

**GROUNDWATER MONITORING AND SAMPLING
REPORT**

**EMERYVILLE MAINTENANCE FACILITY
4525 HOLLIS STREET
EMERYVILLE, CALIFORNIA
SECOND QUARTER 1996**

Prepared for

Pacific Gas and Electric Company
Technical and Ecological Services

July 1996

Prepared by

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Project 0143-014.02

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1 INTRODUCTION

This report presents data collected during the second quarter 1996 monitoring period at the Pacific Gas and Electric Company (PG&E) Emeryville Maintenance facility at 4525 Hollis Street in Emeryville, California (see Figure 1).

2 GROUNDWATER GRADIENT AND DIRECTION

Second quarter groundwater levels were measured at the PG&E Maintenance Facility in Emeryville, California, on June 14, 1996, using an electronic sounding device, and recorded on the historical monitoring well data form included in Appendix A. The groundwater elevations are summarized in Table 1. The June data were used in constructing a groundwater contour map (see Figure 2). June water levels ranged from a low of 10.98 feet above mean sea level (MSL) in well ESE-1 to a high of 17.36 feet above MSL in well MW-4. The groundwater gradient is 0.02 foot per foot (ft/ft) to the north between monitoring wells ESE-2 and MW-4 and 0.06 ft/ft to the south between monitoring wells ESE-4 and ESE-1.

3 SAMPLING, ANALYSIS, AND MONITORING PROGRAM RESULTS

Groundwater samples were collected from wells ESE-1 through ESE-4 on June 14, 1996, consistent with the protocol presented in Figure 3, and analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX) by U.S. Environmental Protection Agency (USEPA) Method 602/8020; polychlorinated biphenyls (PCBs) by USEPA Method 3510/608; and total extractable petroleum hydrocarbons (TEPH) as mineral oil, by USEPA Method 3510/8015M. Temperature, pH, and electrical conductivity were measured in the field and recorded on the water sample field data sheets (see Appendix A). Groundwater samples were not collected from well MW-4. Field readings from the second quarter 1996 monitoring event are summarized in Table 1.

The analytical results are discussed below. Second quarter 1996 and historical analytical data are summarized in Table 2. Certified analytical reports and chain-of-custody records are included in Appendix B.

Petroleum hydrocarbons, BTEX and PCBs were not detected at or above the method reporting limit (MRL) in any sample collected from ESE-1 through ESE-4.

4 FIELD LABORATORY QUALITY CONTROL RESULTS

Analytical data were evaluated for accuracy and precision based on field and laboratory quality control (QC) sample performance. The field QC consisted of collecting one field blank (FB-1) and analyzing it for BTEX.

Field blanks are collected to assess the effect of field environments on the analytical results and to identify false positives. No parameters were detected above their respective MRLs in the field blank, indicating no adverse effects from sampling procedures.

The laboratory QC consisted of checking adherence to holding times and evaluating method blanks and matrix spike (MS) results.

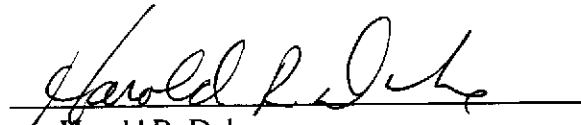
Holding times are established by the USEPA and refer to the maximum time allowed to pass between sample collection and analysis by the laboratory. These limits assist in determining data validity. The method blank results are used to assess the effect of the laboratory environment on the analytical results. The MS recoveries are used to assess accuracy.

All analyses were done within the holding times specified by the USEPA. No compounds were detected in the daily method blanks. Recoveries of MS results, were within the laboratory acceptance limits.

The field and laboratory QC results indicate that the analytical data are of acceptable quality.

The material and data in this report were prepared under the supervision and direction of the undersigned.

EMCON


Harold R. Duke
Project Manager

EMCON

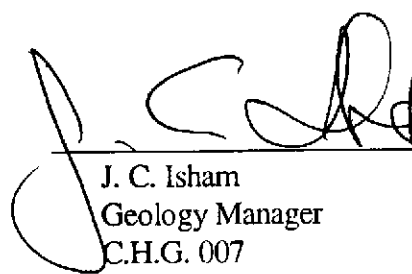

J. C. Isham
Geology Manager
C.H.G. 007



Table 1
Field Measurements
Second Quarter 1996 and Historical Data
Pacific Gas and Electric Company
Emeryville, California

Sample Designation	Date	Top-of-Casing Elevation (ft/MSL) ¹	Depth to Water (feet)	Groundwater Elevation (ft/MSL)	Measured Well Depth (feet)	pH (units)	Temperature (°F)	Electrical Conductivity (umhos/cm)
ESE-1	03/28/94	23.66	10.06	13.60	20.8	8.48	73.1	600
ESE-1	04/07/94	23.66	10.22	13.44	NM ³	NS ⁴	NS	NS
ESE-1	12/12/94	23.66	9.18	14.48	30.6	7.26	63.4	588
ESE-1	03/13/95	23.66	8.20	15.46	30.6	7.33	63.3	548
ESE-1	06/15/95	23.66	9.50	14.16	30.6	6.90	64	505
ESE-1	09/15/95	23.66	10.13	13.53	30.6	6.80	65.1	505
ESE-1	12/15/95	23.66	10.55	13.11	33.8	7.04	65.1	511
ESE-1	03/15/96	23.66	11.79	11.87	33.6	6.94	64.9	540
ESE-1	06/14/96	23.66	12.68	10.98	33.6	6.93	67.4	517
ESE-2	03/28/94	27.80	10.13	17.67	34.2	7.67	67.5	580
ESE-2	04/07/94	27.80	14.37	13.43	NM	NS	NS	NS
ESE-2	12/12/94	27.80	13.05	14.75	34.3	7.05	64.6	610
ESE-2	03/13/95	27.80	12.48	15.32	34.3	7.19	62.5	596
ESE-2	06/15/95	27.80	13.85	13.95	34.3	7.02	65.1	601
ESE-2	09/15/95	27.80	14.22	13.58	34.3	6.91	65.6	627
ESE-2	12/15/95	27.80	11.65	16.15	34.1	7.12	64.7	591
ESE-2	03/15/96	27.80	12.87	14.93	34.1	7.01	65.8	669
ESE-2	06/14/96	27.80	13.94	13.86	34.1	7.08	67.1	607
ESE-3	03/28/94	23.91	11.23	12.68	30.9	7.47	68.7	610
ESE-3	04/07/94	23.91	11.29	12.62	NM	NS	NS	NS
ESE-3	12/12/94	23.91	10.62	13.29	31.0	7.19	63.9	600
ESE-3	03/13/95	23.91	9.45	14.46	31.0	6.99	62.5	600
ESE-3	06/15/95	23.91	10.27	13.64	31.0	7.10	64.9	556

