GROUNDWATER MONITORING AND SAMPLING REPORT

EMERYVILLE MAINTENANCE FACILITY
4525 HOLLIS STREET
EMERYVILLE, CALIFORNIA
THIRD QUARTER 1996

Prepared for

Pacific Gas and Electric Company
Technical and Ecological Services

November 1996

Prepared by

EMCON
1433 North Market Boulevard
Sacramento, California 95834

Project 0143-014.02

CONTENTS

TABLES

FIGURES

1 INTRODUCTION

This report presents data collected during the third 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

Third quarter groundwater levels were measured at the PG&E Maintenance Facility in Emeryville, California, on October 7, 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 October data were used in constructing a groundwater contour map (see Figure 2). October water levels ranged from a low of 11.10 feet above mean sea level (MSL) in well ESE-1 to a high of 17.33 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 October 7, 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 third quarter 1996 monitoring event are summarized in Table 1.

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

BTEX and PCBs were not detected at or above the method reporting limit (MRL) in any sample collected from ESE-1 through ESE-4. An unknown hydrocarbon was reported in the mineral oil range in wells ESE-1 and ESE-2 at concentrations of 110 micrograms per liter (µg/L) and 150 µg/L, respectively.

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.

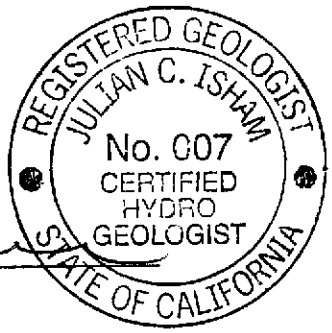
The field and laboratory QC results indicate that the analytical data are of acceptable quality.

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
Third 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-1	10/07/96	23.66	12.56	11.10	34.0	6.94	73.3	494
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-2	10/07/96	27.80	13.58	14.22	34.0	7.10	74.6	558
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
Third 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-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-3	10/07/96	23.91	10.85	13.06	31.0	6.87	68.8	514
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
ESE-4	10/07/96	24.33	10.44	13.89	31.5	6.89	70.1	541
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
MW-4	10/07/96	28.14	10.81	17.33	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
Third 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-1	10/07/96	<0.5	110 [4]	<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 [5]	<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-2	10/07/96	<0.5	150 [4]	<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
Third 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-3	10/07/96	<0.5	<100	<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 [5]	<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 [5]	<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
ESE-4	10/07/96	<0.5	<100	<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[6]	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
Third 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
Field Blank	10/07/96	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] Hydrocarbon reported does not match the pattern of laboratory standard for mineral oil.
[5] Compounds in diesel range not similar to laboratory standard for transformer oil.
[6] NA = not analyzed.

