N)
antimony	NH3N =	ammonia (as N)
arsenic	NO2N =	nitrite (as N)
barium	SO4 =	sulfate
copper		
	pH total dissolved solids turbidity chromium hexavalent chromium fluoride aluminum boron iron manganese zinc antimony arsenic barium	pH NI = total dissolved solids PB = turbidity HG = chromium SE = hexavalent chromium TL = fluoride CO = aluminum CD = boron BE = iron AG = manganese V = zinc NO3N = antimony NH3N = arsenic NO2N = barium SO4 =

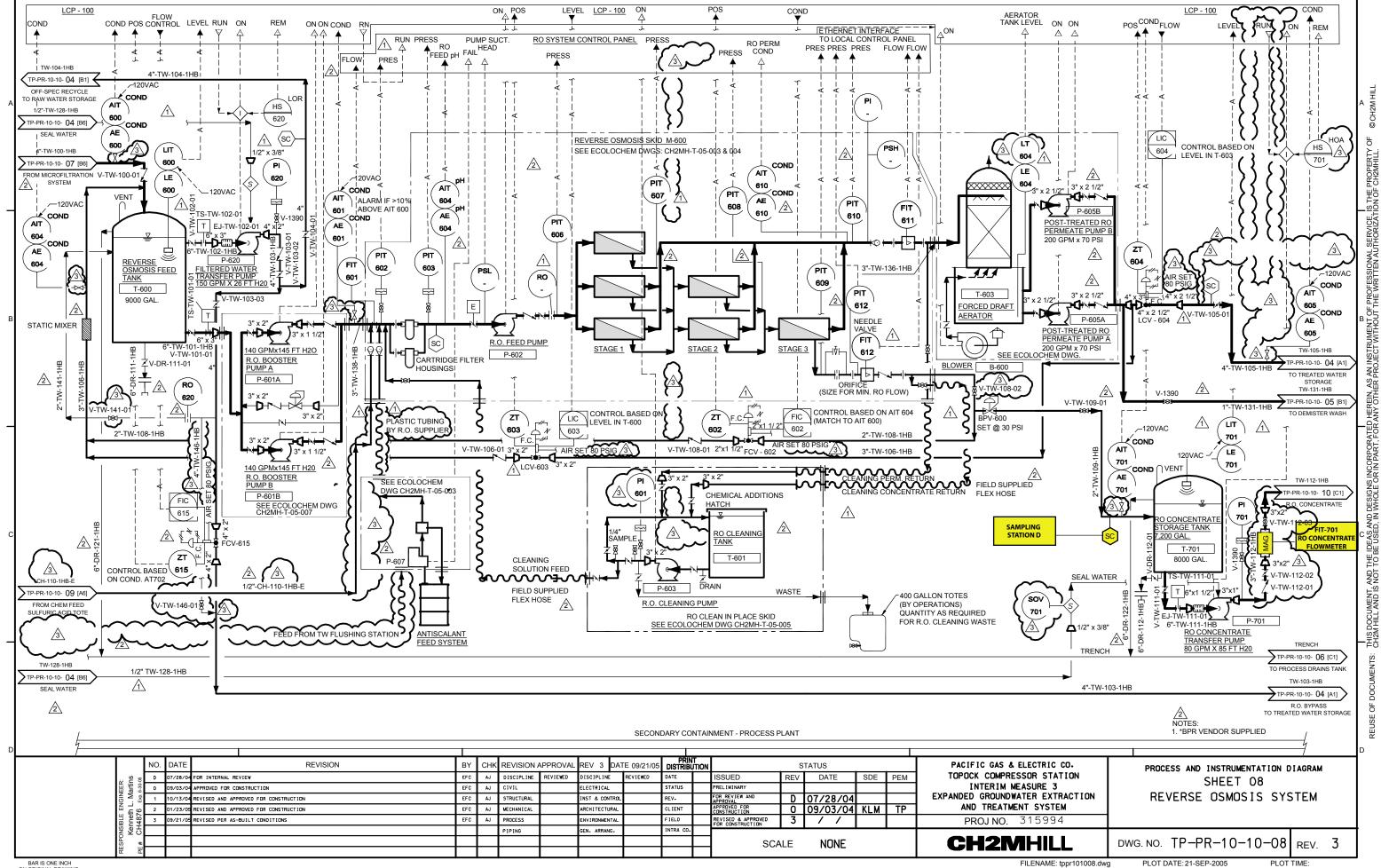


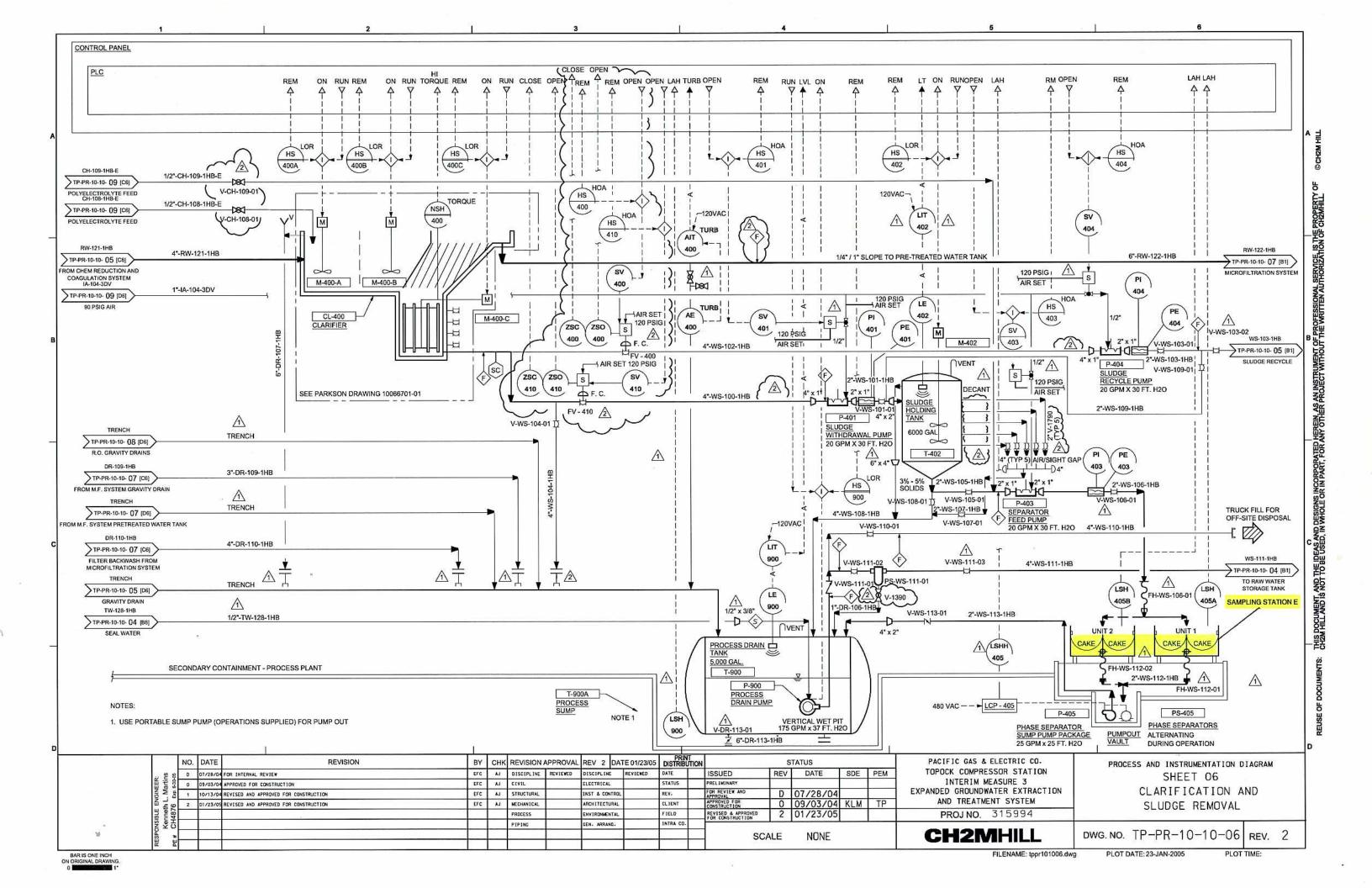


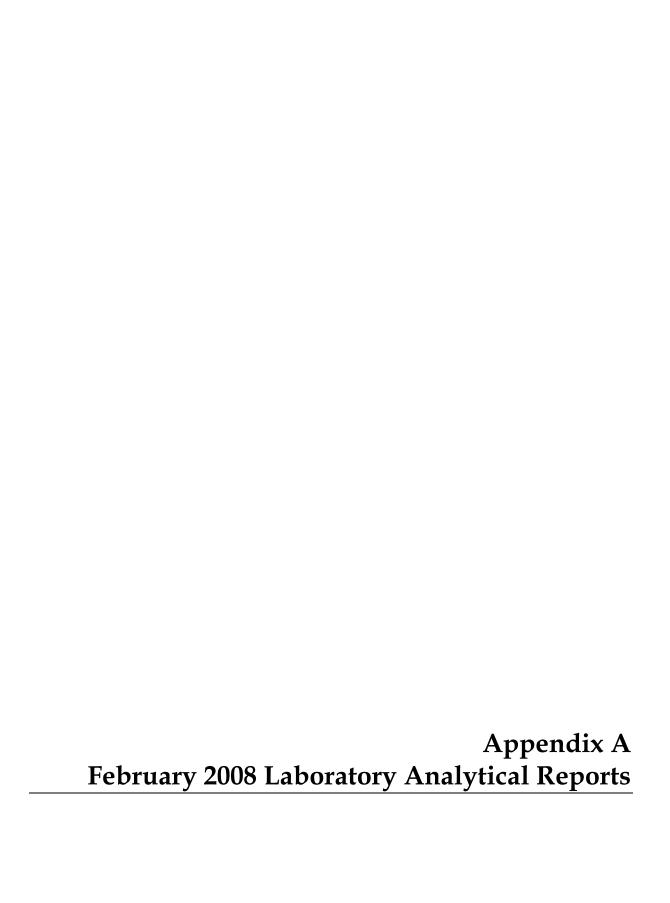












Truesdail Laboratories, Inc.