Table 1
Field Measurements
Second Quarter 1996 and Historical Data
Pacific Gas and Electric Company
Emeryville, California

Sample Designation	Date	Top-of-Casing		Groundwater		Measured Well		Electrical Conductivity (umhos/cm)
		Elevation (ft/MSL) ¹	Depth to Water (feet)	Elevation (ft/MSL)	Depth (feet)	pH (units)	Temperature (°F)	
ESE-3	09/15/95	23.91	10.87	13.04	31.0	6.96	65.5	559
ESE-3	12/19/95	23.91	9.40	14.51	31.0	7.28	64.2	556
ESE-3	03/15/96	23.91	10.02	13.89	30.9	7.01	65.0	583
ESE-3	06/14/96	23.91	10.63	13.28	30.9	7.09	67.0	546
ESE-4	03/28/94	24.33	10.63	13.70	31.4	7.77	66.3	610
ESE-4	04/07/94	24.33	10.85	13.48	NM	NS	NS	NS
ESE-4	12/12/94	24.33	9.63	14.70	31.6	7.11	63.1	591
ESE-4	03/13/95	24.33	8.90	15.43	31.6	7.16	61.2	595
ESE-4	06/15/95	24.33	9.81	14.52	31.6	7.05	64.1	565
ESE-4	09/15/95	24.33	10.85	13.48	31.6	7.01	66.3	584
ESE-4	12/15/95	24.33	8.72	15.61	31.6	7.05	64.6	555
ESE-4	03/15/96	24.33	9.29	15.04	31.5	7.01	63.7	600
ESE-4	06/14/96	24.33	10.23	14.10	31.5	7.04	66.0	591
MW-4	03/13/95	28.14	9.84	18.30	14.7	NS	NS	NS
MW-4	06/15/95	28.14	10.74	17.40	14.7	NS	NS	NS
MW-4	09/15/95	28.14	10.90	17.24	14.7	NS	NS	NS
MW-4	12/15/95	28.14	6.53	21.61	14.7	NS	NS	NS
MW-4	03/15/96	28.14	8.12	20.02	14.7	NS	NS	NS
MW-4	06/14/96	28.14	10.78	17.36	14.7	NS	NS	NS

¹ ft/MSL = feet relative to mean sea level.
² umhos/cm = micromhos per centimeter at 77°F.
³ NM = not measured.
⁴ NS = not sampled.

Table 2
Analytical Data
Second Quarter 1996 and Historical Data
Pacific Gas and Electric Company
Emeryville, California
(ug/l)¹

Sample Designation	Sampling Date	Polychlorinated Biphenols	TEPH ²	Benzene	Toluene	Ethylbenzene	Xylenes
ESE-1	03/28/94	<1	340	<0.3	<0.3	<0.3	<0.3
ESE-1	12/12/94	<0.5	80	<0.5	<0.5	<0.5	<0.5
ESE-1	03/13/95	1.3	500 ³	<0.5	<0.5	<0.5	<0.5
ESE-1	06/15/95	<0.5	350 ³	<0.5	<0.5	<0.5	<0.5
ESE-1	09/15/95	<0.5	470 ³	<0.5	<0.5	<0.5	<0.5
ESE-1	12/15/95	<0.5	440 ³	<0.5	<0.5	<0.5	<0.5
ESE-1	03/15/96	<0.5	277	<0.5	<0.5	<0.5	<0.5
ESE-1	06/14/96	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-2	03/28/94	<1	250	0.8	1.5	<0.3	2.7
ESE-2	12/12/94	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-2	03/13/95	<0.5	120 ⁴	<0.5	<0.5	<0.5	<0.5
ESE-2	06/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-2	09/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-2	12/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-2	03/15/96	<0.5	<59	<0.5	<0.5	<0.5	<0.5
ESE-2	06/14/96	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-3	03/28/94	<1	<50	<0.3	<0.3	<0.3	<0.3
ESE-3	12/12/94	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-3	03/13/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-3	06/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-3	09/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5

Table 2
Analytical Data
Second Quarter 1996 and Historical Data
Pacific Gas and Electric Company
Emeryville, California
(ug/l)¹

Sample Designation	Sampling Date	Polychlorinated Biphenols	TEPH ²	Benzene	Toluene	Ethylbenzene	Xylenes
ESE-3	12/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-3	03/15/96	<0.5	<59	<0.5	<0.5	<0.5	<0.5
ESE-3	06/14/96	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-4	03/28/94	<1	<50	<0.3	<0.3	<0.3	<0.3
ESE-4	12/12/94	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-4	03/13/95	<0.5	56 ⁴	<0.5	<0.5	<0.5	<0.5
ESE-4	06/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-4	09/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-4	12/15/95	<0.5	57 ⁴	<0.5	<0.5	<0.5	<0.5
ESE-4	03/15/96	<0.5	<59	<0.5	<0.5	<0.5	<0.5
ESE-4	06/14/96	<0.5	<500	<0.5	<0.5	<0.5	<0.5
Trip Blank	03/28/94	<1	<50	<0.3	<0.3	<0.3	<0.3
Trip Blank	12/12/94	NA ⁵	NA	<0.5	<0.5	<0.5	<0.5
Trip Blank	03/13/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Trip Blank	06/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Trip Blank	09/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Trip Blank	12/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	03/28/94	NA	NA	NA	NA	NA	NA
Field Blank	12/12/94	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	03/13/95	NA	NA	<0.5	<0.5	<0.5	<0.5

Table 2
Analytical Data
Second Quarter 1996 and Historical Data
Pacific Gas and Electric Company
Emeryville, California
(ug/l)¹

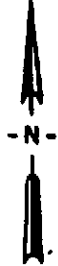
Sample Designation	Sampling Date	Polychlorinated Biphenols	TEPH ²	Benzene	Toluene	Ethylbenzene	Xylenes
Field Blank	06/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	09/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	12/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	03/15/96	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	06/14/96	NA	NA	<0.5	<0.5	<0.5	<0.5

¹ ug/l = micrograms per liter.
² TEPH = total extractable petroleum hydrocarbons..
³ Compounds similar to client-supplied transformer oil were found.
⁴ Compounds in diesel range not similar to laboratory standard for transformer oil.
⁵ NA = not analyzed.