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

Scale : 0 2000 4000 Feet

- N -

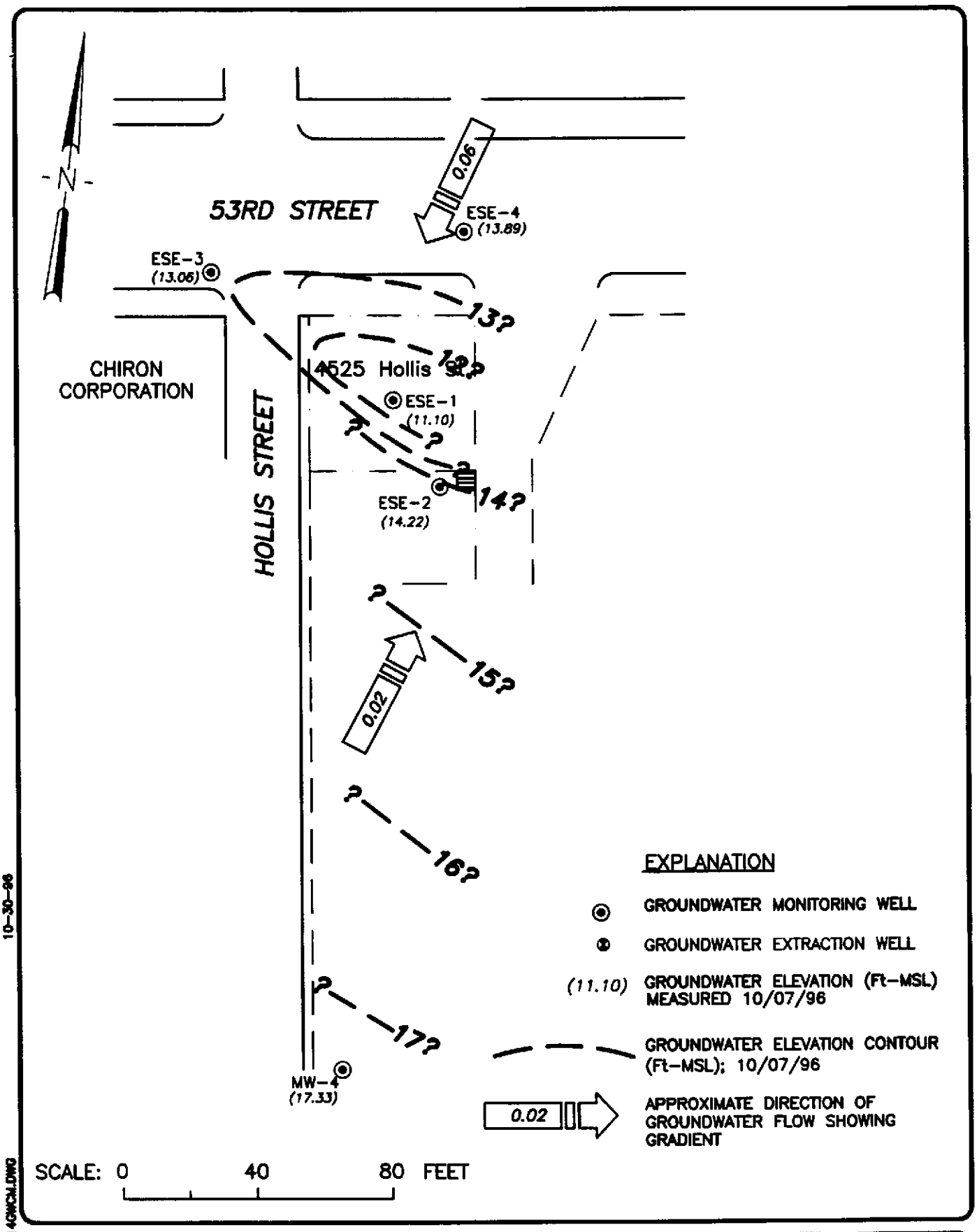
EMCON Associates

PACIFIC GAS & ELECTRIC COMPANY
QUARTERLY MONITORING PROGRAM
EMERYVILLE, CALIFORNIA

SITE LOCATION

FIGURE
1

PROJECT NO.
143-014.02



10-30-96

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PACIFIC GAS AND ELECTRIC
EMERYVILLE MAITENANCE FACILITY
EMERYVILE, CALIFORNIA
QUARTERLY MONITORING REPORT
GROUNDWATER CONTOUR MAP
THIRD QUARTER 1996

FIGURE
2
PROJECT NO.
20143-014.02

MONITORING WELL PURGING PROTOCOL

EMCON

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

EMCON - Field Services
1921 Ringwood Avenue
San Jose, California

Signature

Historical Monitoring Well Data
PG&E Emeryville
20143-014.002

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
	12/15/95		10.55	10.55	ND	33.8	
	03/15/96		11.79	11.79	ND	33.6	
	06/14/96		12.68	12.68	ND	33.6	
ESE-1			1256	12.56	ND	34.[illegible]	Time: 1200 Lock: None
	12/15/95		11.65	11.65	ND	34.1	
	03/15/96		12.87	12.87	ND	34.1	
	06/14/96		13.94	13.94	ND	34.1	
ESE-2			1358	1358	ND	34.[illegible]	Time: 1212 Lock: Dolphin
	12/15/95		9.40	9.40	ND	31.0	
	03/15/96		10.02	10.02	ND	30.9	
	06/14/96		10.65	10.65	ND	30.9	
ESE-3			1085	1085	ND	31.0	Time: 1226 Lock: 3210
	12/15/95		8.72	8.72	ND	31.6	
	03/15/96		9.29	9.29	ND	31.5	
	06/14/96		10.23	10.23	ND	31.5	
ESE-4			1014	10.44	ND	31.5	Time: 1221 Lock: 3210
	12/15/95		6.53	6.53	ND	14.7	
	03/15/96		8.12	8.12	ND	14.7	
	06/14/96		10.78	10.78	ND	14.7	
MW-4			1081	1081	ND	14.7	Time: 1145 Lock: None