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

February 22, 2008

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

Dear Mr. Duffy:

SUBJECT:

REVISED CASE NARRATIVE PG&E TOPOCK IM3PLANT-WDR-137 PROJECT,

GROUNDWATER MONITORING,

TLI No.: 973314

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-137 project groundwater monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on February 6, 2008, 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 from the run at a 5x dilution for Hexavalent Chromium by EPA 218.6 for sample SC-701-WDR-137 have been reported although the matrix spike was on the border of the retention time window. The peak and recovery for the matrix spike were within acceptable limits.

A result for Total Barium by EPA 200.8 is reported in the matrix spike calculations for analytical batch 021108A although it is below the contract required detection limit due to the small amount of Barium detected in the sample.

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

For K.R.P. Iver

Quality Assurance/Quality Control Officer

TRUESDAIL LABORATORIES, INC.

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

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

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

Oakland, CA 94612

Attention: Shawn Duffy

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

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007

ANALYST LIST

		A CONTROL OF THE PARTY OF THE P
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 4500-H B	рН	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 300.0	Anions	Giawad Ghenniwa
SM 4500-NH3 B	Ammonia	lordan Stavrev
SM 4500-NO2 B	Nitrite as N	Tina Acquiat
EPA 200.7	Metals by ICP	Michel Mendoza
EPA 200.8	Metals by ICP/MS	Linda Saetern
EPA 245.1	Mercury	Michel Mendoza
EPA 218.6	Hexavalent Chromium	Jean Paul Gleeson

EXCELLENCE IN INDEPENDENT TESTING

E ____

Established 1931

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

P.O. No.: 358342.TM.02.00

REPORT

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

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007

Prep/ Analyzed: February 7, 2008

Analytical Batch: 02PH08F

Investigation:

pH by SM 4500-H B

Analytical Results pH

<u>TLI I.D.</u>	<u>Fleid I.D.</u>	Run Time	<u>Units</u>	MDL	<u>RL</u>	<u>Results</u>
973314-1	SC-100B-WDR-137	08:17	pН	0.0700	2.00	7.41
973314 - 2 973314-3	\$C-700B-WDR-137 \$C-701-WDR-137	08:20 08:21	рН pH	0.0700 0.0700	2.00 2.00	8.09 7.95

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	973314-3	7.95	7.96	0.01	+ 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Olfference (Units)	Acceptance Limits	QC Within Control
LCS	7.05	7.00	0.05	<u>+</u> 0.100 Units	Yes
LCS #1	7.04	7.00	0.04	± 0.100 Units	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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



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

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007

Prep/ Analyzed: February 7, 2008

Analytical Batch: 02EC08E

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

TLI I.D.	<u>Field I.D.</u>	<u>Units</u>	<u>Method</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
973314-1	SC-100B-WDR-137	μ mhos/cm	EPA 120.1	1.00	2.00	7870
973314-2	SC-700B-WDR-137	μmhos/cm	EPA 120.1	1.00	2.00	6740
973314-3	SC-701-WDR-137	μmhos/cm	EPA 120.1	1.00	2.00	27600

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	973314-3	27600	27700	0.36%	≤ 10%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
ccs	694	706	98.3%	90% - 110%	Yes
ÇVS#1	946	996	95.0%	90% - 110%	Yes
LCS	693	706	98.2%	90% - 110%	Yes

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Fr / Mona Nassimi, Manager Analytical Services

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

P.O. No.: 358342.TM.02.00



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

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007

Prep/ Analyzed: February 7, 2008

Analytical Batch: 02TDS08E

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

<u>TLI I.D.</u>	<u>Field i.D.</u>	<u>Units</u>	<u>Method</u>	<u>RL</u>	<u>Results</u>
973314-1	SC-100B-WDR-137	mg/L	SM 2540C	250	5410
973314-2	SC-700B-WDR-137	mg/L	SM 2540C	250	4300
973314-3	SC-701-WDR-137	mg/L	SM 2540C	250	22800

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	973300	470	474	0.42%	<u>≤</u> 5%	Yes

QC Std LD.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	505	500	101%	90% - 110%	Yes
LCS 2	501	500	100%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

ار 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 oxclusive 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 programmer. authorization from Truesdail Laboratories.

EXCELLENCE IN INDEPENDENT TESTING

Established 1931

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

REPORT



Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007 Prep/ Analyzed: February 7, 2008

Analytical Batch: 02TUC08G

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

<u>TLI I.D.</u>	<u>Field I.D.</u>	Sample Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
973314-1	SC-100B-WDR-137	09:00	NTU	1.00	0.100	ND
973314-2	SC-700B-WDR-137	09:00	NTŲ	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	973301	14.0	14.1	0.71%	<u>≤</u> 20%	Yes

QC Std I.D.	Measured Concentration			Acceptance Limits	QC Within Control
LCS	7.53	8.00	94.1%	90% - 110%	Yes
LCS	7.62	8.00	95.3%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF- Dilution Eactor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

fur Mona Nassimi, Manager Analytical Services

Laboratory

5.00

EXCELLENCE IN INDEPENDENT TESTING



Relative

Percent

0.00500

Established 1931

REPORT

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

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007

QC Within

90-110%

90-110%

Yes

Yes

Prep/ Analyzed: February 7, 2008

Analytical Batch: 02CrH08C

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000 Oakland, CA 94612

Attention: Shawn Duffy

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

P.O. No.: 358342.TM.02.00 Prep. Batch: 02CrH08C

Investigation:

MS

MS

MS

Hexavalent Chromium by IC Using Method EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D.	<u>Field I.D.</u>	Sample Time	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
973314-1 973314-2	SC-100B-WDR-137 SC-700B-WDR-137	09:00 09:00	06:48 07:55	mg/L mg/L	100 5.00	0.0200 0.0010	1,42 ND
973314-3	SC-701-WDR-137	09:00	08:14	mg/L	5.00	0.0010	NĎ

QA/QC Summary

Sample

0.00100

	QC SIL	, I.D.	Number	Concentra	tion C	Concentration	Difference	limits	Control	
	Duplic	ate	973314-1	1.42		1.47	3.46%	<u><</u> 20%_	Yes	
QC Std	Lab Number	Conc.of	Dilution Factor	Added Spike Conc.	MS Amou	Measured Conc. of nt spiked sample		MS% Recovery	Acceptance limits	QC Within Control
MS	973314-1	1.42	100	0.0150	1.50	2.94	2,92	101%	90-110%	Yes

0.00512

Duplicate

0.00		5.00	0.00100	0.00500	_	.00517	0.00500		103%	L.,
QC Std	I,D.	1	sured entration	Theoretica Concentrati		Percent Recovery			QC Wit	
MRC	CS	0.0	0501	0.00500		100%	90% - 11	0%	Yes	
MRCV	S#1	0.0	0995	0.0100		99.5%	95% - 10	5%_	Yes	
MRCV	\$# 2	0.0	0980	0.0100		98.0%	95% - 10	5%	Yes	
LC	3	0.0	0503	0.00500		101%	90% - 11	0%	Yes	
LCS	D	0.0	00501	0.00500		100%	90% - 11	0%	Yes	;

0.00500

ND: Below the reporting limit (Not Detected).

973314-2

973314-3

0.00

DF: Dilution Factor.

Respectfully submitted,

Acceptance

102%

TRUESDAIL LABORATORIES, INC.

ہے۔ Mona Nassimi, Manager **Analytical Services**

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

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

P.O. No.: 358342.TM.02.00

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007

Prep/ Analyzed: February 11, 2008 Analytical Batch: 02NH3-E08B

Investigation:

Ammonia as N by Method SM 4500-NH3 D

Analytical Results Ammonia as N

TLI I.D.	<u>Field I.D.</u>	Sample Time	<u>Method</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
973314-1	SC-100B-WDR-137	09:00	SM 4500-NH3 D	mg/L	1.00	0.500	ND
973314-2	SC-700B-WDR-137	09:00	SM 4500-NH3 D	mg/L	1.00	0.500	ND

QA/QC Summary

	QC STD	1.D.		aborato Number	•	Concentra	itlon	Duj Conce	plicat entrat	ion	Relative Percent Difference		eptance imits	QC Within Control	
	Duplic	ate	ć	73373-	1	2.31		,	2.31		0.00%	<u><</u>	20%	Yes	
QC Std	Lab Number	unsp	c.of piked aple	Dilu Fac		Added Spike Conc.		MS nount	Co 5	asured Inc. of piked Imple	Theoretica Conc. of spiked sample	_ '	VIS% covery	Acceptance limits	QC Within Control
MS	973373-1	2.3	31	1,0	00	6.00	·	6.00		7.98	8.31	٤	4.5%	75-125%	Yes
		G	QC Std		Me	easured centration		neoretica ncentrati		Percer Recove			QC Within Control	1	

10.0

ND: Below the reporting limit (Not Detected).

