



**Pacific Gas and
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October 14, 2005

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: September 2005 Monthly Report and 3rd Quarter 2005 Report for the Interim
Measure No. 3 Groundwater Treatment System at the PG&E Topock Compressor
Station, Needles, California

Dear Mr. Perdue:

Enclosed is the September 2005 Monthly Report for the Pacific Gas and Electric Company's (PG&E) Topock Compressor Station, Interim Measure (IM) No. 3 Groundwater Treatment System. PG&E is submitting this Report for September 2005, in compliance with the Waste Discharge Requirements (WDRs) issued by the Colorado River Basin Regional Water Quality Control Board (CRBRWQCB) under Board Order R7-2004-0103.

This report also serves as the 3rd Quarter 2005 Report as required by Board Order R7-2004-0103. The sampling and analyses of the sludge is the only quarterly data that was collected during this period. Other quarterly reporting requirements include the IM No. 3 Startup Report (submitted on August 12, 2005) and the IM No. 3 August 2005 Monthly Report (submitted on September 15, 2005). These reports are referenced throughout this report when applicable.

WDRs under Board Order R7-2004-0103 apply to discharge by subsurface injection wells only. In addition to Board Order No. R7-2004-0103, the CRBRWQCB issued WDRs for discharge to the Colorado River (Board Order R7-2004-0100) and to the PG&E Compressor Station (Board Order R7-2004-0080). To date, there has been no system discharge to the Colorado River or the PG&E Compressor Station. PG&E has no plans to exercise these options at this time.

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

Sincerely,

Enclosures:

September 2005 Monthly Report and 3rd Quarter 2005 Report for the IM No. 3 Groundwater Treatment System

cc: Jose Cortez, RWQCB
Liann Chavez, RWQCB
Norman Shopay, DTSC

September 2005 Monthly Report and Third Quarter 2005 Report for Interim Measure No. 3 Groundwater Treatment System

**Waste Discharge Requirements
Order No. R7-2004-0103
PG&E Topock Compressor Station
Needles, California**

Prepared for
**California Regional Water Quality Control Board
Colorado River Basin Region**

on behalf of
Pacific Gas and Electric Company

October 14, 2005

CH2MHILL
155 Grand Avenue, Suite 1000
Oakland, CA 94612

**September 2005 Monthly Report
and 3rd Quarter 2005 Report
Interim Measures No. 3 Groundwater Treatment System
Waste Discharge Requirements Order No. R7-2004-0103
PG&E Topock Compressor Station
Needles, California**

Prepared for
Pacific Gas and Electric Company

October 14, 2005

This report was prepared under the supervision of a
California Certified Professional Engineer (P.E.)

Dennis Fink

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



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Acronyms and Abbreviations

CRBRWQCB	Colorado River Basin Regional Water Quality Control Board
DTSC	California Department of Toxic Substances Control
gpm	gallons per minute
IM	Interim Measure
PG&E	Pacific Gas and Electric Company
TVSS	transient voltage surge suppressor
WDR	Waste Discharge Requirements

1.0 Introduction

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

California Regional Water Quality Control Board, Colorado River Basin Region (CRBRWQCB) Order No. R7-2004-0103 authorizes PG&E to re-inject treated groundwater into injection wells located on San Bernardino County Assessor's Parcel No. 650-151-06. The Monitoring and Reporting Program under Order No. R7-2004-0103 requires monthly monitoring reports to be submitted by the 15th day of the following month. This report covers monitoring activities related to operation of the IM No. 3 groundwater treatment system for September 2005 and the third Quarter 2005. This report also includes the quarterly reporting requirements during the third Quarter 2005 (July through September), which is limited to testing and analysis of the sludge generated during the quarter.

In addition to Board Order No. R7-2004-0103, the CRBRWQCB issued Waste Discharge Requirements (WDRs) for discharge to the Colorado River (Board Order R7-2004-0100) and reuse at the PG&E Compressor Station (Board Order R7-2004-0080). To date, there has been no system discharge to the Colorado River or reuse at the PG&E Compressor Station. PG&E has no plans to exercise these options at this time.

2.0 Sampling Station Locations

Table 1 lists the locations of sampling stations. The locations of the sampling stations are provided in process and instrumentation diagrams TP-PR-10-10-04, TP-PR-10-10-08, and TP-PR-10-10-06, previously provided in PG&E's Sampling Locations letter to the CRBRWQCB Executive Officer, dated June 29, 2005. (These figures are provided again at the end of this report.)

3.0 Description of Activities

The treatment system initially operated for the Startup Phase between July 25 and July 28, 2005. Discharge to the injection wellfield was initiated July 31, 2005 at 2:00 p.m. after successful completion of the startup phase in accordance with the WDRs. Full-time operation of the treatment system commenced in August 2005 and was reported in the August 2005 monitoring report.

During September 2005, treatment system operation and discharge to injection well IW-2 operated under the following conditions:

- **September 1 through 3:** A California Department of Toxic Substances Control (DTSC) approved test to operate the treatment plant at a target rate 135 gallons per minute (gpm).
- **September 3 through 6:** The treatment plant was operated at a target rate of 70 gpm.
- **September 6 through 9:** A DTSC-approved test to operate the treatment plant at a target rate of 20 gpm. The extraction well operated at a higher pump rate and was cycled on and off during the test.
- **September 9 through 15:** The treatment plant was operated at a target rate of 70 gpm.
- **September 15 through 30:** The treatment rate was increased to a target of 90 gpm under the direction of DTSC.

4.0 Groundwater Treatment System Flow Rates

The September 2005 treatment system monthly average flow rates are presented in Table 2. The system influent flowrate was measured by flow meters at groundwater extraction wells TW-2D and TW-2S (Figure TP-RP-10-10-11). The treatment system effluent flowrate was measured by flow meters in the piping into injection well IW-2 and IW-3 (Figure TP-RP-10-10-03). 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). During September 2005, the reverse osmosis concentrate flow meter recorded erroneously low readings, and the recorded volume of reverse osmosis concentrate from manifests were used to estimate the monthly flow rate. The reverse osmosis concentrate flow meter accuracy will be evaluated during the October 2005 reporting period.