Rev. 3, 2/9-

EMCON ASSOCIATES

WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 20143-014-002 SAMPLE ID: ESE-1

PURGED BY: J. Williams CLIENT NAME: PG&E

SAMPLED BY: ⊥ LOCATION: Emeryville

TYPE: Ground Water ✓ Surface Water ___ Treatment Effluent ___ Other ___

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

CASING ELEVATION (feet/MSL): NA VOLUME IN CASING (gal.): 3.50

DEPTH TO WATER (feet): 12.56 CALCULATED PURGE (gal.): 14.0

DEPTH OF WELL (feet): 34.0 ACTUAL PURGE VOL. (gal.): 14.0

DATE PURGED: 10-07-96 Start (2400 Hr) 1320 End (2400 Hr) 1335

DATE SAMPLED: ⊥ Start (2400 Hr) — End (2400 Hr) 1345

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (μmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
1324	3.5	6.98	487	80.7	Brown	Heavy
1327	7	6.88	466	76.6	⊥	⊥
1331	10.5	6.94	494	72.6	⊥	⊥
1335	14	6.94	494	73.3	⊥	⊥

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

Field QC samples collected at this well: NA

Parameters field filtered at this well: NA

PURGING EQUIPMENT

- ___ 2" Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Well Wizard™
- ✓ Bailer (Teflon®)
- ___ Bailer (PVC)
- ___ Bailer (Stainless Steel)
- ___ Dedicated

Other: ___

SAMPLING EQUIPMENT

- ___ 2" Bladder Pump
- ___ DDL Sampler
- ___ Dipper
- ___ Well Wizard™
- ✓ Bailer (Teflon®)
- ___ Bailer (Stainless Steel)
- ___ Submersible Pump
- ___ Dedicated

Other: ___

WELL INTEGRITY: OK LOCK #: 3526

REMARKS: ___

Meter Calibration: Date: 10-7-96 Time: ___ Meter Serial #: ___ Temperature °F: ___

(EC 1000 ___ / ___) (DI ___) (pH 7 ___ / ___) (pH 10 ___ / ___) (pH 4 ___ / ___)

Location of previous calibration: ESE-2

Signature: [signature] Reviewed By: [initials] Page 1 of 4

Rev. 3. 2/9

WATER SAMPLE FIELD DATA SHEET

EMCON ASSOCIATES

PROJECT NO: 20143-014-002 SAMPLE ID: ESE-2

PURGED BY: J Williams CLIENT NAME: PG&E

SAMPLED BY: ⅃ LOCATION: Emeryville

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.): 3.41

DEPTH TO WATER (feet): 13.58 CALCULATED PURGE (gal.): 13.66

DEPTH OF WELL (feet): 34.5 ACTUAL PURGE VOL. (gal.): 14

DATE PURGED: 10-07-96 Start (2400 Hr) 1246 End (2400 Hr) 1302

DATE SAMPLED: ⅃ Start (2400 Hr) ___ End (2400 Hr) 1310

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
1250	3.5	7.03	589	78.5	Brown	Heavy
1253	7	7.10	572	74.2	⅃	⅃
1257	10.5	7.11	561	74.9	⅃	⅃
1302	14	7.10	558	74.6	⅃	⅃

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

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

PURGING EQUIPMENT

- ___ 2" Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Well Wizard™
- ✓ Bailer (Teflon®)
- ___ Bailer (PVC)
- ___ Bailer (Stainless Steel)
- ___ Dedicated