LCS

10.6

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

√ Mona Nassimi, Manager Analytical Services

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14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

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

www.truesdail.com



REPORT

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

Oakland, CA 94612

Attention: Shawn Duffy

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

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007 Prep/ Analyzed: February 7, 2008

Analytical Batch: 02AN08F

Investigation:

Fluoride by Ion Chromatography using EPA 300.0

Analytical Results Fluoride

<u>TLI I.D.</u>	<u>Field I.D.</u>	<u>Sample Time</u>	Run Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
973314-1 973314-2	SC-100B-WDR-137 SC-700B-WDR-137	09:00 09:00	09:14 09:25	mg/L mg/L	5.00 5.00	0.500 0.500	2.72 2.15
973314-3	SC-701-WDR-137	09:00	09:36	mg/L	5.00	0.500	8.49

QA/QC Summary

	QC STE	, 1.0.	Labora Numb 97331	er _		Concentration 2.15		licate ntration	Percent Difference 7.2%		eptance lmits	QC Within Control Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	Dil	ution	Added Spike Conc.		MS rount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample		MS%	Acceptance limits	QC Within Control
M\$	973314-2	2.15	£	5.00	4.00	2	20.0	22.7	22.2		103%	75-125%	Yes
		QC St	d I.D.		easured centration	I _	eoretical centratio		,		QC Withi Control	l l	

QC Std I.D.	Concentration	Concentration	Recovery	Acceptance Limits	QC Within Control
MRCCS	4.18	4.00	105%	90% - 110%	Yes
MRCVS#1	3.14	3.00	105%	90% - 110%	Yes
MRCVS#2	3.13	3.00	104%	90% - 110%	Yes
MRCVS#3	3,13	3.00	104%	90% - 110%	Yes
LCS	4.17	4.00	104%	90% - 110%	Yes
LCSD	4.21	4.00	105%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING



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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

P.O. No.: 358342.TM.02.00

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

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

www.truesdail.com

Received: February 6, 2007 Prep/ Analyzed: February 7, 2008

Analytical Batch: 02AN08F

Investigation:

Sulfate by Method EPA 300.0

Analytical Results Sulfate

<u>TL1 I.D.</u>	Field I.D.	Sample Time	Run Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
973314-1	SC-100B-WDR-137	09:00	11:08	mg/L	25.0	12.5	582
973314-2	SC-700B-WDR-137	09:00	11:19	mg/L	25.0	12.5	472

QA/QC Summary

	QC STE) I.D.	aborat Numb		Concentra	tion		licate intration	Percent Difference	i	eptance imits	QC Within Control	
	Duplic	ate	97330	1	77.3		7	7.4	0.13%	<u> </u>	20%	Yes	<u> </u>
QC Std	Lab Number	Conc.of unspiked sample	Dill	ution	Added Spike Conc.		AS count	Measured Conc. of spiked sample	Theoretica Conc. of spiked sample		MS% covery	Acceptance limits	QC Within Control
MS	973301	77.3	2	5.0	4.00	1	00	174	177	9	6.7%	85-115%	Yes
	•			М	easured	The	eoretica	Perce	nt Accept	ance	QC With	nin .	

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	20.0	20.0	100%	90% - 110%	Yes
MRCVS#1	15.0	15.0	100%_	90% - 110%	Yes
MRCVS#2	15.0	15.0	100%	90% - 110%	Yes
LCS	19.8	20.0	99.0%	90% - 110%	Yes
LCSD	20.0	20.0	100%	90% - 11 <u>0%</u>	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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Laboratory

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Relative

Percent

Established 1931

REPORT

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

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007

QC Within

Prep/ Analyzed: February 7, 2008

Analytical Batch: 02AN08F

Acceptance

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

QC STD I.D.

Investigation:

Nitrate as N by Ion Chromatography using EPA 300.0

Analytical Results Nitrate as N

<u>TLI I.D.</u>	Field I.D.	Sample Time	Run Time	<u>Units</u>	<u>DF</u>	<u>RL</u>	<u>Results</u>
973314-1	SC-100B-WDR-137	09:00	09:14	mg/L	5.00	1.00	3.34
973314-2	SC-700B-WDR-137	09:00	09:25	mg/L	5.00	1.00	2.73

Concentration

QA/QC Summary

			Number			Conc	entration	Difference	limits	Control	
	Duplica	te	973314-2	2.73		:	2.90	6.04%	≤ 20%	Yes	
QC Std I.D.	Lab Number	Conc.of unspiked sample	Dilution Factor	Added Spike Conc.		MS nount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	MS% Recovery	Acceptance fimits	QC Within Control
MS	973314-2	2.73	5.00	4.00	2	0.0	23.2	22.7	102%	75-125%	Yes

Duplicate

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	4.01	4.00	100%	90% - 110%	Yes
MRCVS#1	2.97	3.00	99.0%	90% - 110%	Yes
MRCVS#2	2.97	3.00	99.0%	90% - 110%	Yes
LCS	4.00	4.00	100%	90% - 110%	Yes
LCSD	4.00	4.00	100%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Analytical Services

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REPORT

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

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

Oakland, CA 94612

Attention: Shawn Duffy

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

Laboratory No.: 973314

Date: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007 Apalyzed: February 7, 2008

Prep/ Analyzed: February 7, 2008 Analytical Batch: 02NO208C

Investigation:

Nitrite as N by Method SM 4500-NO2-B

Analytical Results for Nitrite as N

<u>TLI I.D.</u>	<u>Field I.D.</u>	Sample Time	<u>Run Time</u>	<u>Units</u>	<u>DF</u>	<u>RL</u>	Results
973314-1	SC-100B-WDR-137	09:00	14:17	mg/L	1.00	0.0050	ΝĎ
973314-2	SC-700B-WDR-137	09:00	14:18	mg/L	1.00	0.0050	ND

QA/QC Summary

	QC STE	I.D.	Labora Num		Concentra	ation		plicate entration	Percent Difference		eptance imits	QC Within Control	
	Duplic	ate	9733	14-2	ND	ND		ND	D 0.00%		20%	Yes	
QC Std 1.D.	Lab Number	Conc.of unspiked sample	1 -	ilution actor	Added Spike Conc.	l	MS nount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample		MS% covery	Acceptance limits	QC Within Control
MS	973314-2	0.00		1.00	0.0200	0.	.0200	0.0198	0.0200		9.0%	75-125%	Yes
		QC Sto	1 I.D.		asured entration		neoretica ncentratio				QC With		

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0230	0.0230	100%	90% - 110%	Yes
MRCVS#1	0.0195	0.0200	97.5%	90% - 110%	Yes
LCS	0.0289	0.0290	99.7%	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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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

Investigation: Total Metal Analyses as Requested



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

Laboratory No.: 973314

Reported: February 15, 2008 Collected: February 6, 2007 Received: February 6, 2007 Analyzed: February 11 - 13, 2007

Analytical Results

REPORT

SAMPLE ID:	SC-100B-WDR-137	Time Col	lected:	09:00		LAB ID:	973314-1	
		Reported					Date	Time
Parameter	Method	Value	DF	Units	RL_	Batch	Analyzed	Analyzed
Aluminum	EPA 200.8	ND	1.00	mg/L	0.0500	021108A	02/11/08	12:15
Antimony	EPA 200.8	ND	1.00	mg/L_	0.0030	021108A	02/11/08	12:15
Arsenic	EPA 200.8	ND	1.00	mg/L	0.0050	021108A	02/11/08	12:15
Barium	EPA 200.8	ND	1.00	mg/L	0.300	021108A	02/11/08	12:15
Chromium	EPA 200.8	1.39	5.00	mg/L	0.0010	021108A	02/11/08	12:22
Соррег	EPA 200.8	ND	1.00	mg/L	0.0100	021108A	02/11/08	12:15
Lead	EPA 200.8	NO	1.00	mg/L	0.0020	021108A	02/11/08	12:15
Manganese	EPA 200.8	ND	1.00	mg/L	0.0200	021108A	02/11/08	12:15
Molybdenum	EPA 200.8	0.0198	1.00	mg/L	0.0050	021108A	02/11/08	12:15
Nickel	EPA 200.8	ND	1.00	mg/L	0.0200	021108A	02/11/08	12:15
Zinc	EPA 200.8	ND	1.00	mg/L	0.0200	021108A	02/11/08	12:15
Boron	EPA 200.7	0.985	1.00	mg/L	0.200	021108A	02/11/08	12:37
Iron	EPA 200.7	ND	1.00	mg/L	0.0200	021108A	02/11/08	12:37