Base map from USGS 7.5' Quad. Map:
Oakland West, California. (Photorevised 1980).

Scale : 0 2000 4000 Feet



EMCON
Associates

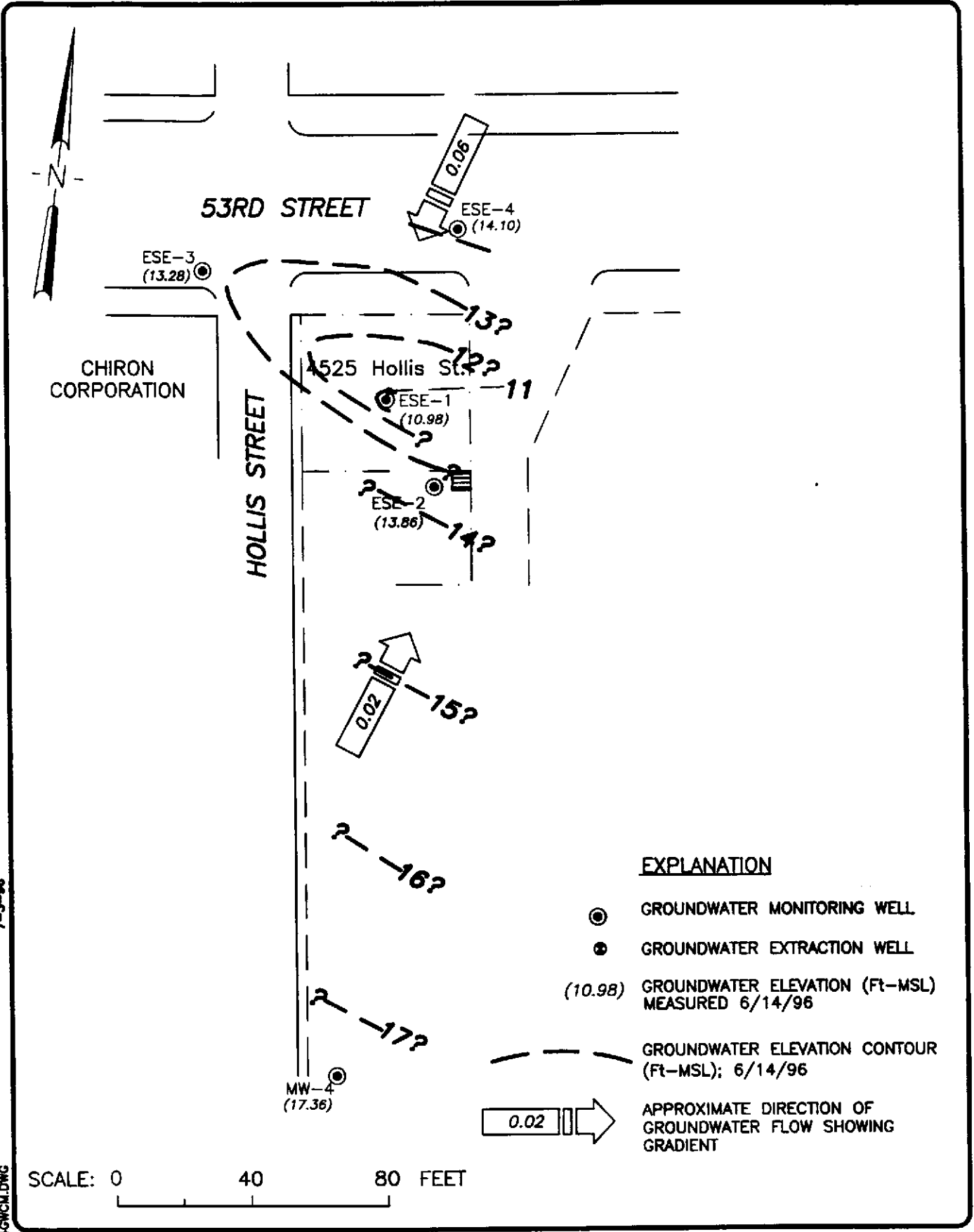
PACIFIC GAS & ELECTRIC COMPANY
QUARTERLY MONITORING PROGRAM
EMERYVILLE, CALIFORNIA

SITE LOCATION

FIGURE
1
PROJECT NO.
143-014.02

7-3-96

I:\DWGSET\PG&E\014GWCM.DWG



SCALE: 0 40 80 FEET

EXPLANATION

- ⊙ GROUNDWATER MONITORING WELL
- ⊕ GROUNDWATER EXTRACTION WELL
- (10.98) GROUNDWATER ELEVATION (Ft-MSL) MEASURED 6/14/96
- - - GROUNDWATER ELEVATION CONTOUR (Ft-MSL); 6/14/96
- 0.02 → APPROXIMATE DIRECTION OF GROUNDWATER FLOW SHOWING GRADIENT



PACIFIC GAS AND ELECTRIC
 EMERYVILLE MAINTENANCE FACILITY
 EMERYVILLE, CALIFORNIA
 QUARTERLY MONITORING REPORT
 GROUNDWATER CONTOUR MAP
 SECOND QUARTER 1996

FIGURE
2
 PROJECT NO.
 20143-014.02



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MONITORING WELL PURGING PROTOCOL

MEASURE AND RECORD DEPTH TO WATER AND WELL TOTAL DEPTH

CHECK FOR FLOATING PRODUCT

YES

MEASURE AND DOCUMENT FLOATING PRODUCT THICKNESS. DO NOT SAMPLE WELL FOR DISSOLVED CONSTITUENTS.