Periods of extraction well downtime during September 2005 are summarized below:

- **September 6 through 9:** Extraction well operations were shut down periodically to conduct a DTSC-approved test to operate the treatment plant at 20 gpm. Extraction well TW-2D was operated at approximately 45 gpm during this time and cycled on and off.
- **September 10:** Extraction well operations were shut down for less than 30 minutes due to a high water level in the receiving tank while maintenance of the reverse osmosis unit was completed.
- **September 12:** Extraction well operations were shut down for approximately 3 hours due to a high water level in the receiving tank while plant maintenance was being completed.
- **September 17:** Extraction well operations were shut down for approximately 2 hours due to a high water level in the receiving tank while correcting a pressure transducer failure on the microfilter unit.
- **September 18 and 19:** Extraction well operations were shut down for approximately 17 hours. A planned performance test to assess the treatment plant response to a total loss of ferrous chloride chemical flow resulted in partially-treated water with detections of hexavalent chromium downstream of the chrome reduction and iron oxidation process. The test was conducted with the treated water tank, and injection wells were isolated to prevent the potential for injected water not meeting discharge criteria. After conducting the test, re-cycling and re-treatment procedures were implemented; however, it was decided to transfer this partially-treated water to holding tanks on the MW-20 bench so that the extraction well system could be brought back into operation. Approximately 15,000 to 20,000 gallons of non-hazardous (or partially-treated) water were transported to US Filter Corporation as non-hazardous waste in conjunction with the reverse osmosis concentrate.
- **September 23, 25, and 26:** TW-2D was shut down for short periods (under 1 hour) to switch to backup power. Since September 26, the IM No. 3 facility has operated on

backup power until a transient voltage surge suppressor (TVSS) is replaced at the facility. The TVSS protects the equipment from power surges. It was determined that it would be safer to operate the facility on generator power (less likely to surge) until the TVSS could be replaced. A new TVSS has been ordered and will be installed in October.

5.0 Sampling and Analytical Procedures

All samples were collected at the designated sampling locations and placed directly into containers provided by Truesdail Laboratories, Inc., Severn Trent Laboratories, Inc., or MBC Laboratories, Inc. Sample containers were labeled and packaged according to standard sampling procedures.

The samples were stored in a cooler at 4° Celsius and transported to Truesdail Laboratories, Inc., Severn Trent Laboratories, Inc., or MBC Laboratories, Inc. via a courier service under chain-of-custody documentation. Truesdail Laboratories, Inc. is certified by the California Department of Health Services (Certification #1237) under the State of California's Environmental Laboratory Accreditation Program. Severn Trent Laboratories, Inc. is certified by the California Department of Health Services (Certification #1118) under the State of California's Environmental Laboratory Accreditation Program. MBC Laboratory is certified by the California Department of Health Services (Certification # 1788) under the State of California's Environmental Laboratory Accreditation Program.

All analyses were performed in accordance with the latest edition of the "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136), promulgated by the United States Environmental Protection Agency.

As required by the Monitoring and Reporting Program, the analytical method selected for total chromium had a method detection limit of 1 part per billion, and the analytical method selected for hexavalent chromium had a method detection limit of 0.2 part per billion.

Influent, effluent, reverse osmosis concentrate, and sludge sampling (a quarterly sample) was conducted in accordance with the sampling frequency required by the Monitoring and Reporting Program, as shown in Tables 3 through 6. Results of samples collected from the sampling locations more frequently than required are included in the analytical results in Tables 3 through 6.

Groundwater quality is being monitored in the surrounding observation and compliance wells following procedures and schedules approved in the *Groundwater Compliance Monitoring Plan for Interim Measures No. 3 Injection Area* (CH2M HILL 2005). Reporting of analytical results will be performed quarterly as a stand-alone document and will be released in conjunction with groundwater level maps of the same monitoring wells. The first report is scheduled for release on Friday, October 14, 2005.

6.0 Analytical Results

Laboratory reports prepared by the certified analytical laboratory are presented in Appendix A. Influent, effluent, reverse osmosis concentrate, and sludge sample (quarterly sample) analytical results are presented in Tables 3, 4, 5 and 6, respectively.

A sludge sample was collected September 22, 2005 and sent for an aquatic bioassay test in accordance with the quarterly reporting requirements. The aquatic bioassay results indicated 100 percent survivability. The aquatic bioassay laboratory report is included in Appendix A.

Based on the WDR testing, further waste characterization of the sludge will be completed in October for the purpose of offsite disposal. The results of this testing will be provided in the next monitoring report. No sludge was shipped offsite during this quarter.

On August 25, 2005, one reverse osmosis concentrate sample was collected in addition to the required reverse osmosis concentrate sampling frequency. The analytical results were not available for the August 2005 Monthly Report that PG&E submitted to the CRBRWQCB on September 15, 2005. The results from the August 25, 2005 sampling event are included in this report.

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

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

7.0 Conclusions

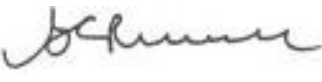
There were no exceedences of the effluent limitations during the reporting period.

8.0 Certification

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

Certification Statement:

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

Signature: 

Name: Curt Russell

Company: Pacific Gas and Electric Company

Title: Topock Onsite Project Manager

Date: 10/14/2005

TABLE 1
Sampling Station Description
September 2005 Report for IM No. 3 Groundwater Treatment System

Sample Station	Location
Groundwater Treatment System Influent	Sample tap on pipe into T-100 (see Figure TP-RP-10-10-04).
Groundwater Treatment System Effluent	Sample tap on pipe downstream from T-700 (see Figure TP-RP-10-10-04).
Groundwater Treatment System Reverse Osmosis Concentrate	Sample tap on pipe into T-701 (see Figure TP-RP-10-10-08).
Groundwater Treatment System Sludge	Sample was taken from sludge accumulated in the phase separator used this quarter (see Figure TP-RP-10-10-06).

TABLE 2

Flow Monitoring Results

September 2005 Report for IM No. 3 Groundwater Treatment System

Parameter	System Influent	System Effluent	Reverse Osmosis Concentrate
Average Monthly Flowrate (gpm)	76.6	67.2	9.1 ^a

^a The reverse osmosis concentrate flow rate is based on the recorded volume from waste manifests during September 2005. The flow meter that monitors the reverse osmosis brine at the IM No. 3 facility recorded erroneously low measurements. The flow meter will be assessed in October 2005.