SAMPLE ID:	\$C-700B-WDR-137	Time Co	ollected:	09:00		LAB ID:	973314-2	
		Reported					Date	Time
Parameter	Method	Value	<u>DF</u>	Units	ŘL	Batch	Analyzed	Analyzed
Aluminum	EPA 200.8	ND	1,00	mg/L	0.0500	021108A	02/11/08	12:40
Antimony	EPA 200.8	ND	1.00	mg/L	0.0030	021108A	02/11/08	12:40
Arsenic	EPA 200.8	ND	1.00	mg/L	0.0050	021108A	02/11/08	12:40
Barlum	EPA 200.8	ND	1.00	mg/L	0.300	021108A	02/11/08	12:40
Chromium	EPA 200.8	ND	1.00	mg/L	0.0010	021108A	02/11/08	12:40
Соррег	EPA 200.8	ND	1.00	mg/L	0.0100	021108A	02/11/08	12:40
Lead	EPA 200.8	ND	1.00	mg/L	0.0020	021108A	02/11/08	12:40
Manganese	EPA 200.8	0.0964	1.00	mg/L	0.0200	021108A	02/11/08	12:40
Molybdenum	EPA 200.8	0.0125	1.00	mg/t_	0.0050	021108A	02/11/08	12:40
Nickel	EPA 200.8	ND	1.00	mg/L	0.0200	021108A	02/11/08	12:40
Zinc	EPA 200.8	ND.	1.00	mg/L	0.0200	021108A	02/11/08	12:40
Boron	EPA 200.7		1.00	mg/L	0.200	021108A	02/11/08	12:41
Iron	EPA 200.7	ND	1.00	mg/L	0.0200	021108A	02/11/08	12:41

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Report Continued

SAMPLE ID: SC-7	'01-WDR-137	Time Coli	ected: (9:00		LAB ID:	973314-3	
		Reported					Date	Time
Parameter	Method	<u>Value</u>	DF	Units	RL	Batch	Analyzed	Analyzed
Antimony	EPA 200.8	ND	1.00	mg/L	0.0030	021108A	02/11/08	12:59
Arsenic	EPA 200.8	ND	5.00	mg/L	0.0050	021108A	02/11/08	13;11
Barium	EPA 200.8	ND	1.00	mg/L	0.300	021108A	02/11/08	12:59
Beryllium	EPA 200.8	ND	5.00	mg/L	0.0010	021108A	02/11/08	13:11
Cadmium	EPA 200.8	ND	5.00	mg/L	0.0020	021108A	02/11/08	13:11
Chromium	EPA 200.8	ND	5.00	mg/L	0.0010	021208A	02/12/08	11:11
Cobalt	EPA 200.8	NĎ	1.00	mg/L	0.0050	021108A	02/11/08	12:59
Copper	EPA 200.8	ND	5.00	mg/L	0.0100	021208A	02/12/08	11:11
Lead	EPA 200.8	ND	1.00	mg/L	0.0020	021108A	02/11/08	12:59
Mercury	EPA 245.1	ND	1.00	mg/L	0.00020	02HG08Aa	02/13/08	N/A
Molybdenum	EPA 200.8	0.0538	5.00	mg/L	0.0050	021208A	02/12/08	11:11
Nickel	EPA 200.8	ND	5.00	mg/L	0.0200	021108A	02/11/08	13:11
Selenium	EPA 200.8	0.0132	5.00	mg/L,	0.0050	021108A	02/11/08	13:11
Silver	EPA 200.8	0.0058	5.00	mg/L	0.0050	021108A	02/11/08	13:11
Thalllum	EPA 200.8	ND	1.00	mg/L	0.0010	021108A	02/11/08	12:59
Vanadium	EPA 200.8	ND	5.00	mg/L	0.0050	021108A	02/11/08	13:11
Zinc	EPA 200.8	ND	1.00	mg/L	0.0200	021108A	02/11/08	12;59

ND: Not detected,or below limit of detection.

DF: Dilution factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services Rec'd 02/06/08 Lab# 973314

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-137] TRUESDAL LABORATORIES, INC.
14201 Franklin Avenue, Tustin, CA 92780-7008
(714)730-6239 FAX: {714} 730-6462
www.truesdall.com

FAX (530) 339-3303

155 Grand Ave Ste 1000

ADDRESS

(530) 229-3303

됐

PG&E Topock

PROJECT NAME

臣2

COMPANY

Oakland, CA 94612

TEAM

358342.TM.02.00

P.O. NUMBER

SAMPLERS (SIGNATURE

ㅎ 10 Days PAGE TURNAROUND TIME COC Number DATE

DH. 7.7 COMMENTS Temp-73.7 NUMBER OF CONTAINERS (EHNOOSPINS) BILLOUNUY Turbidity (SM2130) Mebb (60108) Tille Z., Mercury

Antons (300.0) Fl. SOA, NOZ, NO × (0.00E) anoin! × × × × × × × × DESCRIPTION

Water

00:66

2-6-08

SC-100B-WDR-137 SC-700B-WDR-137

SAMPLE I.D.

¥

DATE TE

For Sample Conditions See Form Attached

-evel III QC

ALERT!!

Water

00:00

2.6.08

SC-701-WDR-137

5

Water

00:60 BO:00

TOTAL NUMBER OF CONTAINERS

1

6.6 Ha

15mp-74.4

16MP -74.6

×

,	CHAIN OF CUSTODY SIGNATURE RECORD		SAMPLE CONDITIONS
Signature (Relinquished)	Printed Company! Name Kat High As Agency Omt	Date/ 8-4-08 Time 0900	RECEIVED COOL WARM
Signature -/ (Received) /30ncfac	Signature -/ Printed Company FC-I Received) 130010100000 FC-I	Date/ 2-6-08 Time /570	CUSTODY SEALED YES NO
Signature Printed (Relinquished) Bond C.C.10 Desgalame	LO DOUGNAME B. DAYAG Agency TLI	Date 2 6 0 8 special Requirements:	SPECIAL REQUIREMENTS:
Signature (Mg Alle	Signature Company 77	Date/FEB 06 2008	
Signature (Relinquished)	Printed Company/ Name Agency	Date: 19:83 Time	
Signature (Received)	Printed Company/ Name Agency	Dale/ Time	

INDÉPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES

February 29, 2008

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

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-138 PROJECT, GROUNDWATER

MONITORING, TLI No.: 973542

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-138 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 February 14, 2008, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

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

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

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

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

to-Mona Nassimi

Manager, Analytical Services

K.R.P. gyer

K.R.P. Iver

Quality Assurance/Quality Control Officer

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



Established 1931

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

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

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 358342,TM.02.00 Laboratory No.: 973542

14201 FRANKLIN AVENUE

Date: February 29, 2008 Collected: February 14, 2008 Received: February 14, 2008

ANALYST LIST

EPA 120.1	Specific Conductivity	Tina Acquiat
SM 4500-H B	pH	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Linda Saetern
EPA 218.6	Hexavalent Chromium	Jean-Paul Gleeson

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REPORT

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

Oakland, CA 94612

Attention: Shawn Duffy

Investigation:

Sample: One (1) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 P.O. No.: 358342.TM.02.00 Laboratory No.: 973542

Date: February 29, 2008 Collected: February 14, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

(714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Received: February 14, 2008 Prep/ Analyzed: February 14, 2008

Analytical Batch: 02CrH08I

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

RLResults DF Sample Time Run Time Units TLI I.D. Field I.D. ND 1.05 0.00020 23:59 mg/L SC-700B-WDR-138 08:30 973542

QA/QC Summary

	QC STE	O I.D.		oratory umber	Concentrati	on	Dupi Concer	icate stration	Relative Percent Difference		eptance imits	QC Within Control	
	Duplic	ate	9	73542	ND		ND		0.00%	<u><</u> 20%		Yes	
QC Std	Lab Number	Conc unspi sam	iked	Dilution Factor	Added Spike Conc.	MS Amount		Measured Conc. of spiked sample	Theoretical Conc. of spiked sample		MS% covery	Acceptance limit	QC Within Control
MS	973542	0.0	00	1.06	0.00100	0.0	00106	0.00113	0.00106	<u> </u>	107%	90 - 110%	Yes
			0.04		Measured	Tř	neoretical	Percei	nt Accepta	nce	QC With	hin	

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.00511	0.00500	102%	90% - 110%	Yes
MRCVS#1	0.0102	0.0100	102%	95% - 105%	Yes
MRCVS#2	0.0102	0.0100	102%	95% - 105%	Yes
MRCVS#3	0.0101	0.0100	101%	95% - 105%	Yes
MRCVS#4	0.0102	0.0100	102%	95% - 105%	Yes
MRCV\$#5	0.0102	0.0100	102%	95% - 105%	Yes
LCS	0.00514	0.00500	103%	90% - 110%	Yes
LCSD	0.00514	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 Samples

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

Prep. Batch: 021508B

Laboratory No.: 973542

Date: February 29, 2008

TUSTIN, CALIFORNIA 92780-7008

(714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Collected: February 14, 2008 Received: February 14, 2008

Prep/ Analyzed: February 15, 2008

Analytical Batch: 021508B

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer

using EPA 200.8

Analytical Results Total Chromium

RL Units Run_Time DF Results TLI I.D. Field I.D. Method 14:48 1.00 SC-700B-WDR-138 mg/L **EPA 200.8** 0.0010 ND 973542

QA/QC Summary

	QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
,	Duplicate	973539-3	0.0174	0.0171	1.74%	<u><</u> 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	973539-3	0.0174	1.00	0.0500	0.0500	0.0639	0.0674	93.0%	70-130%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0506	0.0500	101%	90% - 110%	Yes
MRCVS#1	0.0468	0.0500	93.6%	90% - 110%	Yes
MRCVS#2	0.0455	0,0500	91.0%	90% - 110%	Yes
ICS	0.0474	0.0500	94.8%	80% - 120%	Yes
LÇ\$	0.0464	0.0500	92.8%	90% - 110%	Yes

ND: Not detected at reporting limit

OF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

√ Mona Nassimi, Manager Analytical Services

EXCELLENCE IN INDEPENDENT TESTING



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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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 P.O. No.: 358342.TM.02.00 Laboratory No.: 973542