Other: ___

SAMPLING EQUIPMENT

- ___ 2" Bladder Pump
- ___ DDL Sampler
- ___ Dipper
- ___ Well Wizard™
- ✓ Bailer (Teflon®)
- ___ Bailer (Stainless Steel)
- ___ Submersible Pump
- ___ Dedicated

Other: ___

WELL INTEGRITY: OK LOCK #: Dolphin

REMARKS: ___

Meter Calibration: Date: 10-7-96 Time: 1231 Meter Serial #: ___ Temperature °F: 80.7

(EC 1000 983 / 1000) (DI ___) (pH 7 7.03 / 7.00) (pH 10 9.95 / 10.00) (pH 4 3.96 / —)

Location of previous calibration: ___

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

Rev. 3, 2/94

WATER SAMPLE FIELD DATA SHEET

EMCON ASSOCIATES

PROJECT NO: 20143-014-002 SAMPLE ID: ESE-3

PURGED BY: J WILLIAMS CLIENT NAME: PG&E

SAMPLED BY: L 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):	NS	VOLUME IN CASING (gal.):	3.28
DEPTH TO WATER (feet):	10.85	CALCULATED PURGE (gal.):	13.15
DEPTH OF WELL (feet):	310	ACTUAL PURGE VOL. (gal.):	13.5

DATE PURGED: 10-07-96 Start (2400 Hr) 1455 End (2400 Hr) 1511

DATE SAMPLED: L Start (2400 Hr) ___ End (2400 Hr) 1520

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
1459	3.5	6.98	506	74.1	BROWN	HEAVY
1503	6.5	6.89	503	70.2	L	L
1507	___	6.88	514	69.2	L	L
1511	13.5	6.87	514	68.8	L	L
___	___	___	___	___	___	___

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

Field QC samples collected at this well: NO EB-1

Parameters field filtered at this well: NO

PURGING EQUIPMENT

- ___ 2" Bladder Pump
- ___ Centrifugal Pump
- ___ Submersible Pump
- ___ Well Wizard™
- ✓ Bailer (Teflon®)
- ___ Bailer (PVC)
- ___ Bailer (Stainless Steel)
- ___ Dedicated

Other: ___

SAMPLING EQUIPMENT

- ___ 2" Bladder Pump
- ___ DDL Sampler
- ___ Dipper
- ___ Well Wizard™
- ✓ Bailer (Teflon®)
- ___ Bailer (Stainless Steel)
- ___ Submersible Pump
- ___ Dedicated

Other: ___

WELL INTEGRITY: OK LOCK #: 3716

REMARKS: ___

Meter Calibration: Date: 10-7-96 Time: ___ Meter Serial #: ___ Temperature °F: ___

(EC 1000 ___ / ___) (DI ___) (pH 7 ___ / ___) (pH 10 ___ / ___) (pH 4 ___ / ___)

Location of previous calibration: ESE-2

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

Rev. 3. 2/9-

WATER SAMPLE FIELD DATA SHEET

EMCON ASSOCIATES

PROJECT NO: 20143-014.002 SAMPLE ID: ESE-CC

PURGED BY: J. WILLIAMS CLIENT NAME: PG&E

SAMPLED BY: L LOCATION: EMERYVILLE CC

TYPE: Ground Water ✓ Surface Water ___ Treatment Effluent ___ Other ___

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

CASING ELEVATION (feet/MSL): NA VOLUME IN CASING (gal.): 3.43

DEPTH TO WATER (feet): 10.46 CALCULATED PURGE (gal.): 13.75

DEPTH OF WELL (feet): 31.5 ACTUAL PURGE VOL. (gal.): 14

DATE PURGED: 10-07-96 Start (2400 Hr) 1414 End (2400 Hr) 1429

DATE SAMPLED: L Start (2400 Hr) ~~1429~~ End (2400 Hr) 1439

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
1417	3.5	6.89	498	80.9	BROWN	HEAVY
1421	7	6.91	503	74.3	L	L
1425	10.5	6.90	540	70.8	L	L
1429	14	6.86	541	70.1	L	L