TABLE 3
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Influent Monitoring Results ^a
September 2005 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency		Weekly						Monthly																	
<div><div>Analytes</div><div>Units ^b</div></div>	<div><div>Sample ID</div><div>Date</div></div>	TDS	Turbidity	Specific Conductance	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	
		mg/L	NTU	µmhos/cm	pHunits	µg/L	µg/L	µg/L	mg/L	µg/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
SC-100B-WDR-010		9/1/2005	4740	0.144	7450	7.54	5000	4120	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-100B-WDR-011		9/7/2005	6090	ND (0.1)	9240	7.54	4710	3930	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-100B-WDR-012		9/16/2005	6090 J	0.137	9440	7.70	3910	3920	ND (52)	0.56	ND (5.0)	ND (10)	27.0	1.46	ND (5.0)	2.92	ND (2.1)	ND (50)	23.1	5.20	5.00	0.0126	723	ND (300)	14.8
SC-100B-WDR-013		9/21/2005	6360	0.219	9250	7.59	4150	3990	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-100B-WDR-014		9/28/2005	6250	ND (0.1)	9210	7.72	5570	4020	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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 = micro ohms per centimeter
ND = parameter not detected at the listed reporting limit
J = concentration or reporting limits estimated by laboratory or validation

^a Sampling Location for all Influent Samples is tap on pipe from extraction wells into tank T-100 (see attached P&ID TP-PR-10-10-04)
^b Units reported in this table are those units required in the WDRs

TABLE 4
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Effluent Monitoring Results^a
September 2005 Monthly Report for Interim Measures No.3 Groundwater Treatment System

WDRs Effluent Limits ^b	Ave. Monthly	NA	NA	NA	6.5-8.4	25	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	Max Daily	NA	NA	NA	6.5-8.4	50	16	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Required Sampling Frequency		Weekly						Monthly																	
<div><div></div><div>Analytes Units ^c</div></div>	Date	TDS	Turbidity	Specific Conductance	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	
		mg/L	NTU	µmhos/cm	pHunits	µg/L	µg/L	µg/L	mg/L	µg/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
Sample ID	Date																								
SC-700B-WDR-010	9/1/2005	3640	ND (0.1)	5810	8.08	ND (1.0)	ND (1.0)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
SC-700B-WDR-011	9/7/2005	3180	ND (0.1)	5090	7.94	ND (1.0)	0.36	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
SC-700B-WDR-012	9/16/2005	3760 J	ND (0.1)	6020	7.60	ND (1.0)	ND (1.0)	ND (52)	0.65	ND (5.0)	ND (10)	10.9	1.31	5.40	1.74	ND (2.1)	ND (50)	8.40	9.30	3.51	0.0053	429	ND (300)	22.2	
SC-700B-WDR-013	9/21/2005	3900	ND (0.1)	5810	8.10	ND (1.0)	0.23	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
SC-700B-WDR-014	9/28/2005	3770	ND (0.1)	5200 J	7.82	ND (1.0)	0.22	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

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 = micro ohms per centimeter
ND = parameter not detected at the listed reporting limit
J = concentration or reporting limits estimated by laboratory or validation

^a Sampling location for all Effluent Samples is tap on pipe downstream from tank T-700 to injection well IW-2 (see attached P&ID TP-PR-10-10-04)
^b In addition to the listed effluent limits, the WDRs state that the effluent shall not contain heavy metals, chemicals, pesticides or other constituents in concentrations toxic to human health.
^c Units reported in this table are those units required in the WDRs

TABLE 5
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Reverse Osmosis Concentrate Results ^a
September 2005 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency		Weekly					Monthly																
<div>Sample ID</div>	<div>Analytes Units^b Date</div>	TDS	Specific Conductance	pH	Chromium	Hexavalent Chromium	Antimony	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Copper	Fluoride	Lead	Molybdenum	Mercury	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
		mg/L	µmhos/cm	pHUnits	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
SC-701-082505 ^c	8/25/2005	---	37600	7.92	---	---	---	---	0.0523	---	---	---	---	12.2	---	---	---	---	---	---	---	---	---
SC-701-WDR-010	9/1/2005	20300	33800	7.95	ND (0.001)	ND (0.002)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-701-WDR-011	9/7/2005	23700	39400	7.87	0.0057	0.0056	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-701-WDR-012	9/16/2005	25300 J	40000	7.76	ND (0.001)	ND (0.002)	ND (0.01)	ND (0.01)	0.0494	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	12.7	ND (0.01)	0.0622	ND (0.0002)	0.0311	ND (0.021)	ND (0.01)	ND (0.015)	0.0776	ND (0.052)
SC-701-WDR-013	9/21/2005	26400	40300	7.94	ND (0.001)	ND (0.002)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SC-701-WDR-014	9/28/2005	25000	40400	7.78	ND (0.001)	ND (0.002)	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

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

^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 Sample SC-701-082505 results were not available for the IM No.3 August 2005 Monthly Report

TABLE 6
Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)
Sludge Monitoring Results^a
September 2005 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Required Sampling Frequency		Each Time Sludge is Transported Offsite ^c																			
Sample ID	Date	Analytes Units ^b																			
		Chromium mg/kg	Hexavalent Chromium mg/kg	Antimony mg/kg	Arsenic mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Cobalt mg/kg	Copper mg/kg	Fluoride mg/kg	Lead mg/kg	Molybdenum mg/kg	Mercury mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg	Bioassay Percent Survival
SC-SLUDGE-WDR-013	9/22/2005	43000	120	ND (62)J	45.0	120	ND (5.2)	ND (5.2)J	ND (52)	100	12.5	ND (5.2)	120	1.40	62.0	ND (5.2)	ND (10)	37.0	130	29.0	100

NOTES:

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

^a Sampling Location for all Sludge Samples is the Sludge Collection Tanks (see attached P&ID TP-PR-10-10-06)
^b Units reported in this table are those units required in the WDR
^c Unless transport is more frequent than monthly, in which case the sampling frequency shall be monthly

TABLE 7

Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)

Monitoring Information

September 2005 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-100B	SC-100B-WDR-010	Gary Sibble	9/1/2005	8:00:00 AM	TLI	EPA 120.1	SC	9/2/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/2/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/2/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/2/2005	Gautam Savani
					TLI	EPA 6010B	CRT	9/8/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/1/2005	Jorge Arriaga
SC-100B	SC-100B-WDR-011	Harley Booth	9/7/2005	8:00:00 AM	TLI	EPA 120.1	SC	9/8/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/8/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/9/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/8/2005	Gautam Savani
					TLI	EPA 6010B	CRT	9/12/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/7/2005	Vanna Kho/Jorge Arriaga
SC-100B	SC-100B-WDR-012	Brian Dobbs	9/16/2005	10:55:00 AM	TLI	EPA 120.1	SC	9/17/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/17/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/19/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/17/2005	Gautam Savani
					TLI	EPA 300.0	SO4	9/17/2005	Vanna Kho
					TLI	EPA 300.0	FL	9/17/2005	Vanna Kho
					TLI	EPA 300.0	NO3N	9/17/2005	Vanna Kho
					TLI	EPA 350.2	NH3N	9/20/2005	Alex Hernandez
					TLI	EPA 354.1	NO2N	9/17/2005	Alex Hernandez
					TLI	EPA 6010B	AL	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	CRT	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	FE	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	MN	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	B	9/19/2005	Riddhi Patel
					TLI	SW 6020A	MO	9/19/2005	Victoria Than
					TLI	SW 6020A	ZN	9/19/2005	Victoria Than
					TLI	SW 6020A	SB	9/19/2005	Victoria Than
					TLI	SW 6020A	PB	9/19/2005	Victoria Than
					TLI	SW 6020A	NI	9/19/2005	Victoria Than
					TLI	SW 6020A	CU	9/19/2005	Victoria Than
					TLI	SW 6020A	BA	9/20/2005	Victoria Than
					TLI	SW 6020A	AS	9/19/2005	Victoria Than