Date: February 29, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

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

Collected: February 14, 2008 Received: February 14, 2008

Prep/ Analyzed: February 15, 2008

Analytical Batch: 02TDS08H

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D. 973542 Field 1.D. SC-700B-WDR-138 <u>Units</u> mg/L Method SM 2540C <u>RL</u> 250 Results 4400

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	973542	4400	4450	0.56%	<u>≺</u> 5%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS 1	496	500	99.2%	90% - 110%	Yes
LCS 2	495	500	99.0%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING

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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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00

P.O. No.: 358342.TM.02.00

Laboratory No.: 973542

Date: February 29, 2008

14201 FRANKLIN AVENUE

TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 - FAX (714) 730-6462

www.truesdail.com

Collected: February 14, 2008

Received: February 14, 2008 Prep/ Analyzed: February 15, 2008

Analytical Batch: 02TUC08N

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

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

 973542
 SC-700B-WDR-138
 08:30
 NTU
 1.00
 0.100
 ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	973542	ND	ND	0.00%	<u><</u> 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	7.40	8.00	92.5%	90% - 110%	Yes
LCS	7.42	8.00	92.8%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

EXCELLENCE IN INDEPENDENT TESTING



Established 1931

REPORT

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

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00

P.O. No.: 358342.TM.02.00

Laboratory No.: 973542

Date: February 29, 2008

Collected: February 14, 2008 Received: February 14, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

(714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Prep/ Analyzed: February 15, 2008

Analytical Batch: 02PH08N

Investigation:

pH by SM 4500-H B

Analytical Results pH

TLI I.D. 973542

Field I.D.

SC-700B-WDR-138

Sample Time 08:30

Run Time 07:47

Units pΗ

MDL 0.0700

RL Results 2.00

8.14

QA/QC Summary

QC STD I.D.	Laboratory Concentration		Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate 973542		8.14	8,14	0.00	+ 0.100 Units	Yes

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

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING

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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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00

P.O. No.: 358342.TM.02.00

Laboratory No.: 973542

Date: February 29, 2008 Collected: February 14, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

(714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Received: February 14, 2008 Prep/ Analyzed: February 15, 2008

Analytical Batch: 02EC08H

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

<u>TL1 I.D.</u>

Field I.D.

<u>Units</u>

<u>Method</u>

DF

RL

<u>Results</u>

973542

SC-700B-WDR-138

μmhos/cm

EPA 120.1

1.00

2.00

7040

QA/QC Summary

QC ST		Laborato Number	· I Gon	centration	Ì	Duplicat Concentrat			ative Percent Difference		eptance limits	QC Within Control
Duplic	ate	973542		7040		7050			0.14%		≤ 10%	Yes
	Q	C Std I.D.	Measur Concentr			heoretical ncentration	Perce Recov		Acceptan Limits	CO	QC Within	п
		ccs	693			706	98.29	%	90% - 110)%	Yes	
		CVS#1	945			996	94,9	%	90% - 110)%	Yes	
		LCS	693			706	98.2	%	90% - 110)%	Yes	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

 Mona Nassimi, Manager Analytical Services

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

CHAIN OF CUSTODY RECORD [IM3Plant-WDR-138]

COC Number

TURNAROUND TIME

능 10 Days PAGE DATE

TOTAL NUMBER OF CONTAINERS COMMENTS 87 Hd PH=2 NUMBER OF CONTAINERS (n)(4) 02/14/08 35 Rec'd Lab.# Turbidity (SM2130) × ^(8140056WS)Hd (LOSI) agueranpuog. (7.005) ^{glejoM} lelo^T DESCRIPTION Water FAX (530) 339-3303 1E4# B 뾽 20-61-7 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 358342.TM.02.00 (530) 229-3303 PG&E Topock SC-700B-WDR-138 SAMPLERS (SIGNATURE Ε2 PROJECT NAME P.O. NUMBER SAMPLE LD. COMPANY ADDRESS 몽

evel III QC ALERTII For Sample Conditions

See Form Attached

ų. 욷 WARM | SAMPLE CONDITIONS YES 000 SPECIAL REQUIREMENTS: CUSTODY SEALED RECEIVED FEB 14 200 Z E Û Date 7-14-C Date/2-7 Date/ Time Date/ Time Date/ Time Date/ Time CHAIN OF CUSTODY SIGNATURE RECORD Company! Agency Company/ Agency Company Company Company Company/ Agency Agency CLU Leggency Agency Printed Name Name Printed Printed Printed Name Printed Printed Name Name Name (Relinquished) (Relinquished) (Relinquished (Received) Signature (Received) Signature Signature (Received) Signature Signature Signature

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



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

March 4, 2008

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

Dear Mr. Duffy:

SUBJECT:

CASE NARRATTVE PG&E TOPOCK IM3PLANT-WDR-139 PROJECT, GROUNDWATER

MONITORING, TLI NO.: 973677

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-139 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 February 20, 2008, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

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

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

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

Respectfully Submitted,

TRUESDAIL LABORATORIES, INC.

🗸 – Mona Nassimi

Manager, Analytical Services

K. R. P. Syen

K.R.P. Iyer

Quality Assurance/Quality Control Officer

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



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

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

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 Laboratory No.: 973677

Date: March 4, 2008

Collected: February 20, 2008

Received: February 20, 2008

ANALYST LIST

METHOD		
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 4500-H B	рН	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Linda Saetern
EPA 218.6	Hexavalent Chromium	Jean-Paul Gleeson

EXCELLENCE IN INDEPENDENT TESTING



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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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00

P.O. No.: 358342.TM.02.00

Prep. Batch: 030408A

Laboratory No.: 973677

Laboratory No.: 010011

Date: March 4, 2008 Collected: February 20, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

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

Received: February 20, 2008 Prep/ Analyzed: March 4, 2008

Analytical Batch: 030408A

Investigation:

Total Chromium by Inductively Coupled Argon Plasma Mass Spectrometer

using EPA 200.8

Analytical Results Total Chromium

TLI I.D. Field I.D. Run Time DF RL<u>Units</u> <u>Method</u> Results SC-700B-WDR-139 **EPA 200.8** 10:59 1.00 0.0010 mg/L ND 973677

QA/QC Summary

ļ	QC STD I.D.	Laboratory Number Concentration		Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
	Duplicate	973677	ND	ND	0.00%	<u>≺</u> 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	973677	0.00	1.00	0.0500	0.0500	0.0546	0.0500	109%	70-130%	Yės

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0504	0.0500	101%	90% - 110%	Yes
MRCVS#1	0.0474	0.0500	94.8%	90% - 110%	Yes
ICS	0.0513	0.0500	103%	80% - 120%	Yes
LCS	0.0507	0.0500	101%	90% - 110%	Yes

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

for Mona Nassimi, Manager Analytical Services

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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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00

P.O. No.: 358342.TM.02.00

Laboratory No.: 973677

Date: March 4, 2008 Collected: February 20, 2008

Received: February 20, 2008 Prep/ Analyzed: February 20, 2008

Analytical Batch: 02CrH08Q

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

Results Sample Time Run Time <u>Units</u> <u>DF</u> <u>RL</u> TLLI.D. Field I.D. 973677 SC-700B-WDR-139 11:40 20:51 mg/L 1.05 0.00020 ND

QA/QC Summary

					Q.	Concentration Co		11111111	113	<u>/</u>					
	QC STD	1.D.		oratory umber	Concentrat			licate ntration		Relative Percent ifference		eptance imits		QC Within Control	
	Duplic	ate	9	73677	ND		11	۷D		0.00%	<	20%		Yes	
QC Std I,D,	Lab Number	uns	nc.of piked nple	Dilutlo Facto		1	MS nount	Measure Conc. of spiked sample	" 1	Theoretical Conc. of spiked sample	1	MS% covery	Ac	ceptance limit	QC Within Control
MS	973677	0.	.00	1.06	0.00100	0.	00106	0.00116		0.00106		109%		90 - 110%	Yes
		6	QC Std	ı I.D.	Measured Concentration		neoretical ncentratio			Acceptar Limits		QC With Contro			
			MRC	C\$	0.00512	1	0.00500	102	%	90% - 11	0%	Yes			
			MRCV	S#1	0.0100		0.0100	100	%	95% - 10	5%	Yes			
			MRÇV	\$#2	0.0101		0.0100	101	%	95% - 10	5%	Yes			
			MRCV	S#3	0.0102		0.0100	102	%	95% - 10	5%	Yes			
			LÇ	3	0.00509		0.00500	102	%	90% - 11	0%	Yes			
			LCS	D	0.00510		0.00500	102	%	90% - 11	0%	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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00

P.O. No.: 358342.TM.02.00

Laboratory No.: 973677

Date: March 4, 2008

Collected: February 20, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

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

Received: February 20, 2008

Prep/ Analyzed: February 21, 2008 Analytical Batch: 02TUC08Q

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

<u>TLI I.D.</u>

Field I.D.