NO

CALCULATE PURGE VOLUME BY USING THE FOLLOWING EQUATION:

$$P = \pi r^2 h \times 7.48 \times 3$$

where:

- P = calculated purge volume (gallons)
- π = 3.14
- r = radius of well casing in feet
- h = height of water column in feet

EVACUATE WATER FROM WELL EQUAL TO THE CALCULATED PURGE VOLUME WHILE MONITORING GROUND-WATER STABILIZATION INDICATOR PARAMETERS (pH, CONDUCTIVITY, TEMPERATURE) AND TURBIDITY AT INTERVALS OF ONE CASING VOLUME.

WELL EVACUATED TO PRACTICAL LIMITS OF DRYNESS BEFORE REMOVING CALCULATED PURGE VOLUME

NO

FINAL TWO SETS OF GROUND-WATER STABILIZATION INDICATOR PARAMETER MEASUREMENTS MEET THE FOLLOWING CRITERIA:

- pH = ± 0.05 pH units
- COND. = ± 3%
- TEMP. = ± 1.0 °F
- TURBIDITY = < 5 NTU

YES

WELL PURGING CRITERIA MET; PROCEED TO WELL SAMPLING

NO

CONTINUE PURGING; EVACUATE ADDITIONAL CASING VOLUME OF WATER, MONITORING INDICATOR PARAMETERS FOR STABILITY.

YES

WELL RECHARGES TO A LEVEL SUFFICIENT FOR SAMPLE COLLECTION WITHIN 24 HOURS OF EVACUATION TO DRYNESS.

YES

FIELD TEST FIRST RECHARGE WATER FOR INDICATOR PARAMETERS AND TURBIDITY, THEN PROCEED TO WELL SAMPLING.

NO

RECORD WELL AS DRY FOR PURPOSES OF SAMPLING.



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MONITORING WELL PURGING PROTOCOL

FIGURE

3

APPENDIX A

**HISTORICAL MONITORING WELL DATA FORM AND WATER SAMPLE
FIELD DATA SHEETS**

[Handwritten Signature]
 Signature

Well ID	Date	Depth to Floating Product (feet)	First Depth to Water (feet)	Second Depth to Water (feet)	Floating Product Thickness (feet)	Well Total Depth (feet)	Comments
Depth to liquid : 0.01 foot		Total depth : 0.1 foot					
ESE-1	09/15/95		10.13	10.13	ND	30.6	Time: 0731 Lock: None
	12/15/95		10.55	10.55	ND	33.8	
	03/15/96		11.79	11.79	ND	33.6	
	6/14/96		12.68	12.68	ND	33.6	
ESE-2	09/15/95		14.22	14.22	ND	34.3	Time: 0939 Lock: Dolphin
	12/15/95		11.65	11.65	ND	34.1	
	03/15/96		12.87	12.87	ND	34.1	
			13.94	13.94		34.1	
ESE-3	09/15/95		10.87	10.87	ND	31.0	Time: 0942 Lock: 3210
	12/15/95		9.40	9.40	ND	31.0	
	03/15/96		10.02	10.02	ND	30.9	
			10.63	10.63		30.9	
ESE-4	09/15/95		10.85	10.85	ND	31.6	Time: 0946 Lock: 3210
	12/15/95		8.72	8.72	ND	31.6	
	03/15/96		9.29	9.29	ND	31.5	
			10.23	10.23		31.5	
MW-4	09/15/95		10.90	10.90	ND	14.7	Time: 0950 Lock: None
	12/15/95		6.53	6.53	ND	14.7	
	03/15/96		8.12	8.12	ND	14.7	
	✓		10.78	10.78	✓	14.7	



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ASSOCIATES

WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 20143-014-002
 PURGED BY: M. Gallegos
 SAMPLED BY: ✓

SAMPLE ID: ESE-1
 CLIENT NAME: PG&E
 LOCATION: EMERYVILLE, CA

TYPE: Ground Water Surface Water _____ Treatment Effluent _____ Other _____
 CASING DIAMETER (inches): 2 3 _____ 4 _____ 4.5 _____ 6 _____ Other _____

CASING ELEVATION (feet/MSL): NR VOLUME IN CASING (gal.): 3,411
 DEPTH TO WATER (feet): 12.6 CALCULATED PURGE (gal.): 13.64
 DEPTH OF WELL (feet): 33.6 ACTUAL PURGE VOL. (gal.): 14.0

DATE PURGED: 6-14-96 Start (2400 Hr) 1012 End (2400 Hr) 1021
 DATE SAMPLED: ✓ Start (2400 Hr) 1028 End (2400 Hr) _____

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1014</u>	<u>3.5</u>	<u>6.54</u>	<u>538</u>	<u>68.0</u>	<u>BRN</u>	<u>Heavy</u>
<u>1016</u>	<u>7.0</u>	<u>6.78</u>	<u>514</u>	<u>67.4</u>	<u>↓</u>	<u>↓</u>
<u>1019</u>	<u>10.5</u>	<u>6.88</u>	<u>516</u>	<u>67.5</u>	<u>↓</u>	<u>↓</u>
<u>1021</u>	<u>14.0</u>	<u>6.93</u>	<u>517</u>	<u>67.4</u>	<u>✓</u>	<u>✓</u>

D. O. (ppm): NR ODOR: None COLOR: NR (COBALT 0 - 500)
TURBIDITY: NR (NTU 0 - 200 or 0 - 1000)
 Field QC samples collected at this well: NR Parameters field filtered at this well: NR

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> 2" Bladder Pump	<input type="checkbox"/> Bailer (Teflon®)	<input type="checkbox"/> 2" Bladder Pump	<input checked="" type="checkbox"/> Bailer (Teflon®)
<input checked="" type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> DDL Sampler	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input type="checkbox"/> Dipper	<input type="checkbox"/> Submersible Pump
<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Well Wizard™	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	

WELL INTEGRITY: Good LOCK #: PG&E

REMARKS: 611 sample taken

Meter Calibration: Date: 6-14-96 Time: 1010 Meter Serial #: 7204 Temperature °F: 70.3
 (EC 1000 996 / 1000) (DI _____) (pH 7 700 / 700) (pH 10 1000 / 1000) (pH 4 401 / _____)

Location of previous calibration: _____
 Signature: [Signature] Reviewed By: SG Page 1 of 4



WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 20143-014-002
 PURGED BY: M. Gallegos
 SAMPLED BY: ↓