TABLE 7

Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)

Monitoring Information

September 2005 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-100B	SC-100B-WDR-012	Brian Dobbs	9/16/2005	10:55:00 AM	TLI	SW 7199	CR6	9/17/2005	Jorge Arriaga
SC-100B	SC-100B-WDR-013	Brian Dobbs	9/21/2005	11:00:00 AM	TLI	EPA 120.1	SC	9/22/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/22/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/22/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/22/2005	Gautam Savani
					TLI	EPA 6010B	CRT	9/23/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/22/2005	Jorge Arriaga
SC-100B	SC-100B-WDR-014	Brian Dobbs	9/28/2005	10:15:00 AM	TLI	EPA 120.1	SC	9/29/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/29/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/29/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/29/2005	Gautam Savani
					TLI	EPA 6010B	CRT	9/30/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/29/2005	Vanna Kho
SC-700B	SC-700B-WDR-010	Gary Sibble	9/1/2005	8:00:00 AM	TLI	EPA 120.1	SC	9/2/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/2/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/2/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/2/2005	Gautam Savani
					TLI	EPA 6010B	CRT	9/8/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/1/2005	Jorge Arriaga
SC-700B	SC-700B-WDR-011	Harley Booth	9/7/2005	8:00:00 AM	TLI	EPA 120.1	SC	9/8/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/8/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/9/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/8/2005	Gautam Savani
					TLI	EPA 6010B	CRT	9/13/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/7/2005	Vanna Kho/Jorge Arriaga
SC-700B	SC-700B-WDR-012	Brian Dobbs	9/16/2005	11:00:00 AM	TLI	EPA 120.1	SC	9/17/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/17/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/19/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/17/2005	Gautam Savani
					TLI	EPA 300.0	FL	9/17/2005	Vanna Kho
					TLI	EPA 300.0	NO3N	9/17/2005	Vanna Kho
					TLI	EPA 300.0	SO4	9/17/2005	Vanna Kho
					TLI	EPA 350.2	NH3N	9/20/2005	Alex Hernandez
					TLI	EPA 354.1	NO2N	9/17/2005	Alex Hernandez

TABLE 7

Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)

Monitoring Information

September 2005 Monthly Report for Interim Measures No.3 Groundwater Treatment System

Location	Sample ID	Sampler Name	Sample Date	Sample Time	Lab	Analysis Method	Parameter	Analysis Date	Lab Technician
SC-700B	SC-700B-WDR-012	Brian Dobbs	9/16/2005	11:00:00 AM	TLI	EPA 6010B	B	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	CRT	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	FE	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	MN	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	AL	9/19/2005	Riddhi Patel
					TLI	SW 6020A	ZN	9/19/2005	Victoria Than
					TLI	SW 6020A	SB	9/19/2005	Victoria Than
					TLI	SW 6020A	AS	9/19/2005	Victoria Than
					TLI	SW 6020A	BA	9/20/2005	Victoria Than
					TLI	SW 6020A	CU	9/19/2005	Victoria Than
					TLI	SW 6020A	MO	9/19/2005	Victoria Than
					TLI	SW 6020A	NI	9/19/2005	Victoria Than
					TLI	SW 6020A	PB	9/19/2005	Victoria Than
					TLI	SW 7199	CR6	9/17/2005	Jorge Arriaga
SC-700B	SC-700B-WDR-013	Brian Dobbs	9/21/2005	11:00:00 AM	TLI	EPA 120.1	SC	9/22/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/22/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/22/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/22/2005	Gautam Savani
					TLI	EPA 6010B	CRT	9/23/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/22/2005	Jorge Arriaga
SC-700B	SC-700B-WDR-014	Brian Dobbs	9/28/2005	10:05:00 AM	TLI	EPA 120.1	SC	9/29/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/29/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/29/2005	Emilia Haley
					TLI	EPA 180.1	TRB	9/29/2005	Gautam Savani
					TLI	EPA 6010B	CRT	9/30/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/29/2005	Vanna Kho
SC-701	SC-701-082505	Harley Booth	8/25/2005	12:05:00 PM	TLI	EPA 120.1	SC	8/26/2005	Alex Hernandez
					TLI	EPA 150.1	PH	8/26/2005	Alex Hernandez
					TLI	EPA 300.0	NO3N	8/26/2005	Vanna Kho
					TLI	EPA 300.0	SO4	8/26/2005	Vanna Kho
					TLI	EPA 300.0	FL	8/26/2005	Vanna Kho
					TLI	EPA 350.2	NH3N	8/26/2005	Alex Hernandez
					TLI	SW 6020A	BA	9/12/2005	Victoria Than
SC-701	SC-701-WDR-010	Gary Sibble	9/1/2005	8:00:00 AM	TLI	EPA 120.1	SC	9/2/2005	Alex Hernandez

TABLE 7

Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)

Monitoring Information

September 2005 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-010	Gary Sibble	9/1/2005	8:00:00 AM	TLI	EPA 150.1	PH	9/2/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/2/2005	Emilia Haley
					TLI	EPA 6010B	CRT	9/8/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/1/2005	Jorge Arriaga
SC-701	SC-701-WDR-011	Harley Booth	9/7/2005	8:00:00 AM	TLI	EPA 120.1	SC	9/8/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/8/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/9/2005	Emilia Haley
					TLI	EPA 6010B	CRT	9/13/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/7/2005	Vanna Kho/Jorge Arriaga
SC-701	SC-701-WDR-012	Brian Dobbs	9/16/2005	11:05:00 AM	TLI	EPA 120.1	SC	9/17/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/17/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/19/2005	Emilia Haley
					TLI	EPA 300.0	SO4	9/17/2005	Vanna Kho
					TLI	EPA 300.0	FL	9/17/2005	Vanna Kho
					TLI	EPA 300.0	NO3N	9/17/2005	Vanna Kho
					TLI	EPA 350.2	NH3N	9/20/2005	Alex Hernandez
					TLI	EPA 354.1	NO2N	9/17/2005	Alex Hernandez
					TLI	EPA 6010B	B	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	FE	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	CRT	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	MN	9/19/2005	Riddhi Patel
					TLI	EPA 6010B	AL	9/19/2005	Riddhi Patel
					TLI	EPA 7470A	HG	9/19/2005	Jorge Arriaga
					TLI	SW 6020A	AS	9/19/2005	Victoria Than
					TLI	SW 6020A	CO	9/19/2005	Victoria Than
					TLI	SW 6020A	BA	9/20/2005	Victoria Than
					TLI	SW 6020A	BE	9/20/2005	Victoria Than
					TLI	SW 6020A	CD	9/19/2005	Victoria Than
					TLI	SW 6020A	AG	9/19/2005	Victoria Than
					TLI	SW 6020A	CU	9/19/2005	Victoria Than
					TLI	SW 6020A	MO	9/19/2005	Victoria Than
					TLI	SW 6020A	PB	9/19/2005	Victoria Than
					TLI	SW 6020A	SB	9/19/2005	Victoria Than
					TLI	SW 6020A	SE	9/20/2005	Victoria Than