Sample Time

Units

<u>DF</u>

RL

Results

973677

SC-700B-WDR-139

11:40

NTU

1.00

0.100

ND

QA/QC Summarv

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Relative Percent Difference	Acceptance limits	QC Within Control
Duplicate	973656-4	ND	ND	0.00%	≤ 20%	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
LCS	7.51	8.00	93.9%	90% - 110%	Yes
LCS	7.45	8.00	93.1%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

DF: Dilution Factor.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

ゲ~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 Samples

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

Laboratory No.: 973677

Date: March 4, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

(714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Collected: February 20, 2008 Received: February 20, 2008

Prep/ Analyzed: February 21, 2008

Analytical Batch: 02TDS08L

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D. 973677

Field I.D. SC-700B-WDR-139 Units mg/L

Method SM 2540C <u>RL</u> 250 Results 4220

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Percent Difference	Acceptance limits	QC Within Control
Duplicate	973677	4220	4260	0.47%	<u>≤</u> 5%	Yes

QC Std I.D.	Measured	Theoretical	Percent	Acceptance	QC Within
	Concentration	Concentration	Recovery	Limits	Control
LCS 1	503	500	101%	90% - 110%	Yes

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

L. 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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 P.O. No.: 358342.TM.02.00 Laboratory No.: 973677

Date: March 4, 2008 Collected: February 20, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

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

Received: February 20, 2008

Prep/ Analyzed: February 21, 2008

Analytical Batch: 02PH08S

Investigation;

pH by SM 4500-H B

Analytical Results pH

TLI I.D.

<u>Field I.D.</u>

Sample Time

<u>Run Time</u>

<u>Units</u>

<u>MDL</u>

RL

<u>Results</u>

973677

SC-700B-WDR-139

11:40

08:07

pН

0.0700

2.00

8.01

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
Duplicate	973677	8.01	8.01	0.00	<u>+</u> 0.100 Units	Yes

QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
LCS	7.05	7.00	0.05	+ 0.100 Units	Yes
LCS #1	7.05	7.00	0.05	+ 0.100 Units	Yes
LCS #2	7.04	7,00	0.04	+ 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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00

P.O. No.: 358342.TM.02.00

Laboratory No.: 973677

Date: March 4, 2008 Collected: February 20, 2008 Received: February 20, 2008

Prep/ Analyzed: February 21, 2008

Analytical Batch: 02EC08L

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

DE RLField I.D. Results TLI I.D. Units Method 973677 SC-700B-WDR-139 umhos/cm **EPA 120.1** 1.00 2.00 6990

QA/QC Summarv

QC S		Laborato Number	- 1	Concentration		Duplicat Concentra	-		Relative Percent Difference		eptance imits	QC Within Control
Duplic	ate	973677		6990		6990			0.00%	ζ.	10%	Yes
	Q	C Std I.D.		Measured oncentration		Theoretical encentration	Perce Recov		Acceptan Limits	ce	QC Withi Control	
		ccs		694		706	98.3	%	90% - 110	%	Yes	
		ÇV\$#1		946		996	95.0	%	90% - 110	%	Yes	
		LCS		694		706	98.3	%	90% - 110	1%	Yes	

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

- fy- Mona Nassimi, Manager **Analytical Services**

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ttgetb

CHAIN OF CUSTODY RECORD

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

www.truesdail.com

TRUESDAIL LABORATORIES, INC.

IM3Plant-WDR-139]

COC Number

þ

10 Days PAGE DATE 22008 TURNAROUND TIME

COMMENTS 2 H=2 NUMBER OF CONTAINERS μ × DESCRIPTION Water FAX (530) 339-3303 TEAM 04.11 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 358342.TM.02.00 (530) 229-3303 PG&E Topock SC-700B-WDR-139 SAMPLERS (SIGNATURE €2 PROJECT NAME P.O. NUMBER SAMPLE 1.D. COMPANY ADDRESS PHONE

Sample Conditions e se Form Attached

RUSH Level III OC ALERTII

Rec'd 72/20/08

TOTAL NUMBER OF CONTAINERS

CHAIN	CHAIN OF CUSTODY SIGNATURE RECORD		SAMPLE CONDITIONS
Signature Printed (Relinquished) Am Name	e how HELDS Agency OM!	Date/ 7-20-08 Time	RECEIVED COOL WARM "F
Signature Printed (Received) 12011F 18011/4 ac. o DegName	ad 13001 Jaylag Companyi T.C.	Date/ 2-20-08 Time /520	CUSTODY SEALED YES [] NO []
Signature V Printed Company Company Number Same Same DAYS. Adency	Someony Company	Date/. 2 - 20 - 0 & Time	SPECIAL REQUIREMENTS:
Signature // (Received) // Name	a 14; Armi Agency T. L.	Date/ 1-20.08	
Signature Printed (Relinquished) Name	Company/	Date/ C :CD	
Signature Printed (Received) Name	ed Company/ B Agency	Date/ Tme	



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

March 4, 2008

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-140 PROJECT, GROUNDWATER

MONITORING, TLI No.: 973829

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-140 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 February 27, 2008, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

Due to the large number of samples in-house, the sample for Total Chromium analysis was analyzed by method EPA 200.8, tather 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.

fo - Mona Nassimi

Manager, Analytical Services

K. R. P. gyer

K.R.P. Iver

Quality Assurance/Quality Control Officer

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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 Laboratory No.: 973829 Date: March 4, 2008

Collected: February 27, 2008 Received: February 27, 2008

ANALYST LIST

	1945 - 1946 La 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946 - 1946	
EPA 120.1	Specific Conductivity	Tina Acquiat
SM 4500-H B	рН	Tina Acquiat
SM 2540C	Total Dissolved Solids	Tina Acquiat
SM 2130B	Turbidity	Gautam Savani
EPA 200.8	Total Chromium	Linda Saetern
EPA 218.6	Hexavalent Chromium	Jean-Paul Gleeson

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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 Samples

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

Prep. Batch: 022808A

Laboratory No.: 973829

Date: March 4, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

(714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Collected: February 27, 2008 Received: February 27, 2008 Prep/ Analyzed: February 28, 2008

Analytical Batch: 022808A

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 973829 SC-700B-WDR-140 ma/L **EPA 200.8** 09:24 1.00 0.0010 ND

QA/QC Summarv

QC STD) I.D. I	aboratory Number	Concentrati	ntration Duplicate Relative Percent Difference		Acceptance limits	QC Within Control	
 Duplica	ate	973829	ND		ND	0.00%	<u>≺</u> 20%	Yes
Lab	Conc.of	Dilution	Added	MS	Measured Conc. of	Theoretical	MS%	Acceptance

QC Std I.D.	Lab Number	unspiked sample	Dilution Factor	Spike Conc.	M\$ Amount	Conc. of spiked sample	Conc. of spiked sample	M5% Recovery	Acceptance limits	QC Within Control
MS	973829	0.00	1.00	0.0500	0.0500	0.0463	0.0500	92.6%	70-130%	Yes
		QC Std	LD. N	leasured	Theoretical	Percent	Acceptan	ce QC With	iin	···

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0477	0.0500	95.4%	90% - 110%	Yes
MRCVS#1	0.0479	0,0500	95.8%	90% - 110%	Yes
ics	0.0500	0.0500	100%	80% - 120%	Yes
LCS	0.0486	0.0500	97.2%	90% - 110%	Voc

ND: Not detected at reporting limit

DF: Dilution Factor

Respectfully submitted,

TRUESDAIL LABORATORIES, INC.

f∞ − 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 Samples

Project Name: PG&E Topock Project Project No.: 358342,TM.02.00 P.O. No.: 358342.TM.02.00

Laboratory No.: 973829

Date: March 4, 2008 Collected: February 27, 2008 Received: February 27, 2008 Prep/ Analyzed: February 28, 2008

Analytical Batch: 02CrH08U

Investigation:

Hexavalent Chromium by EPA 218.6

Analytical Results Hexavalent Chromium

TLI I.D. Field I.D. Sample Time Run_Time <u>Units</u> DF RL Results SC-700B-WDR-140 973829 13:00 06:39 ma/L 1.05 0.00020 ND

QA/QC Summary

	QC STI		N	oratory umber	Concentrati	on	Dupli Concen	tration	Relative Percent Difference		eptance imits	QC Within Control	
	Dupilo	atė	9	73829	ND_		N	D	0.00%	<u> </u>	20%	Yes	
QC Std I.D.	Lab Number	Con unsp sam		Dilution Factor	Added Spike Conc.		MS nount	Measured Conc. of spiked sample	Theoretical Conc. of spiked sample	1	VIS% covery	Acceptance limit	QC Within Control
MS	973829	0.0	00	1.06	0,00100	0.0	00106	0.00106	0.00106	Ţ	00%	90 - 110%	Yes
		Q	C Std	I.D.	Measured		eoretical	Percen	t Acceptan	ice	QC With	nin	

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control	
MRCCS	0.00508	0.00500	102%	90% - 110%	Yes	
MRCVS#1	0.00997	0.0100	99.7%	95% - 105%	Yes	
LCS	0.00509	0.00500	102%	90% - 110%	Yes	
LCSD	0.00508	0.00500	102%	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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Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 P.O. No.: 358342.TM.02.00 Laboratory No.: 973829

Date: March 4, 2008

14201 FRANKLIN AVENUE

TUSTIN, CALIFORNIA 92780-7008 (714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Collected: February 27, 2008 Received: February 27, 2008

Prep/ Analyzed: February 28, 2008 Analytical Batch: 02TUC08V

Front Latter to a 66 car.