D. O. (ppm): NA ODOR: None

COLOR (COBALT 0 - 500): NA

TURBIDITY (NTU 0 - 200 or 0 - 1000): NA

Field QC samples collected at this well: NA

Parameters field filtered at this well: NA

PURGING EQUIPMENT

___ 2" Bladder Pump ✓ Bailer (Teflon®)

___ Centrifugal Pump ___ Bailer (PVC)

___ Submersible Pump ___ Bailer (Stainless Steel)

___ Well Wizard™ ___ Dedicated

Other: ___

SAMPLING EQUIPMENT

___ 2" Bladder Pump ✓ Bailer (Teflon®)

___ DDL Sampler ___ Bailer (Stainless Steel)

___ Dipper ___ Submersible Pump

___ Well Wizard™ ___ Dedicated

Other: ___

WELL INTEGRITY: OK LOCK #: 321C

REMARKS: ___

Meter Calibration: Date: 1-25 Time: ___ Meter Serial #: ___ Temperature °F: ___

(EC 1000 ___ / ___) (DI ___) (pH 7 ___ / ___) (pH 10 ___ ___) (pH 4 ___ ___)

Location of previous calibration: ESE

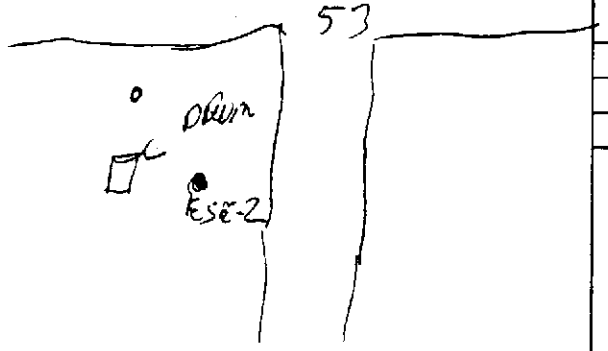
Signature: [signature] Reviewed By: SH Page 4 of 4

EMCON - Drum Inventory Record

20143-014.002	Emeryville, CA	10-7-96
Project No	**Location**	**Date**
PG&E	SAL	MON
Client	**Sampler**	**Day of Week**

DRUM NUMBER OR ID	WELL OR SOURCE ID(s)	TYPE OF MATERIAL	AMOUNT OF MATERIAL IN DRUM	DATE ACCUMULATED OR GENERATED
1	ALL WELLS	GRAND WATER	40	10-7-96

Sketch locations of drums, include drum ID's



COMMENTS:

Number of Drums From This Event: 1

Total Number of Drums At Site: 1

EMCON
GROUNDWATER SAMPLING AND ANALYSIS REQUEST FORM

PROJECT NAME: **PG&E-Emeryville**
4525 Hollis Street, Emeryville, CA
DATE SUBMITTED: **07-Oct-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 Tuesday, **October 11th**; 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)

October 30, 1996

Submission #: 9610107

REVISED FROM Oct. 14, 1996

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: **ESE-1**
Spl#: 103069 *Matrix:* WATER
Sampled: October 7, 1996 *Run#:* 3588 *Analyzed:* October 11, 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.	105	1
ETHYL BENZENE	N.D.	0.50	N.D.	104	1
XYLENES	N.D.	0.50	N.D.	105	1

June Zhao
Chemist

Marianne Alexander
Gas/BTEX Supervisor

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996 *Submission #:* 9610107

EMCON ASSOCIATES-SACRAMENTO REVISED FROM Oct. 14, 1996

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: **ESE-2**
Spl#: 103070 *Matrix:* WATER
Sampled: October 7, 1996 *Run#:* 3588 *Analyzed:* October 11, 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.	105	1
ETHYL BENZENE	N.D.	0.50	N.D.	104	1
XYLENES	N.D.	0.50	N.D.	105	1

June Zhao
Chemist

Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 30, 1996

Submission #: 9610107

REVISED FROM Oct. 14, 1996

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: ESE-3
Spl#: 103071 *Matrix:* WATER
Sampled: October 7, 1996 *Run#:* 3588 *Analyzed:* October 11, 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.	105	1
ETHYL BENZENE	N.D.	0.50	N.D.	104	1
XYLENES	N.D.	0.50	N.D.	105	1