SAMPLE ID: FSE-2
 CLIENT NAME: PG&E
 LOCATION: Emeryville, CA

TYPE: Ground Water Surface Water _____ Treatment Effluent _____ Other _____

CASING DIAMETER (inches): 2 3 _____ 4 _____ 4.5 _____ 6 _____ Other _____

CASING ELEVATION (feet/MSL): <u>A/R</u>	VOLUME IN CASING (gal.): <u>3.29</u>
DEPTH TO WATER (feet): <u>13.94</u>	CALCULATED PURGE (gal.): <u>13.16</u>
DEPTH OF WELL (feet): <u>34.1</u>	ACTUAL PURGE VOL. (gal.): <u>13.5</u>

DATE PURGED: <u>6-14-96</u>	Start (2400 Hr) <u>1049</u>	End (2400 Hr) <u>1055</u>
DATE SAMPLED: <u>↓</u>	Start (2400 Hr) <u>1105</u>	End (2400 Hr) _____

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1051</u>	<u>3.5</u>	<u>7.03</u>	<u>656</u>	<u>68.0</u>	<u>BROWN</u>	<u>HEAVY</u>
<u>1052</u>	<u>7.0</u>	<u>7.05</u>	<u>626</u>	<u>67.6</u>	↓	↓
<u>1053</u>	<u>10.5</u>	<u>7.05</u>	<u>611</u>	<u>67.0</u>	↓	↓
<u>1055</u>	<u>13.5</u>	<u>7.08</u>	<u>607</u>	<u>67.1</u>	↓	↓

D. O. (ppm): A/R ODOR: none A/R A/R
(COBALT 0 - 500) (NTU 0 - 200 or 0 - 1000)

Field QC samples collected at this well: A/R Parameters field filtered at this well: A/R

- | PURGING EQUIPMENT | | SAMPLING EQUIPMENT | |
|--|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailor (Teflon®) | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailor (Teflon®) |
| <input checked="" type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Bailor (PVC) | <input type="checkbox"/> DDL Sampler | <input type="checkbox"/> Bailor (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailor (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated | <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated |
| Other: _____ | | Other: _____ | |

WELL INTEGRITY: Recid LOCK #: Dolphin DC-4E

REMARKS: All samples failed

Meter Calibration: Date: 6/11/96 Time: _____ Meter Serial #: 9204 Temperature °F: _____
 (EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)
 Location of previous calibration: FSE-1

Signature: [Signature] Reviewed By: [Signature] Page 2 of 4



EMCON ASSOCIATES

WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 20143-1761.007
PURGED BY: M. Callahan
SAMPLED BY: IV

SAMPLE ID: EJE-3
CLIENT NAME: PG+E
LOCATION: Exeterville, VA

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL): <u>NR</u>	VOLUME IN CASING (gal.): <u>3.30</u>
DEPTH TO WATER (feet): <u>10.63</u>	CALCULATED PURGE (gal.): <u>13.23</u>
DEPTH OF WELL (feet): <u>30.9</u>	ACTUAL PURGE VOL. (gal.): <u>13.5</u>

DATE PURGED: <u>6-14-94</u>	Start (2400 Hr) <u>1137</u>	End (2400 Hr) <u>1143</u>
DATE SAMPLED: <u>↓</u>	Start (2400 Hr) <u>1155</u>	End (2400 Hr) <u>---</u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1133</u>	<u>3.5</u>	<u>7.15</u>	<u>569</u>	<u>68.4</u>	<u>BRN</u>	<u>HAU</u>
<u>1139</u>	<u>7.0</u>	<u>7.10</u>	<u>548</u>	<u>67.7</u>	<u> </u>	<u> </u>
<u>1141</u>	<u>10.5</u>	<u>7.03</u>	<u>549</u>	<u>67.3</u>	<u> </u>	<u> </u>
<u>1143</u>	<u>13.5</u>	<u>7.09</u>	<u>546</u>	<u>67.0</u>	<u>↓</u>	<u>↓</u>

D. O. (ppm): NR ODOR: None (COBALT 0 - 500) NR (NTU 0 - 200 or 0 - 1000) NR

Field QC samples collected at this well: NR Parameters field filtered at this well: NR

PURGING EQUIPMENT

SAMPLING EQUIPMENT

- | | | | |
|--|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon®) | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailer (Teflon®) |
| <input checked="" type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> DDL Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated | <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated |
- Other: _____ Other: _____

WELL INTEGRITY: Good LOCK #: PG+E

REMARKS: All samples taken

Meter Calibration: Date: 6/14/94 Time: _____ Meter Serial #: 9201 Temperature °F: _____
(EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)
Location of previous calibration: EJE 1

Signature: [Signature] Reviewed By: [Signature] Page 3 of 4



WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 20143-CHA.002
 PURGED BY: M. Gallagos
 SAMPLED BY: ↓

SAMPLE ID: ESE-4
 CLIENT NAME: PKLE
 LOCATION: Emeryville, CA

TYPE: Ground Water Surface Water Treatment Effluent Other

CASING DIAMETER (inches): 2 3 4 4.5 6 Other

CASING ELEVATION (feet/MSL): <u>KIR</u>	VOLUME IN CASING (gal.): <u>3.47</u>
DEPTH TO WATER (feet): <u>10.23</u>	CALCULATED PURGE (gal.): <u>13.88</u>
DEPTH OF WELL (feet): <u>31.5</u>	ACTUAL PURGE VOL. (gal.): <u>14.0</u>

DATE PURGED: 6-14-96 Start (2400 Hr) 1216 End (2400 Hr) 1224
 DATE SAMPLED: ↓ Start (2400 Hr) 1235 End (2400 Hr) ---

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1218</u>	<u>3.5</u>	<u>7.13</u>	<u>553</u>	<u>67.2</u>	<u>BN1</u>	<u>NR</u>
<u>1220</u>	<u>7.0</u>	<u>7.00</u>	<u>587</u>	<u>66.1</u>	<u>↓</u>	<u>↓</u>
<u>1222</u>	<u>10.5</u>	<u>7.05</u>	<u>592</u>	<u>66.2</u>	<u>↓</u>	<u>↓</u>
<u>1224</u>	<u>14.0</u>	<u>7.04</u>	<u>591</u>	<u>66.0</u>	<u>↓</u>	<u>↓</u>