Investigation:

Turbidity by Method SM 2130B

Analytical Results Turbidity

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

 973829
 SC-700B-WDR-140
 13:00
 NTU
 1.00
 0.100
 ND

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Ouplicate Concentration	Relative Percent Ofference	Acceptance limits	QC Within Control
Duplicate	973851	0.227	0.230	1.31%	≤ 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%	Yeş	
LCS	7.72	8.00	96.5%	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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 P.O. No.: 358342.TM.02.00 Laboratory No.: 973829

Date: March 4, 2008
Collected: February 27, 2008
Received: February 27, 2008
Prep/ Analyzed: February 28, 2008

Analytical Batch: 02PH08AA

Investigation:

pH by SM 4500-H B

Analytical Results pH

TLI I.D. Field I.D. Sample Time Run Time Units MDL RL Results 973829 SC-700B-WDR-140 13:00 08:40 pН 0.0700 2.00 7.97

QA/QC Summary

QC STD I.D.	Laboratory Number	Concentration	Duplicate Concentration	Difference (Units)	Acceptance limits	QC Within Control
_ Duplicate	973829	7.97	7.97	0.00	± 0.100 Units	Yes

	QC Std I.D.	Measured Concentration	Theoretical Concentration	Difference (Units)	Acceptance Limits	QC Within Control
L	<u>LCS</u>	7.04	7.00	0.04	± 0.100 Units	Yes
L	LCS #1	7.02	7.00	0.02	± 0.100 Units	Yes
L	LCS #2	7.06	7.00	0.06	+ 0.100 Units	Yes

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

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Attention: Shawn Duffy

Sample: One (1) Groundwater Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 P.O. No.: 358342.TM.02.00 Laboratory No.: 973829

Date: March 4, 2008

14201 FRANKLIN AVENUE TUSTIN, CALIFORNIA 92780-7008

(714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

Collected: February 27, 2008 Received: February 27, 2008

Prep/ Analyzed: February 28, 2008

Analytical Batch: 02EC08O

Investigation:

Specific Conductivity by EPA 120.1

Analytical Results Specific Conductivity

 TLI I.D.
 Field I.D.
 Units
 Method
 DF
 RL
 Results

 973829
 SC-700B-WDR-140
 μmhos/cm
 EPA 120.1
 1.00
 2.00
 6820

QA/QC Summary

QC S	- 1	Laborato Number	Conco	ntration	Duplica Concentra			tive Percent Ifference		eptance imits	QC Within Control
Duplic	ate	973829	6	320	6820			0.00%	-	10%	Yes
	QC Std I		Measure Concentrat		heoretical encentration	Percer Recove			ce QC WithI Control		
		ccs	693		706	98.2%			% Yes		1
		CVS#1	947		996	95.1%				Yes	1
		LCS	693		706	98.2%	,	90% - 110	%	Yes	1

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 Samples

Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 P.O. No.: 358342.TM.02.00 Laboratory No.: 973829

Date: March 4, 2008 Collected: February 27, 2008

Received: February 27, 2008 Prep/ Analyzed: February 28, 2008

Analytical Batch: 02TDS08P

Investigation:

Total Dissolved Solids by SM 2540C

Analytical Results Total Dissolved Solids

TLI I.D. 973829 Field I.D. SC-700B-WDR-140 <u>Units</u> mg/L Method SM 2540C

<u>RL</u> 250 Results 4140

QA/QC Summary

						_				
QC STD I.I	Laborator Number	- I l'Ancontro	tion	Dupile Concent			ercent fference		ceptance limits	QC Within Control
Duplicate	973829	4140		418	30		0.48%		<u><</u> 5%	Yes
	QC Std I.D.	Measured Concentration	1	oretical entration	Percen Recove		Acceptance Limits		QC Within Control	
	LCS 1	495		500	99.0%		90% - 11	10%	Yes	1

ND: Below the reporting limit (Not Detected).

RL: Reporting Limit.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

√ Mona Nassimi, Manager Analytical Services

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COMPANY

ADDRESS

PHONE

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

CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-140]

Rec'd 02/27/08 COC Number

TURNAROUND TIME

5 Days

능 PAGE 1 DATE

COMMENTS P H - 2 NUMBER OF CONTAINERS M (OETSMR) (VIIDIDIU) × (BHOOS WS) Hd × (2015 ZWS) SQL Specific Conductance (120.1) (7,005) 216,6M 1610^T DESCRIPTION Water FAX (530) 339-3303 8 HKE. 2-27-00 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 358342.TM.02.00 (530) 229-3303 PG&E Topock SAMPLERS (SIGNATURE SC-700B-WDR-140 E PROJECT NAME P.O. NUMBER SAMPLE LD.

RUSH

TOTAL NUMBER OF CONTAINERS

(A)

Level III QC **ALERT!!**

For Sample Conditions See Form Attached

5	CHAIN OF CUSTODY SIGNATURE	SNATURE RECORD		SAMPLE CONDITIONS
Signature (Relinquished)	Printed John Deets	Company/ OM /	Date 2-27-08 Time 13110 pm	RECEIVED COOL □ WARM □ °F
Signature (Received)/#46 / Les	Printed HYD// C2	Companyl + //	. ~	CUSTODY SEALED YES NO NO
Signature (Relinquished)	Printed UNION	Companyl 7	Date/ 20.20	SPECIAL REQUIREMENTS:
Signature - Received) + QQ Sure	Printed Rafe U	Company!	Date/ 2-27-08 Time 20:10	
Wignature Relinquished)	Printed 1	Company/ Agency	Date/ Time	
Signature (Received)	Printed Name	Company/ Agency	Date/ Time	

Table of Contents TLI Laboratory Data Package

For Laboratory Number: 973316

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INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



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

February 13, 2008

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

Dear Mr. Duffy:

SUBJECT:

CASE NARRATIVE PG&E TOPOCK IM3-IW-2 REHAB PROJECT,

TLI NO.: 973316

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3-IW-2 Rehab project. 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 February 6, 2008, 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 sample South-Phase-Sep will be reported when they become available.

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.

to - Mona Nassimi

Manager, Analytical Services

Seam Canda

K.R.P. Iyer

Quality Assurance/Quality Control Officer

EXCELLENCE IN INDEPENDENT TESTING

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Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

Samples: Two (2) Groundwaters and One (1) Soil Sample

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



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

Laboratory No.: 973316

Received: February 6, 2008

Analytical Results Summary

REPORT

Lab I.D.

Sample ID: Time Collected:

> Method: Units:

973316-1

SC-700B 11:45

SW 8260 μg/L 973316-2 MPE327-IW2GW

12:30 SW 8260

μg/L

Parameter Acrolein ND ND Acrylonitrile ND ND Benzene ND ND Bromobenzene ND ND Bromoform ND ND Bromodichloromethane ND ND Bromomethane ND ND 2-Butanone ND ND n-Butylbenzene ND ND sec-Butylbenzene ND ND tert-Butvibenzene ND ND Chlorobenzene ND ND Chloroethane ND ND Chloroform ND ND Chloromethane ND ND 2-Chlorotoluene ND ND 4-Chlorotoluene ND ND Dibromochloromethane ND ND 1,2-Dibromo-3-chloropropane ND ND 1,2-Dibromoethane ND ND 1,2-Dichlorobenzene ND ΝĎ 1,3-Dichlorobenzene NO ND 1,4-Dichlorobenzene ND ND Dichlorodiffuoromethane ND ND 1,1-Dichloroethane ND ND 1,2-Dichloroethane ND ND 1.1-Dichloroethene ND ND

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



Report Continued

Lab I.D. 973316-1 Sample ID: SC-700B Time Collected: 11:45 Method: SW 8260

973316-2 MPE327-IW2GW 12:30 SW 8260

Units:	μ g/ L	μg/L
Parameter		r- # -
cls-1,2-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloroethene (Total)	ND	
1,2-Dichloropropane	ND	ND
1,3-Dichloropropane	ND	ND
2,2-Dichloropropane	ND	ND
1,1-Dichloropropane	ND ND	ND
cis-1,3-Dichloropropene	ND -	ND
trans-1,3-Dichloropropene	ND	ND ND
Ethyt Benzene	ND	ND .
Hexachlorobutadiene	ND	ND
Isopropylbenzene	ND ND	ND
p-Isopropyttoluene	ND	ND
Methylene Chloride	ND	ND
Naphthalene	ND	ND
n-Propylbenzene	ND	ND
Styrene	ND	ND
1,1,1,2-Tetrachioroethane	ND .	ND
1,1,2,2-Tetrachloroethane	DO	ND
Tetrachioroethene	ND	ND
Toluene	ND	2.57
1,2,3-Trichlorobenzene	ND_	ND
1,2,4-Trichlorobenzene	ND	ND ND
1.1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichioroethene	ND	ND ND
Trichlorofluoromethane	ND	ND ND
1,2,3-Trichloropropane	ND	ND
1,2,4-Trimethylbenzene	ND ND	ND ND
1,3,5-Trimethylbenzene	ND	ND
Vinyl Chloride	ND	ND ND
m,p-Xylene	ND	ND ND
o-Xylene	ND -	3.36
Acetone	ND .	ND
tert-Butyl Methyl Ether (MTBE)	ND	ND ND

ND: Non Detected (below reporting limit)

mg/L: Milligrams per liter,

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

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

March 5, 2008

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-137 PROJECT, SLUDGE

MONITORING,

TLI No.: 973678

Truesdail Laboratories, Inc. is pleased to submit this report summarizing the Topock IM3Plant-WDR-137 project sludge monitoring. A summary table for this sample delivery group is included in Section 2. Complete laboratory reports, quality control data and chain of custody forms for sampling period are included in Sections 3 and 4. Analytical raw data have been included under Section 5.