June Zhao
Chemist

Marianne Alexander
Gas/BTEX Supervisor

916-928-3341 GC 10/15
FAX TO FRED FLINT 866-5881

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096

CHROMALAB, INC.
Environmental Services (SDB)

October 30, 1996 *Submission #:* 9610107

EMCON ASSOCIATES-SACRAMENTO REVISED FROM Oct. 14, 1996

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: **ESE-4**
Spl#: 103072 *Matrix:* WATER
Sampled: October 7, 1996 *Run#:* 3588 *Analyzed:* October 11, 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.	105	1
ETHYL BENZENE	N.D.	0.50	N.D.	104	1
XYLENES	N.D.	0.50	N.D.	105	1

June Zhao
Chemist

Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.
Environmental Services (SDB)

October 30, 1996 *Submission #:* 9610107

EMCON ASSOCIATES-SACRAMENTO REVISED FROM Oct. 14, 1996

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: FB-1
Spl#: 103073 *Matrix:* WATER
Sampled: October 7, 1996 *Run#:* 3546 *Analyzed:* October 11, 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.	104	1
ETHYL BENZENE	N.D.	0.50	N.D.	100	1
XYLENES	N.D.	0.50	N.D.	103	1

June Zhao
Chemist

Marianne Alexander
Gas/BTEX Supervisor

916-928-3341 GC 10/15
FAX TO FRED FLINT 869-5561

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CHROMALAB, INC.

Environmental Services (SDB)

OCT 3 1 1996

EMCON/SACRAMENTO

October 28, 1996 *Submission #:* 9610107

revised from 10/15/96

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: **ESE-4**
Spl#: 103072 *Matrix:* WATER *Extracted:* October 9, 1996
Sampled: October 7, 1996 *Run#:* 3537 *Analyzed:* October 10, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	N.D.	100	N.D.	--	1

NOTE: Quantitation for the above Analyte is based on the response factor of Diesel.

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor

916-928-3341 GC 10/15
FAX TO FRED FLINT 888-5681

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

October 28, 1996

Submission #: 9610107
revised from 10/15/96

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: **ESE-3**
Spl#: 103071 *Matrix:* WATER *Extracted:* October 9, 1996
Sampled: October 7, 1996 *Run#:* 3537 *Analyzed:* October 10, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	N.D.	100	N.D.	--	1

NOTE: Quantitation for the above Analyte is based on the response factor of Diesel.

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor

818-828-3341 GC 10/15
FAX TO FRED FLINT 866-5681

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

October 28, 1996

Submission #: 9610107
revised rom 10/15/96

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: **ESE-2**
Spl#: 103070 *Matrix:* WATER *Extracted:* October 9, 1996
Sampled: October 7, 1996 *Run#:* 3537 *Analyzed:* October 10, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	150	100	N.D.	--	1

Note: Hydrocarbon reported does not match the pattern of our Mineral oil standard.

NOTE: Quantitation for the above Analyte is based on the response factor of Diesel.

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

October 28, 1996

Submission #: 9610107
revised from 10/15/96

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

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

Client Sample ID: **ESE-1**
Spl#: 103069 *Matrix:* WATER *Extracted:* October 9, 1996
Sampled: October 7, 1996 *Run#:* 3537 *Analyzed:* October 10, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	110	100	N.D.	--	1

Note: *Hydrocarbon reported does not match the pattern of our Mineral oil standard.*

NOTE: **Quantitation for the above Analyte is based on the response factor of Diesel.**

Bruce Havlik
Chemist

Alex Tam
Semivolatiles Supervisor

916-928-3341 GC 10/15
FAX TO FRED FLINT 866-5681

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.
Environmental Services (SDB)

October 16, 1996 *Submission #:* 9610107

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.
Method: *EPA SW846 8080A*

Client Sample ID: **ESE-1**
Spl#: 103069 *Matrix:* WATER *Extracted:* October 11, 1996
Sampled: October 7, 1996 *Run#:* 3622 *Analyzed:* October 14, 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.	--	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.	112	1