D. O. (ppm): NR ODOR: None (COBALT 0 - 500) (NTU 0 - 200 or 0 - 1000)

Field QC samples collected at this well: PKLE FB-K(1240) Parameters field filtered at this well: NR

PURGING EQUIPMENT

SAMPLING EQUIPMENT

- | | | | |
|--|---|--|--|
| <input type="checkbox"/> 2" Bladder Pump | <input type="checkbox"/> Bailer (Teflon®) | <input type="checkbox"/> 2" Bladder Pump | <input checked="" type="checkbox"/> Bailer (Teflon®) |
| <input checked="" type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Bailer (PVC) | <input type="checkbox"/> DDL Sampler | <input type="checkbox"/> Bailer (Stainless Steel) |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Bailer (Stainless Steel) | <input type="checkbox"/> Dipper | <input type="checkbox"/> Submersible Pump |
| <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated | <input type="checkbox"/> Well Wizard™ | <input type="checkbox"/> Dedicated |
- Other: _____ Other: _____

WELL INTEGRITY: Good LOCK #: PKLE

REMARKS: All samples to L1

Meter Calibration: Date: 6/14/96 Time: _____ Meter Serial #: 9204 Temperature °F: _____
 (EC 1000 _____ / _____) (DI _____) (pH 7 _____ / _____) (pH 10 _____ / _____) (pH 4 _____ / _____)

Location of previous calibration: ESE-1

Signature: [Signature] Reviewed By: GA Page 4 of 4

EMCON - Drum Inventory Record

20143-014.002

Project No

Emeryville, CA

Location

6-14-96

Date

PG&E

Client

M.G.

Sampler

Friday

Day of Week

DRUM NUMBER OR ID	WELL OR SOURCE ID(s)	TYPE OF MATERIAL	AMOUNT OF MATERIAL IN DRUM	DATE ACCUMULATED OR GENERATED
H	All wells	Groundwater	55.0(gal)	6-14-96

Sketch locations of drums, include drum ID's

COMMENTS: _____

Number of Drums From This Event 1

Total Number of Drums At Site 1

**Pacific Gas & Electric, Emeryville
Well Sampling Bottle List
20143-014.002**

For all wells:

2	Liter Glass	NP	PCBs by EPA 8080
2	40mL VOAs	HCl	BTEX by EPA 602
2	Liter Glass	NP	TEPH as mineral oil by EPA 3510/8015

For: FB-1

2	40mL VOAs	HCl	BTEX by EPA 602
---	-----------	-----	-----------------

**EMCON
GROUNDWATER SAMPLING AND ANALYSIS REQUEST FORM**

PROJECT NAME: **PG&E-Emeryville**
 4525 Hollis Street, Emeryville, CA
 DATE SUBMITTED: **14-Jul-96**

SPECIAL INSTRUCTIONS / CONSIDERATIONS :
Quarterly Water Quality Monitoring - Third Month of the Quarter

Survey water levels prior to well purging and sampling.
Purge four casing volumes prior to sample collection
 Purge and sample using bailers.
 Drum purge water; use the drums supplied by PG&E
 Chromalab will pick up the samples on **Friday, June 14th at 3:00**; bring the samples back to the office.

Authorization: _____

Project No. : 20143-014.002

Send Results To: J. C. Isham

Coordinator: Steve Horton

Well Locks:
PG&E

PG&E Project

Coordinator: Mr. Fred Flint

Phone No.: (510) 866-5808

Site Contact: Mr. Mel Byrd

Phone No.: (510) 450-5740

Well ID or Source	Casing Diameter (inches)	Casing Length (feet)	ANALYSES REQUESTED
ESE-1	2.0	30.6	PCBs by EPA 8080 BTEX by EPA 602 TEPH as mineral oil by EPA 3510/8015
ESE-2	2.0	34.3	
ESE-3	2.0	31.0	
ESE-4	2.0	31.6	
FB-1	NA	NA	BTEX by EPA 602
MW-4	2.0	14.7	Water Level & Total Depth Only

Laboratory and Lab QC Instructions:
 Tier I QC: all samples are to be analyzed by Chromalab

APPENDIX B
CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY
DOCUMENTATION

CHROMALAB, INC.

Environmental Services (SDB)

RECEIVED
JUL 03 1996
EMCON/SACRAMENTO

June 21, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E-EMERYVILLE

Project#: 20143-014.002

Received: June 14, 1996

re: One sample for TEPH analysis.
Method: EPA METHOD 8015 (Mod)

Client Sample ID: ESE-1

Spl#: 88461

Matrix: WATER

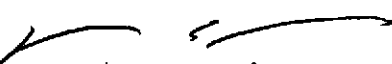
Extracted: June 20, 1996

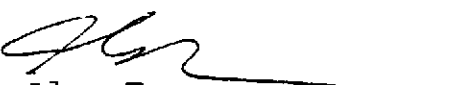
Sampled: June 14, 1996

Run#: 1821

Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	N.D.	500	N.D.	--	1


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 28, 1996

Submission #: 9606727

revised from 6/21/96

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project#: 20143-014.002

Project: PG&E-EMERYVILLE
Received: June 14, 1996

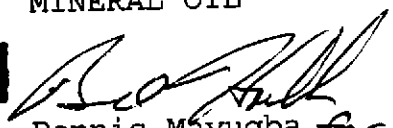
re: One sample for TEPH analysis.
Method: EPA METHOD 8015 (Mod)


Client Sample ID: ESE-2
Spl#: 88462
Sampled: June 14, 1996

Matrix: WATER
Run#: 1860

Extracted: June 21, 1996
Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	N.D.	500	N.D.	--	1


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 21, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E-EMERYVILLE
Received: June 14, 1996

Project#: 20143-014.002


re: One sample for TEPH analysis.
Method: EPA METHOD 8015 (Mod)


Client Sample ID: ESE-3
Spl#: 88463
Sampled: June 14, 1996

Matrix: WATER
Run#: 1821

Extracted: June 20, 1996
Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	N.D.	500	N.D.	--	1


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 21, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E-EMERYVILLE
Received: June 14, 1996

Project#: 20143-014.002

re: One sample for TEPH analysis.
Method: EPA METHOD 8015 (Mod)