TABLE 7

Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)

Monitoring Information

September 2005 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-012	Brian Dobbs	9/16/2005	11:05:00 AM	TLI	SW 6020A	TL	9/19/2005	Victoria Than
					TLI	SW 6020A	V	9/19/2005	Victoria Than
					TLI	SW 6020A	ZN	9/19/2005	Victoria Than
					TLI	SW 6020A	NI	9/19/2005	Victoria Than
					TLI	SW 7199	CR6	9/17/2005	Jorge Arriaga
SC-701	SC-701-WDR-013	Brian Dobbs	9/21/2005	11:00:00 AM	TLI	EPA 120.1	SC	9/22/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/22/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/22/2005	Emilia Haley
					TLI	EPA 6010B	CRT	9/23/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/22/2005	Jorge Arriaga
SC-701	SC-701-WDR-014	Brian Dobbs	9/28/2005	9:55:00 AM	TLI	EPA 120.1	SC	9/29/2005	Alex Hernandez
					TLI	EPA 150.1	PH	9/29/2005	Alex Hernandez
					TLI	EPA 160.1	TDS	9/29/2005	Emilia Haley
					TLI	EPA 6010B	CRT	9/30/2005	Riddhi Patel
					TLI	SW 7199	CR6	9/29/2005	Vanna Kho
SC-Sludge	SC-SLUDGE-WDR-013	Brian Dobbs	9/22/2005	2:15:00 PM	STL	EPA 160.3	MOIST	9/27/2005	Floran Zimmermann
					TLI	EPA 300.0	FL	9/29/2005	Vanna Kho
					STL	EPA 6010B	AG	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	PB	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	AS	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	BE	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	CD	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	CO	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	CRT	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	CU	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	BA	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	NI	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	SB	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	SE	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	TL	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	V	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	ZN	9/29/2005	Josephine Asuncion
					STL	EPA 6010B	MO	9/29/2005	Josephine Asuncion
					STL	EPA 7471A	HG	9/29/2005	Hao Ton

TABLE 7

Board Order No. R7-2004-0103 Waste Discharge Requirements (WDRs)

Monitoring Information

September 2005 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-Sludge	SC-SLUDGE-WDR-013	Brian Dobbs	9/22/2005	2:15:00 PM	STL	SW 7199	CR6	9/30/2005	Yuriy Zakhrafov
Bioassay	SC-Sludge-WDR-013	Brian Dobbs	9/22/05	2:15:00 P.M	MBC	96-Hour Acute Aquatic Toxicity Screening test	BIO	9/26/05 - 9/30/05	Sonia Beck

NOTES:

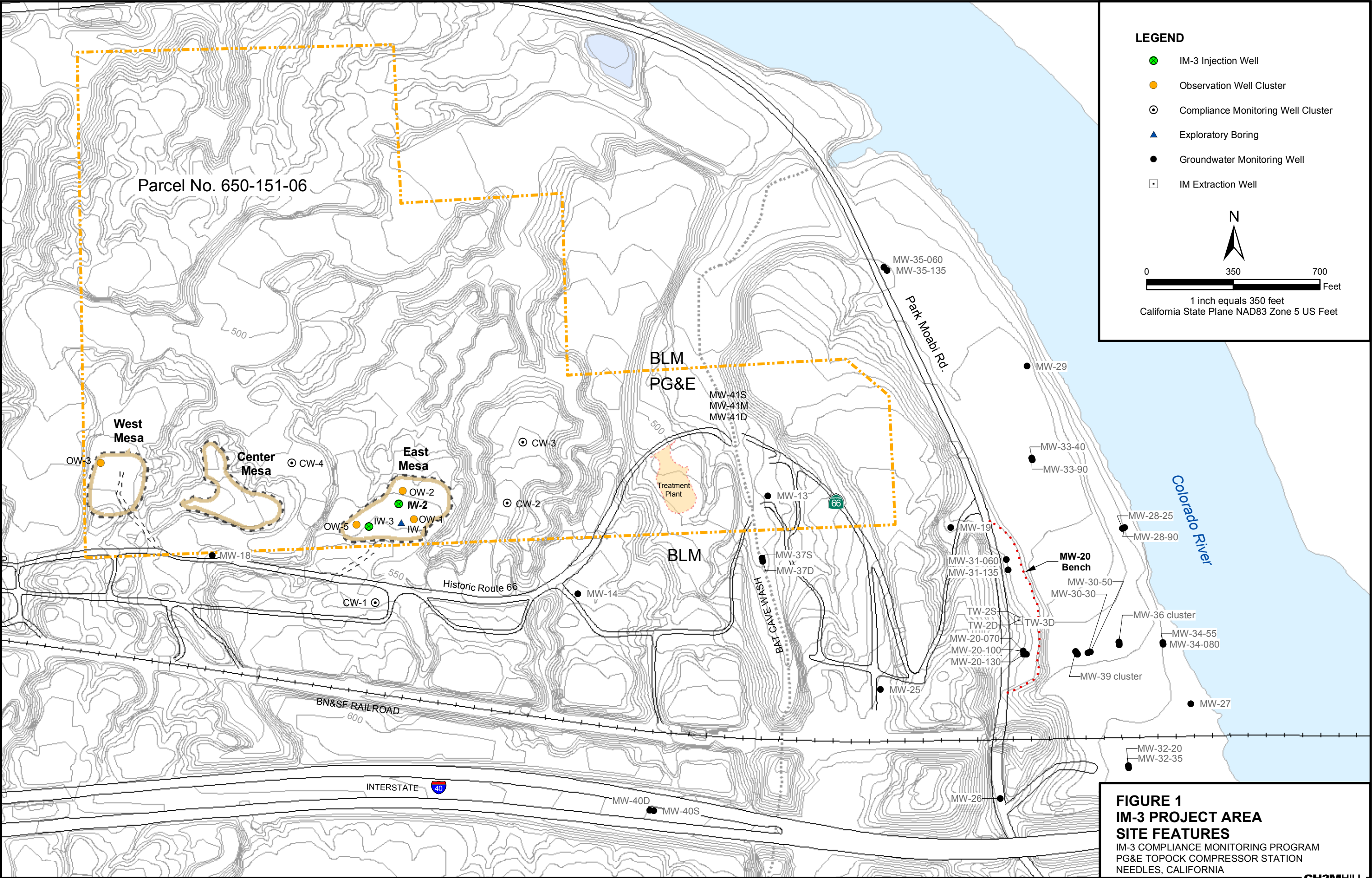
SC-700B = Sampling location for all Effluent Samples is tap on pipe downstream from tank T-700 to injection well IW-2 (see attached P&ID TP-PR-10-10-04)