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

916-928-3341 GC 10/15
FAX TO FRED FLINT 868-5881

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

October 16, 1996 *Submission #:* 9610107

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.
Method: *EPA SW846 8080A*

Client Sample ID: **ESE-2**
Spl#: 103070 *Matrix:* WATER *Extracted:* October 11, 1996
Sampled: October 7, 1996 *Run#:* 3622 *Analyzed:* October 15, 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.	--	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.	112	1

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

916-928-3341 GC 10/15
FAX TO FRED FLINT 866-5681

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.
Environmental Services (SDB)

October 16, 1996 *Submission #:* 9610107

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.
Method: *EPA SW846 8080A*

Client Sample ID: **ESE-3**
Spl#: 103071 *Matrix:* WATER *Extracted:* October 11, 1996
Sampled: October 7, 1996 *Run#:* 3622 *Analyzed:* October 15, 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.	--	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.	112	1

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

916-928-3341 GC 10/15
FAX TO FRED FLINT 866-5681

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.

Environmental Services (SDB)

October 16, 1996 *Submission #:* 9610107

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E - EMERYVILLE *Project#:* 20143-014.002
Received: October 8, 1996

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.
Method: *EPA SW846 8080A*

Client Sample ID: **ESE-4**
Spl#: 103072 *Matrix:* WATER *Extracted:* October 11, 1996
Sampled: October 7, 1996 *Run#:* 3622 *Analyzed:* October 15, 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.	--	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.	112	1

Dennis Mayugba
Chemist

Alex Tam
Semivolatiles Supervisor

916-928-3341 GC 10/16
FAX TO FRED FLINT 866-5681

1220 Quarry Lane • Pleasanton, California 94566-4756
(510) 484-1919 • Facsimile (510) 484-1096
Federal ID #68-0140157

CHROMALAB, INC.
SAMPLE RECEIPT CHECKLIST

Client Name EMCON
Project PG&E - EMERYVILLE
Reference/Subm # 30134 | 9610107
Checklist completed by: Minnie Park (Signature) / 10/9/96 (Date)

Date/Time Received 10/8/96 (Date) / 1600 (Time)
Received by S. Antone
Carrier name
Logged in by MP (Initials) / 10/8/96 (Date)
Matrix Water

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? 6.0°C

pH upon receipt 6-7 pH adjusted to <2 Check performed by: MP 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: One VOA vial for ESE-4 was received with headspace. Amber Liters for TEPH analysis were preserved with HCl at the lab. The Amber Liters for PCBs were left unpreserved.

Corrective Action:

SMPLRECD.CK

EMCON - San Jose

CHAIN OF CUSTODY /LABORATORY ANALYSIS REQUEST FORM 30134

EMCON 107/103069-103073

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

Date 10-7-'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:

SUBM #: 9610107 REP: GC
CLIENT: EMCON
DUE: 10/15/96
REF #:30134

Sample I.D.	Date	Time	LAB I.D.	Sample Matrix	Number of Containers	BTXE by EPA 602	PCBs by EPA 8080	TEPH as mineral oil by EPA 3510/8015								REMARKS
						HCl	NP	NP								Preservations
ESE-1	10-7-96	1345		H2O	6	2	2	2								
ESE-2		1310			6	2	2	2								
ESE-3		1520			6	2	2	2								
ESE-4		1439			6	2	2	2								
FB-1		1530			2	2										

Relinquished By	Received By
Signature: Steve Horton	Signature: Chris Antone
Printed Name: EMCON	Printed Name: CHROMALAB
Firm	Firm
Date/Time: 10/8/96 1600	Date/Time: 10/8/96 1600
Relinquished By	Received By
Signature: Chris Antone	Signature: Mimie Pak
Printed Name: Chromalab	Printed Name: Chromalab
Firm: 1800, 10/8/96	Firm: 10/08/96
Date/Time	Date/Time

TURNAROUND REQUIREMENTS

___ 24 hr ___ 48 hr
X Standard
___ Provide Verbal Preliminary Results
X Provide FAX Preliminary Results

Requested Report Date ___

REPORT REQUIREMENTS

X 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: ___

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