Client Sample ID: ESE-4

Spl#: 88464

Matrix: WATER


Extracted: June 20, 1996


Sampled: June 14, 1996

Run#: 1821

Analyzed: June 21, 1996

<u>ANALYTE</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u> (ug/L)	<u>BLANK</u> <u>RESULT</u> (ug/L)	<u>BLANK</u> <u>SPIKE</u> (%)	<u>DILUTION</u> <u>FACTOR</u>
MINERAL OIL	N.D.	500	N.D.	--	1


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 21, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E-EMERYVILLE
Received: June 14, 1996

Project#: 20143-014.002


re: One sample for Polychlorinated Biphenyls (PCBs) analysis.
Method: EPA 8080

Client Sample ID: ESE-1
Spl#: 88461
Sampled: June 14, 1996

Matrix: WATER
Run#: 1852

Extracted: June 20, 1996
Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	89.6	1
AROCLOR 1221	N.D.	0.50	N.D.	--	1
AROCLOR 1232	N.D.	0.50	N.D.	--	1
AROCLOR 1242	N.D.	0.50	N.D.	--	1
AROCLOR 1248	N.D.	0.50	N.D.	--	1
AROCLOR 1254	N.D.	0.50	N.D.	--	1
AROCLOR 1260	N.D.	0.50	N.D.	83.6	1


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 21, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E-EMERYVILLE
Received: June 14, 1996

Project#: 20143-014.002

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.
Method: EPA 8080

Client Sample ID: ESE-2

Spl#: 88462

Matrix: WATER

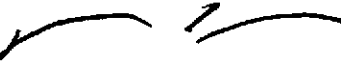
Extracted: June 20, 1996


Sampled: June 14, 1996

Run#: 1852

Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	89.6	1
AROCLOR 1221	N.D.	0.50	N.D.	--	1
AROCLOR 1232	N.D.	0.50	N.D.	--	1
AROCLOR 1242	N.D.	0.50	N.D.	--	1
AROCLOR 1248	N.D.	0.50	N.D.	--	1
AROCLOR 1254	N.D.	0.50	N.D.	--	1
AROCLOR 1260	N.D.	0.50	N.D.	83.6	1


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 21, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E-EMERYVILLE
Received: June 14, 1996

Project#: 20143-014.002

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.
Method: EPA 8080

Client Sample ID: ESE-3

Spl#: 88463

Sampled: June 14, 1996

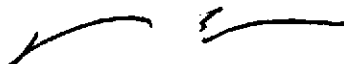
Matrix: WATER


Run#: 1852

Extracted: June 20, 1996

Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	89.6	1
AROCLOR 1221	N.D.	0.50	N.D.	--	1
AROCLOR 1232	N.D.	0.50	N.D.	--	1
AROCLOR 1242	N.D.	0.50	N.D.	--	1
AROCLOR 1248	N.D.	0.50	N.D.	--	1
AROCLOR 1254	N.D.	0.50	N.D.	--	1
AROCLOR 1260	N.D.	0.50	N.D.	83.6	1


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

June 21, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E-EMERYVILLE
Received: June 14, 1996

Project#: 20143-014.002

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.
Method: EPA 8080

Client Sample ID: ESE-4

Spl#: 88464

Sampled: June 14, 1996


Matrix: WATER


Run#: 1852

Extracted: June 20, 1996

Analyzed: June 21, 1996

<u>ANALYTE</u>	<u>RESULT</u> (ug/L)	<u>REPORTING</u> <u>LIMIT</u> (ug/L)	<u>BLANK</u> <u>RESULT</u> (ug/L)	<u>BLANK</u> <u>SPIKE</u> (%)	<u>DILUTION</u> <u>FACTOR</u>
AROCLOR 1016	N.D.	0.50	N.D.	89.6	1
AROCLOR 1221	N.D.	0.50	N.D.	--	1
AROCLOR 1232	N.D.	0.50	N.D.	--	1
AROCLOR 1242	N.D.	0.50	N.D.	--	1
AROCLOR 1248	N.D.	0.50	N.D.	--	1
AROCLOR 1254	N.D.	0.50	N.D.	--	1
AROCLOR 1260	N.D.	0.50	N.D.	83.6	1


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

July 17, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

revised from 6/24/96

Atten: J.C. Isham

Project: PG&E-EMERYVILLE

Project#: 20143-014.002

Received: June 14, 1996

re: One sample for BTEX analysis.

Method: EPA 5030/8015M/8020

Client Sample ID: ESE-1

Spl#: 88461


Matrix: WATER

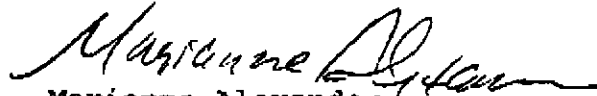
Sampled: June 14, 1996

Run#: 1861

Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	107	1
TOLUENE	N.D.	0.50	N.D.	112	1
ETHYL BENZENE	N.D.	0.50	N.D.	116	1
XYLENES	N.D.	0.50	N.D.	116	1


June Zhao
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SOE)

July 17, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

revised from 6/24/96

Atten: J.C. Isham

Project: PG&E-EMERYVILLE

Project#: 20143-014.002

Received: June 14, 1996

re: One sample for BTEX analysis.
Method: EPA 5030/8015M/8020

Client Sample ID: ESE-2

Spl#: 88462


Matrix: WATER

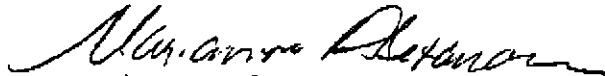
Sampled: June 14, 1996

Run#: 1861

Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	107	1
TOLUENE	N.D.	0.50	N.D.	112	1
ETHYL BENZENE	N.D.	0.50	N.D.	116	1
XYLENES	N.D.	0.50	N.D.	116	1


June Zhao
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

July 17, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

revised from 6/24/96

Atten: J.C. Isham

Project: PG&E-EMERYVILLE

Project#: 20143-014.002

Received: June 14, 1996

re: One sample for BTEX analysis.
Method: EPA 5030/8015M/8020

Client Sample ID: ESE-3

Spl#: 88463


Matrix: WATER

Sampled: June 14, 1996

Run#: 1861

Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	107	1
TOLUENE	N.D.	0.50	N.D.	112	1
ETHYL BENZENE	N.D.	0.50	N.D.	116	1
XYLENES	N.D.	0.50	N.D.	116	1