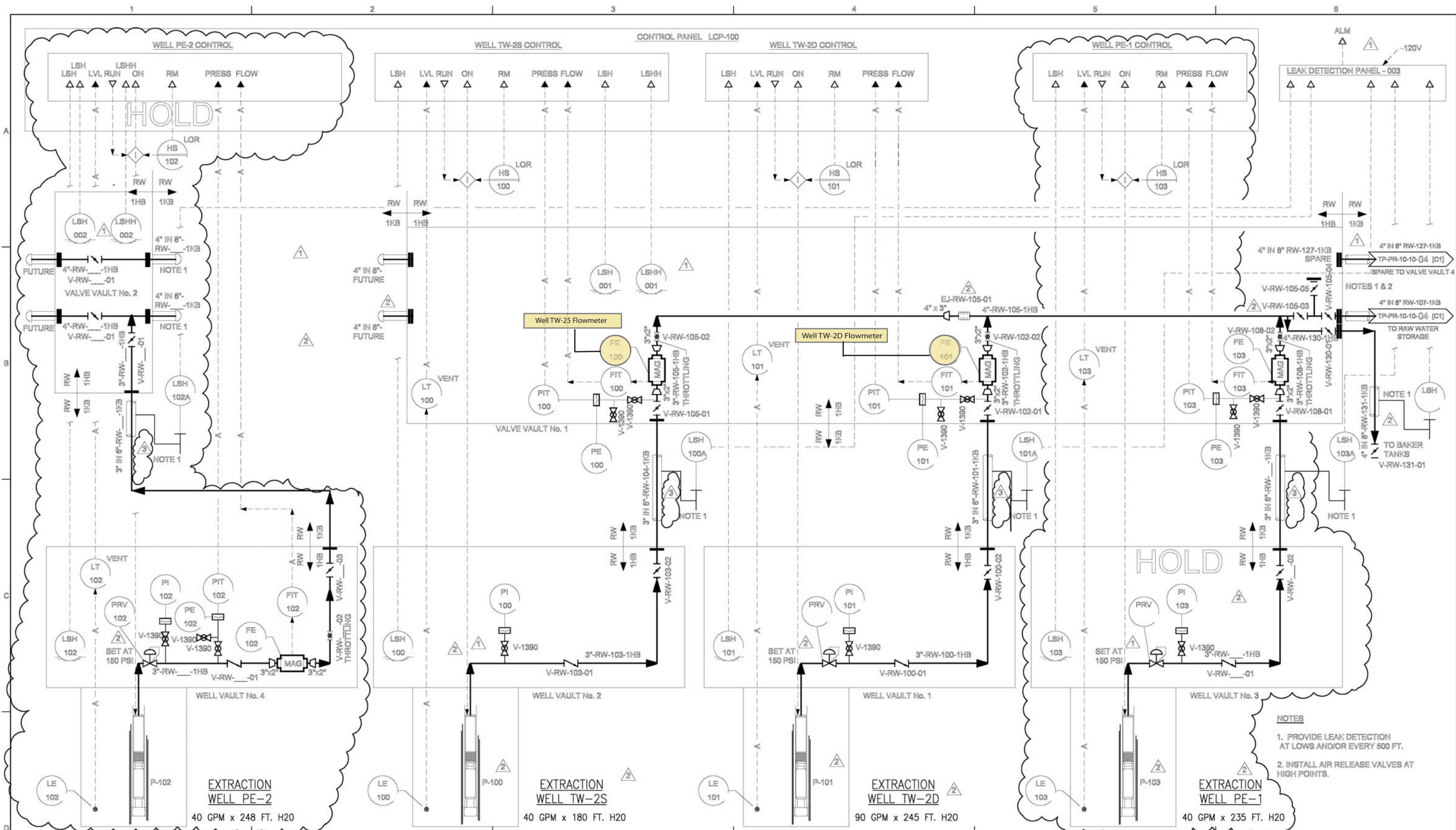
SC-100B = Sampling Location for all Influent Samples is tap on pipe from extraction wells into tank T-100 (see attached P&ID TP-PR-10-10-04)

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

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

Figures





RESPONSIBLE ENGINEER: Kenneth L. Martins PE # CH44876 Exp 6-30-06	NO.	DATE	REVISION	BY	CHK	REVISION APPROVAL	REV 3	DATE 03/16/05	PRINT DISTRIBUTION	STATUS					
	0	07/28/04	FOR INTERNAL REVIEW	EFC	AJ	DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED	DATE	ISSUED	REV	DATE	SDE	PEM
	0	09/03/04	APPROVED FOR CONSTRUCTION	EFC	AJ	CIVIL		ELECTRICAL		STATUS	PRELIMINARY				
	1	10/13/04	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ	STRUCTURAL		INST & CONTROL		REV.	FOR REVIEW AND APPROVAL	D	07/28/04		
	2	01/23/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ	MECHANICAL		ARCHITECTURAL		CLIENT	APPROVED FOR CONSTRUCTION	0	09/03/04	KLM	TP
	3	03/16/05	DELETED NOTES, APPROVED FOR CONSTRUCTION	EFC	AJ	PROCESS		ENVIRONMENTAL		FIELD	REVISED & APPROVED FOR CONSTRUCTION	3	03/16/05		
						PIPING		GEN. ARRANG.		INTRA CO.					
SCALE											NONE				