The samples were received and delivered with the chain of custody on February 20, 2008, intact and in chilled condition. The samples will be kept in a locked refrigerator for 30 days; thereafter it will be kept in warm storage for an additional 2 months before disposal.

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

Results above the reporting limit were detected in the Method Blank (Blank Beads) for Selenium by SW 6010B. The sample result is over ten times the blank detection, therefor the data was accepted.

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. Sope

K.R.P. Iver

Quality Assurance/Quality Control Officer

INDEPENDENT TESTING, FORENSIC SCIENCE, AND ENVIRONMENTAL ANALYSES



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

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

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Soil Sample Project Name: PG&E Topock Project Project No.: 358342.TM.02.00 Laboratory No.: 973678 Date: March 5, 2008

Collected: February 20, 2008 Received: February 20, 2008

ANALYST LIST

Misseset		
EPA 300.0	Fluoride	Giawad Ghenniwa
SM 2540 B	% Moisture	Gautam Savani
SW 6010B	Metals by ICP	Michel Mendoza
SW 6020	Metals by ICP/MS	Linda Saetern
SW 7471A	Mercury	Michel Mendoza
SW 7199	Hexavalent Chromium	David Blackburn

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REPORT

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

P.O. No.: 358342.TM.02.00 Prep. Batch: 02CrH08U

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

Laboratory No.: 973678

Date: March 5, 2008

Collected: February 20, 2008 Received: February 20, 2008

Prep/ Analyzed: February 28, 2008

Analytical Batch: 02CrH08U

Investigation:

Hexavalent Chromium by IC Using Method SW 7199

Analytical Results Hexavalent Chromium

TLI I.D. Field I.D. Sample Time <u>Run Time</u> <u>Units</u> DF _ŖĻ Results 4 8 1 973678 SC-Sludge-WDR-137 11:30 10:47 mg/kg 10.0 30.1 703

QA/QC Summary

	QC STE	D LO.	Laboratory Number	• • • • • • • • • • • • • • • • • • • •	· . I	 Relative Percent Difference	Acceptance limits	QC Within Control	
	Duplic	ate	973678	Concentration Concentration Percent Difference Ilmits 703 613 13.7% ≤ 20% Added Measured Theoretical	Yes				
Std	Lab	Conc.of unspiked	Dilution Factor		MŞ	 	1	Acceptance	Ţ,

QC Std	Lab Number	unspiked sample	Dilution Factor	Added Spike Conc.	MS Amount	Conc. of spiked sample	Conc. of spiked sample	MS% Recovery	Acceptance limits	QC Within Control
MS	973678	703	10.0	60,2	602	1400	1305	116%	75-125%	Yes
IMS	973678	703	40.0	143	5720	5730	6423	87.9%	75-125%	Yes
PDMS	973678	703	25.0	48,1	1203	2070	1906	114%	75-125%	Yes
-						<u></u>	1000	11470	73-12376	165

QC Std I.D.	Measured Concentration	Theoretical Concentration	Percent Recovery	Acceptance Limits	QC Within Control
MRCCS	0.0516	0.0500	103%	90% - 110%	Yes
MRCVS#1	0.0502	0.0500	100%	90% - 110%	Yeş
LCS	0.0480	0.0500	96.0%	80% - 120%	Yes
LCSD	0.0468	0.0500	93.6%	80% - 120%	Yes

ND: Below the reporting limit (Not Detected).

DF; Ollution Factor.

Respectfully submitted.

TRUESDAIL LABORATORIES, INC.

🖟 – Mona Nassimi, Manager Analytical Services

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(714) 730-6239 · FAX (714) 730-6462

www.truesdail.com

REPORT

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

Oakland, CA 94612

Attention: Shawn Duffy

Sample: One (1) Soil Sample

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

Laboratory No.: 973678

Pate: March 5, 2008

Collected: February 20, 2008 Received: February 20, 2008

Prep/ Analyzed: February 22, 2008

Analytical Batch: 02AN08R

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** 973678 SC-Sludge-WDR-137 11:30 10:51 mg/kg 20.0 15.0 104

QA/QC Summary

	QC ST		N	borat lumb 97363	er _	Concentra	ation	Conc	plica entra 1.88	tion	Relative Percent Difference 0.53%	,	ceptance limits ≤ 20%	QC Within Control Yes	
QC Std I.D.	Lab Number	Conc unspil samp	ked		ition ctor	Added Spike Conc.	MS Amount		Measured Conc. of spiked sample		1		MS% ecovery	Acceptance limits	QC Within Control
MS	973632	1.87	7	1.	.00	2.00		2.00		3.87	3.87		100%	85-115%	Yes
		QC	Std	I.D,		easured entration		eoretica centrati		Percer Recove		otance nits	QC With		
		_ M	IRCC	S		4.20		4.00		105%	90%	110%	YAR		

3.00

3.00

4.00

4.00

105%

106%

105%

105%

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

MRCVS#1

MRCVS#2

LCS

LCSD

3.15

3.18

4.21

4.21

Respectfully submitted.

90% - 110%

90% - 110%

90% - 110%

90% - 110%

TRUESDAIL LABORATORIES, INC.

Yes

Yes

Yes

Yes

 t_{ω_r} Mona Nassimi, Manager Analytical Services

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EXCELLENCE IN INDEPENDENT TESTING

Established 1931

Client: E2 Consulting Engineers, Inc.

155 Grand Ave. Suite 1000

Oakland, CA 94612

Attention: Shawn Duffy

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

investigation: Total Metal Analyses as Requested



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

Laboratory No.: 973678 Reported: March 5, 2008 Collected: February 20, 2008 Received: February 20, 2008

Analyzed: See Below

Analytical Results

REPORT

SAMPLE ID:	SC-Sludge-WDR-137	Time Collected:		11:30		LAB ID:	973678	
Parameter	Method	Reported Value	DF	Units	RL	Batch	Date Analyzed	Time Analyzed
Antimony	SW 6010B	812	497	mg/kg	74.8	022908A	02/29/08	08:19
Arsenic	SW 6010B	247	497	mg/kg	37.4	022808A	02/28/08	13:32
Barium	SW 6010B	195	497	mg/kg	37.4	022808A	02/28/08	13:32
Beryllium	SW 6010B	341	497	mg/kg	37.4	022808A	02/28/08	13:32
Cadmium	SW 6010B	75.2	497	mg/kg	74.8	022808A	02/28/08	13:32
Chromium	SW 6010B	33200	497	mg/kg	37.4	022808A	02/28/08	13:32
Cobalt	SW 6010B	21,3	49.7	mg/kg	3.74	030308A	03/03/08	15:21
Copper	SW 6010B	1350	497	mg/kg	37.4	022808A	02/28/08	13:32
Lead	SW 6010B	136	497	mg/kg	74.8	022908A	02/29/08	08:19
Mercury	SW 7471A	ND	98.8	mg/kg	0.149	02HG08Ac	02/28/08	N/A
Molybdenum	SW 6010B	ND	49,7	mg/kg	3.74	030308A	03/03/08	
Nickel	SW 6010B	66.2	497	mg/kg	37.4	022808A	02/28/08	13:32
Selenium	SW 6010B	850	497	mg/kg	187	022908A	02/29/08	08:19
Silver	SW 6020	25.4	9950	mg/kg	15.0	022808A	02/28/08	14:06
Thallium	SW 6010B	ND	49.7	mg/kg	7.47	030308A	03/03/08	15:21
Vanadium	SW 6010B	195	497	mg/kg	37.4	022908A	02/29/08	08:19
Zinc	SW 6010B	2260	497	mg/kg	187	022808A	02/28/08	13:32

NOTES:

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

ND: Not detected, or below limit of detection.

DF: Dilution factor.

Respectfully submitted, TRUESDAIL LABORATORIES, INC.

Mona Nassimi, Manager Analytical Services

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On 1

973678 CHAIN OF CUSTODY RECORD

[IM3Plant-WDR-137]

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

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5 10 Days PAGE DATE 2.20-09 TURNAROUND TIME COC Number

TOTAL NUMBER OF CONTAINERS COMMENTS NUMBER OF CONTAINERS T (OETSMS) (SM2T30) Anors (300.0) Ft. SOA. NOZ. NO3 × (BHOOSIMS) Hd DESCRIPTION Sludge FAX (530) 339-3303 1.8 TEAM 2-20-08 155 Grand Ave Ste 1000 DATE Oakland, CA 94612 358342.TM.02.00 (530) 229-3303 PG&E Topock SC-Sludge-WDR-137 SAMPLERS (SIGNATURE **E**2 PROJECT NAME P.O. NUMBER SAMPLE 10. COMPANY ADORESS PHONE

Level III QC ALERTII

For Sample Condition
See Form Attached

HSDY.

Rec'd 02/20/08 Lah#973678

SAMPLE CONDITIONS	RECEIVED COOL WARM +F	CUSTODY SEALED YES 🗍 NO 🗍	SPECIAL REQUIREMENTS:	q		
VTURE RECORD	Company On Time Time			Company T. L. I Date 2-2-39	mpany/ Oate/ ancy Time	Првпу! Date! ency Time
CHAIN OF CUSTODY SIGNA	Printed How Helly	Printed Conference BoxIFACLO DAYAGAGE	Signature Company Painted Company 701	Name (L c here: Agent	Printed Comp	Printed Cont
	Signature (Relinguished)	Signature (Received) /3.07	Signature (Relinevished) 20	Signature	Signature (Relinguished)	Signature