June Zhao
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

July 17, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

revised from 6/24/96

Atten: J.C. Isham

Project: PG&E-EMERYVILLE
 Received: June 14, 1996

Project#: 20143-014.002


re: One sample for BTEX analysis.
 Method: EPA 5030/8015M/8020

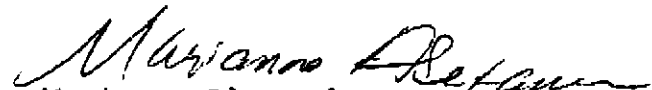
Client Sample ID: ESE-4
 Spl#: 88464
 Sampled: June 14, 1996

Matrix: WATER
 Run#: 1861

Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	107	1
TOLUENE	N.D.	0.50	N.D.	112	1
ETHYL BENZENE	N.D.	0.50	N.D.	116	1
XYLENES	N.D.	0.50	N.D.	116	1


 June Zhao
 Chemist


 Marianne Alexander
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CHROMALAB, INC.

Environmental Services (SDB)

July 17, 1996

Submission #: 9606727

EMCON ASSOCIATES-SACRAMENTO

revised from 6/24/96

Atten: J.C. Isham

Project: PG&E-EMERYVILLE

Project#: 20143-014.002

Received: June 14, 1996

re: One sample for BTEX analysis.
Method: EPA 5030/8015M/8020

Client Sample ID: FB-1

Spl#: 88465

Matrix: WATER

Sampled: June 14, 1996

Run#: 1861

Analyzed: June 21, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	107	1
TOLUENE	N.D.	0.50	N.D.	112	1
ETHYL BENZENE	N.D.	0.50	N.D.	116	1
XYLENES	N.D.	0.50	N.D.	116	1

June Zhao
June Zhao
Chemist

Marianne Alexander
Marianne Alexander
Gas/BTEX Supervisor

**CHROMALAB, INC.
SAMPLE RECEIPT CHECKLIST**

Client Name EMCON Date/Time Received 6/14/96 1854
 Project PGAE-EMERYVILLE Received by PSolis Date / Time
 Reference/Subm # 28331/9606727 Carrier name _____
 Checklist completed by: [Signature] 6/17/96 Logged in by CR 6/14/96
 Signature Date Initials / Date
 Matrix H2O

- Shipping container in good condition? NA ___ Yes ___ No ___
- Custody seals present on shipping container? Intact ___ Broken ___ Yes ___ No ___
- Custody seals on sample bottles? Intact ___ Broken ___ Yes ___ No ___
- Chain of custody present? Yes No ___
- Chain of custody signed when relinquished and received? Yes No ___
- Chain of custody agrees with sample labels? Yes No ___
- Samples in proper container/bottle? Yes No ___
- Samples intact? Yes No ___
- Sufficient sample volume for indicated test? Yes No ___
- VOA vials have zero headspace? NA ___ Yes No ___
- Trip Blank received? NA ___ Yes No ___
- All samples received within holding time? Yes No ___
- Container temperature? _____
- pH upon receipt 7 pH adjusted <2 Check performed by: CR NA ___

Any NO response must be detailed in the comments section below. If items are not applicable, they should be marked NA.

Client contacted? _____ Date contacted? _____
 Person contacted? _____ Contacted by? _____

Regarding? _____
 Comments: pH adjusted for TEPH, BTEX checked by Chemist

Corrective Action: _____



EMCON - San Jose

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

1921 Ringwood Avenue, San Jose, CA 95131 (408) 453-7300 FAX (408) 437-9526

Date 6-14-96 Page of

Project Name: Pacific Gas & Electric - Emeryville
Project Number: 20143-014.002
Project Manager: J.C. Isham

Company/Address: EMCON
 1433 North Market Boulevard
 Sacramento, CA 95834-1943
Phone: (916) 928-3300
 (916) 928-3341 (fax)

Sampler's Signature: *M. McFall*

Number of Containers	Analysis Requested									REMARKS
	BTXE (incl MTBE) by EPA 602	PCBs by EPA 8080	TEPH as mineral oil by EPA 3510/8015							
	HCl	NP	NP							Preservations
6	X	X	X							
6	X	X	X							
6	X	X	X							
6	X	X	X							
2	X									

SUBM #: 9606727 REP: GC
 CLIENT: EMCON
 DUE: 06/21/96
 REF #: 20331

Relinquished By: *M. McFall*
 Signature: *M. McFall*
 Printed Name: *McFall*
 Firm: *Emcon*
 Date/Time: *6/14/96 1517*

Received By: *Robert Solis*
 Signature: *Robert Solis*
 Printed Name: *Robert Solis*
 Firm: *Chromalab*
 Date/Time: *6/14/96 1517*

TURNAROUND REQUIREMENTS

24 hr 48 hr

Standard

Provide Verbal Preliminary Results

Provide FAX Preliminary Results

Requested Report Date: _____

REPORT REQUIREMENTS

I. Routine Report

II. Report (includes DUP, MS MSD, as required, may be charged as samples)

III. Data Validation Report (includes All Raw Data)

RWQCB

(MDLs/PQLs/TRACE#)

INVOICE INFORMATION

P.O. #: _____

Bill to: _____

SAMPLE RECEIPT

Shipping VIA: _____

Shipping #: _____

Condition: _____

Lab No: _____

Relinquished By: *Robert Solis*
 Signature: *Robert Solis*
 Printed Name: *Robert Solis*
 Firm: *Chromalab*
 Date/Time: *6/14/96 1859*

Reviewed By: *Chris Rowley*
 Signature: *Chris Rowley*
 Printed Name: *Chris Rowley*
 Firm: *Chromalab*
 Date/Time: *6/14/96 1859*

Special Instructions/Comments:

Please fax chain-of-custody to Fred Flint prior to conducting analysis; please fax analytical results to Fred Flint after conducting analysis (fax # 510-866-5681)

Please analyze for MTBE in the BTEX analysis

Send results to J.C. Isham at Emcon-Sacramento (please FAX preliminary results)

Use Dielectric standard previously supplied to Chromalab for TEPH Analysis