SCALE NONE

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

PROJ. NO. 315994

CH2MHILL

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

DWG. NO. TP-PR-10-10-03 REV. 3

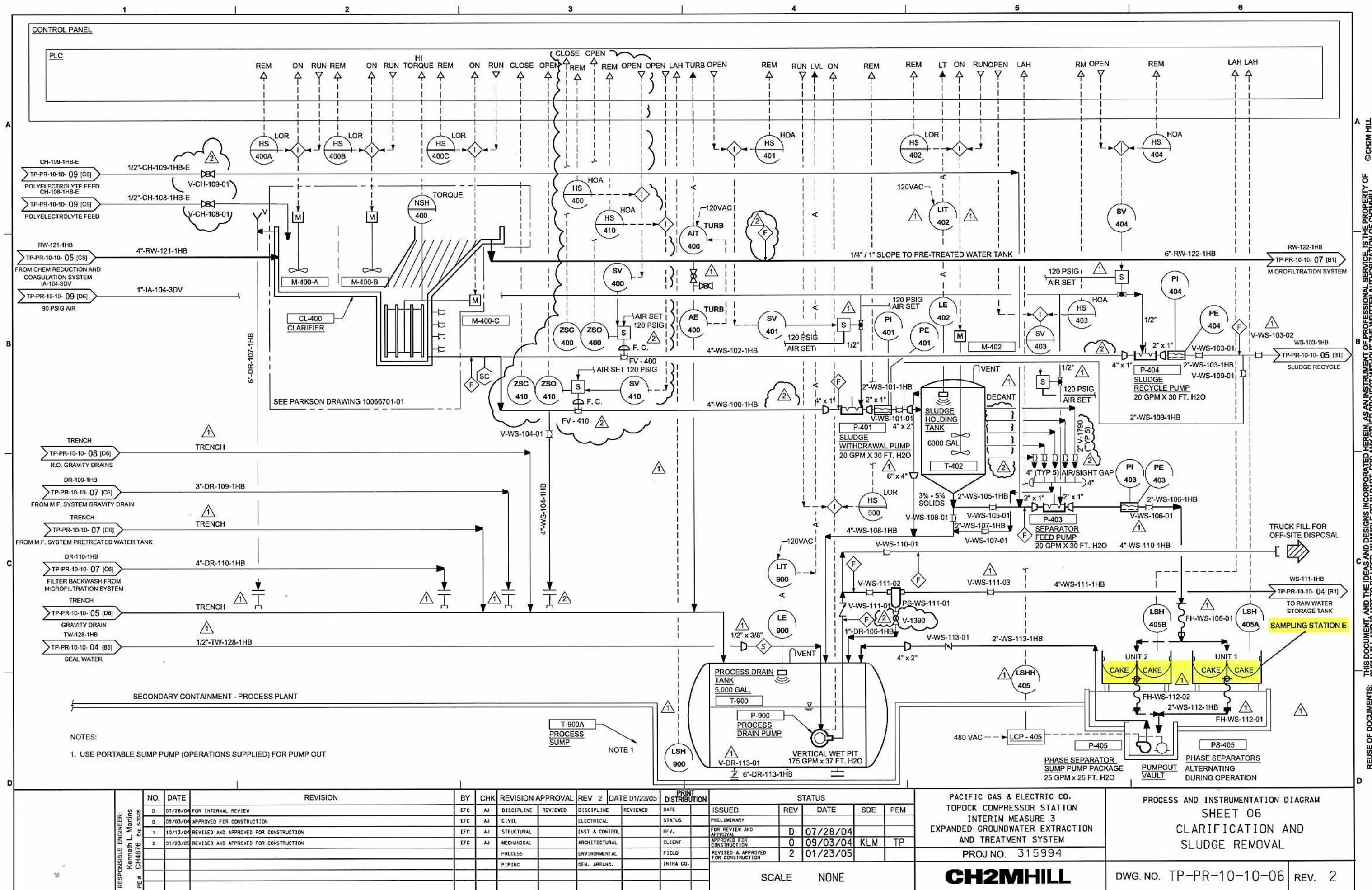
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ON ORIGINAL DRAWING.
0 1"

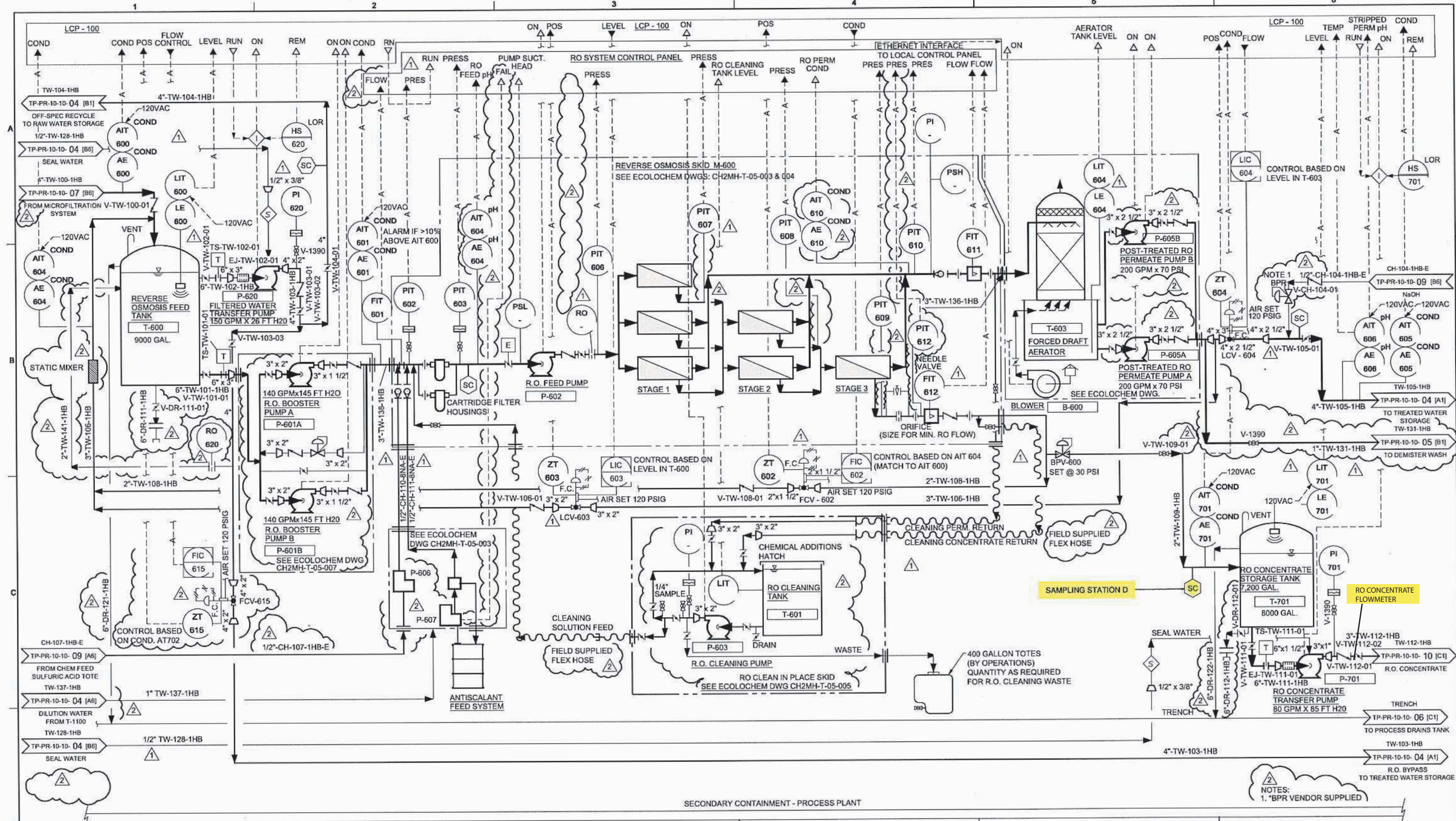
FILENAME: tppr101003.dwg

PLOT DATE: 16-MAR-2005

PLOT TIME:

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SECONDARY CONTAINMENT - PROCESS PLANT

RESPONSIBLE ENGINEER:
Kenneth L. Martins
PE # CH4876
Exp 5-30-05

NO.	DATE	REVISION	BY	CHK	REVISION APPROVAL	REV 2	DATE 01/23/05	PRINT DISTRIBUTION	STATUS	ISSUED	REV	DATE	SDE	PEM
0	07/28/04	FOR INTERNAL REVIEW	EFC	AJ	DISCIPLINE	REVIEWED	DISCIPLINE	REVIEWED	DATE	ISSUED				
0	09/03/04	APPROVED FOR CONSTRUCTION	EFC	AJ	CIVIL		ELECTRICAL		STATUS	PRELIMINARY				
1	10/13/04	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ	STRUCTURAL		INST & CONTROL		FOR REVIEW AND APPROVAL	D	07/28/04			
2	01/23/05	REVISED AND APPROVED FOR CONSTRUCTION	EFC	AJ	MECHANICAL		ARCHITECTURAL		APPROVED FOR CONSTRUCTION	0	09/03/04	KLM	TP	
					PROCESS		ENVIRONMENTAL		REVISED & APPROVED FOR CONSTRUCTION	2	01/23/05			
					PIPING		GEN. ARRANG.		INTRA CO.					

SCALE NONE

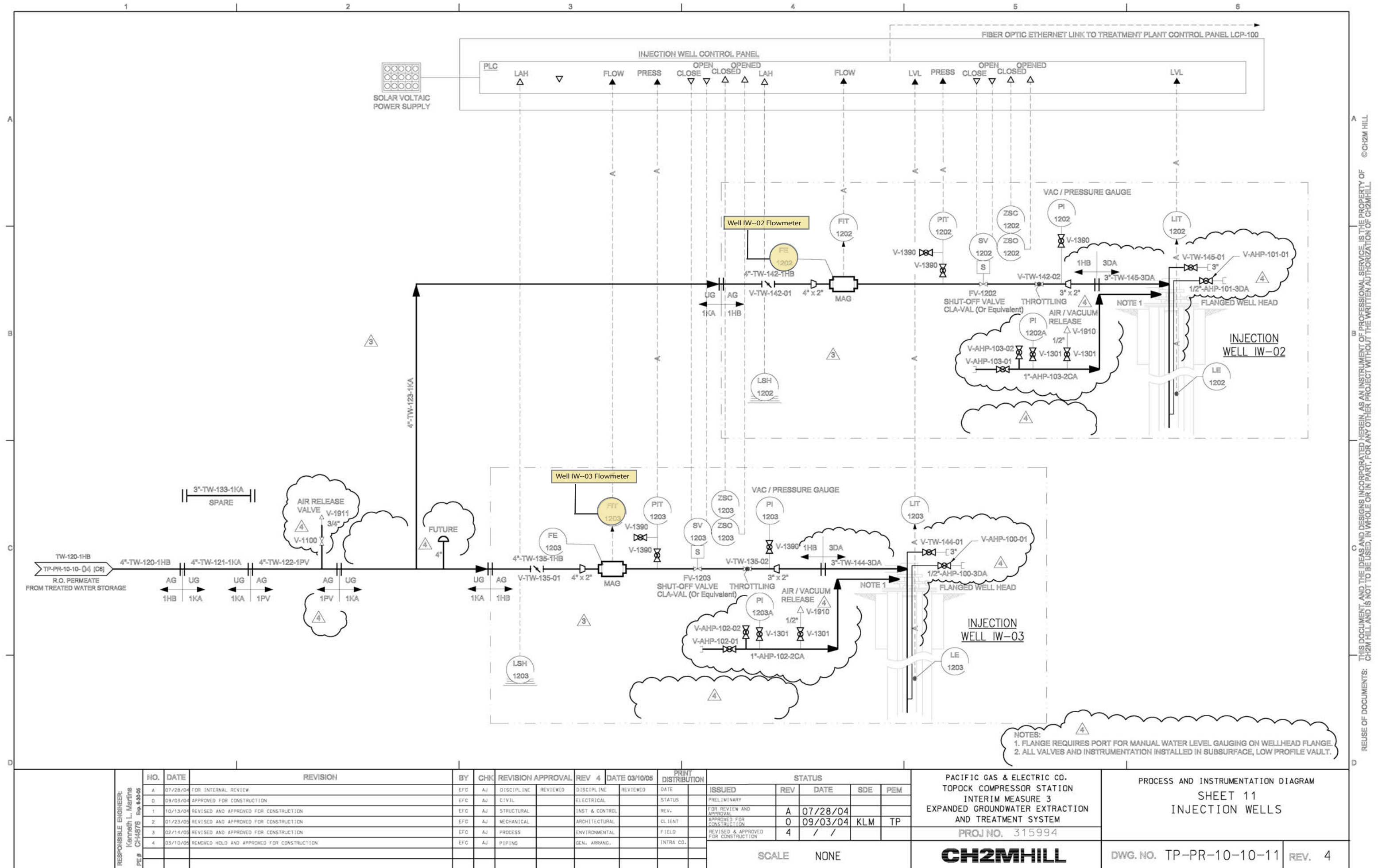
PACIFIC GAS & ELECTRIC CO.
TOPOCK COMPRESSOR STATION
INTERIM MEASURE 3
EXPANDED GROUNDWATER EXTRACTION
AND TREATMENT SYSTEM
PROJ NO. 315994
CH2MHILL

PROCESS AND INSTRUMENTATION DIAGRAM
SHEET 08
REVERSE OSMOSIS SYSTEM
DWG. NO. TP-PR-10-10-08 REV. 2

BAR IS ONE INCH
ON ORIGINAL DRAWING.
0 1"

FILENAME: tpr101008.dwg PLOT DATE: 23-JAN-2005 PLOT TIME:

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Appendix A

Laboratory Analytical Reports
