

May 02, 1997

Ms. Susan Hugo  
Senior Hazardous Materials Specialist  
Alameda County Environmental Health Dept.  
1131 Harbor Bay Parkway #250  
Alameda, CA 94502-6577



Dear Ms. Hugo:

Re: PG&E's Groundwater Monitoring and Sampling Report, Pacific Gas & Electric's Emeryville Materials Facility, Emeryville, California

Enclosed are two copies of the above-referenced report, performed for the first quarter of 1997 ending in March. The report was prepared by EMCON Associates, and summarizes groundwater flow direction, hydraulic gradient, and the results of laboratory chemical analyses of groundwater samples collected in February 1997.

Findings of the report include:

- The depth to ground water ranges for 10.12 to 12.62 feet below the surface. Ground water flow was to the north between wells ESE-2 and MW-4 with a gradient magnitude of 0.03 ft/ft, and toward the south between wells ESE-4 and ESE-1 with a gradient magnitude of 0.06 ft/ft.
- The TEPH is present in the well ESE-1 (1600  $\mu\text{g}/\text{l}$ ) and ESE-2 (510  $\mu\text{g}/\text{l}$ ). An unknown hydrocarbon quantified in the mineral oil range was found in well ESE-4 at a concentration of 210  $\mu\text{g}/\text{l}$ . All other compounds were below the method detection limit.

If you have any questions about this report, please call me at (510) 450-5710.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rudy Promani'. The signature is written in a cursive style with some loops and flourishes.

Rudy Promani  
Director Environmental Services

Enclosures

cc: Rafat A. Shahid, Environmental Health  
Gil Jensen, Alameda County District Attorney's Office  
Gordon Coleman, Acting Chief, Environmental Protective Division  
Kevin Graves, San Francisco Bay RWQCB  
Sum Arigala, San Francisco Bay RWQCB

5/11/97 9:14:15  
ENVIRONMENTAL  
PROTECTION  
DIVISION

**GROUNDWATER MONITORING AND SAMPLING  
REPORT**

**EMERYVILLE MAINTENANCE FACILITY  
4525 HOLLIS STREET  
EMERYVILLE, CALIFORNIA  
FIRST QUARTER 1997**

Prepared for

Pacific Gas and Electric Company  
Technical and Ecological Services

March 1997

Prepared by

EMCON  
1433 North Market Boulevard  
Sacramento, California 95834

Project 0143-014.02

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## **1 INTRODUCTION**

This report presents data collected during the first quarter 1997 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**

First quarter groundwater levels were measured at the PG&E Maintenance Facility in Emeryville, California, on February 14, 1997, 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 February data were used in constructing a groundwater contour map (see Figure 2). February water levels ranged from a low of 11.04 feet above mean sea level (MSL) in well ESE-1 to a high of 17.73 feet above MSL in well MW-4. The groundwater gradient is 0.03 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 February 14, 1997, 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 first quarter 1997 monitoring event are summarized in Table 1.

The analytical results are discussed below. First quarter 1997 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. Mineral oil was detected in the samples collected from ESE-1 and ESE-2 at concentrations of 1,600 µg/L and 510 µg/L, respectively. An unknown hydrocarbon was reported in the mineral oil range in well ESE-4 at a concentration of 270 micrograms per liter (µg/L). Well MW-4 was upgradient and the material found in the groundwater does not appear to be mineral oil although its chemical profile contains peaks in the late hydraulic oil range. The material appears to be migrating from an offsite source.

#### 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.

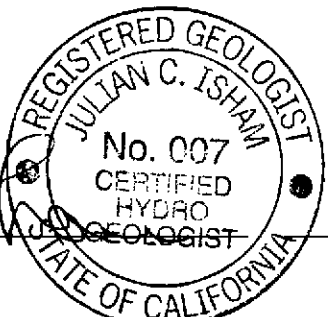
The field and laboratory QC results indicate that the analytical data are of acceptable quality.


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

EMCON

EMCON

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



  
Harold R. Duke  
Project Manager

**Table 1**  
**Field Measurements**  
**First Quarter 1997 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) <sup>1</sup>	Depth to Water (feet)	Elevation (ft/MSL)	Depth (feet)	pH (units)	Temperature (°F)		
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 <sup>3</sup>	NS <sup>4</sup>	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-1	12/04/96	23.66	12.67	10.99	34.2	6.80	64.4	507	
ESE-1	02/14/97	23.66	12.62	11.04	34.2	6.96	67.5	509	
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-2	12/04/96	27.80	14.20	13.60	34.4	6.89	65.0	618	
ESE-2	02/14/97	27.80	13.80	14.00	34.4	7.02	66.3	578	

**Table 1**  
**Field Measurements**  
**First Quarter 1997 and Historical Data**  
**Pacific Gas and Electric Company**  
**Emeryville, California**

Sample Designation	Date	Top-of-Casing Elevation (ft/MSL) <sup>1</sup>	Depth to Water (feet)	Groundwater Elevation (ft/MSL)	Measured Well Depth (feet)	pH (units)	Temperature (°F)	Electrical Conductivity (umhos/cm)
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
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-3	12/04/96 <sup>5</sup>	23.91	10.67	13.24	30.9	NM	NM	NM
ESE-3	02/14/97	23.91	10.75	13.16	30.9	7.01	65.9	506
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
ESE-4	12/04/96 <sup>5</sup>	24.33	10.31	14.02	31.5	NM	NM	NM
ESE-4	02/14/97	24.33	10.12	14.21	31.5	7.11	65.3	511

**Table 1**  
**Field Measurements**  
**First Quarter 1997 and Historical Data**  
**Pacific Gas and Electric Company**  
**Emeryville, California**

Sample Designation	Date	Top-of-Casing Elevation (ft/MSL) <sup>1</sup>	Depth to Water (feet)	Groundwater Elevation (ft/MSL)	Measured Well Depth (feet)	pH (units)	Temperature (°F)	Electrical Conductivity (umhos/cm)
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
MW-4	12/04/96	28.14	10.44	17.70	14.7	NS	NS	NS
MW-4	02/14/97	28.14	10.41	17.73	14.7	NS	NS	NS

<sup>1</sup> ft/MSL = feet relative to mean sea level.  
<sup>2</sup> umhos/cm = micromhos per centimeter at 77°F.  
<sup>3</sup> NM = not measured.  
<sup>4</sup> NS = not sampled.  
<sup>5</sup> Wells not sampled due to construction in the area resulting in heavy traffic.



**Table 2**  
**Analytical Data**  
**First Quarter 1997 and Historical Data**  
**Pacific Gas and Electric Company**  
**Emeryville, California**  
**(ug/l)<sup>1</sup>**

Sample Designation	Sampling Date	Polychlorinated					
		Biphenols	TEPH <sup>2</sup>	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 <sup>3</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	06/15/95	<0.5	350 <sup>3</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	09/15/95	<0.5	470 <sup>3</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	12/15/95	<0.5	440 <sup>3</sup>	<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 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	12/04/96	<0.5	430 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	02/14/97	<0.5	1,600	<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 <sup>5</sup>	<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 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5
ESE-2	12/04/96	<0.5	380 <sup>4</sup>	<0.5	<0.5	<0.5	<0.5
ESE-2	02/14/97	<0.5	510	<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**  
**First Quarter 1997 and Historical Data**  
**Pacific Gas and Electric Company**  
**Emeryville, California**  
**(ug/l)<sup>1</sup>**

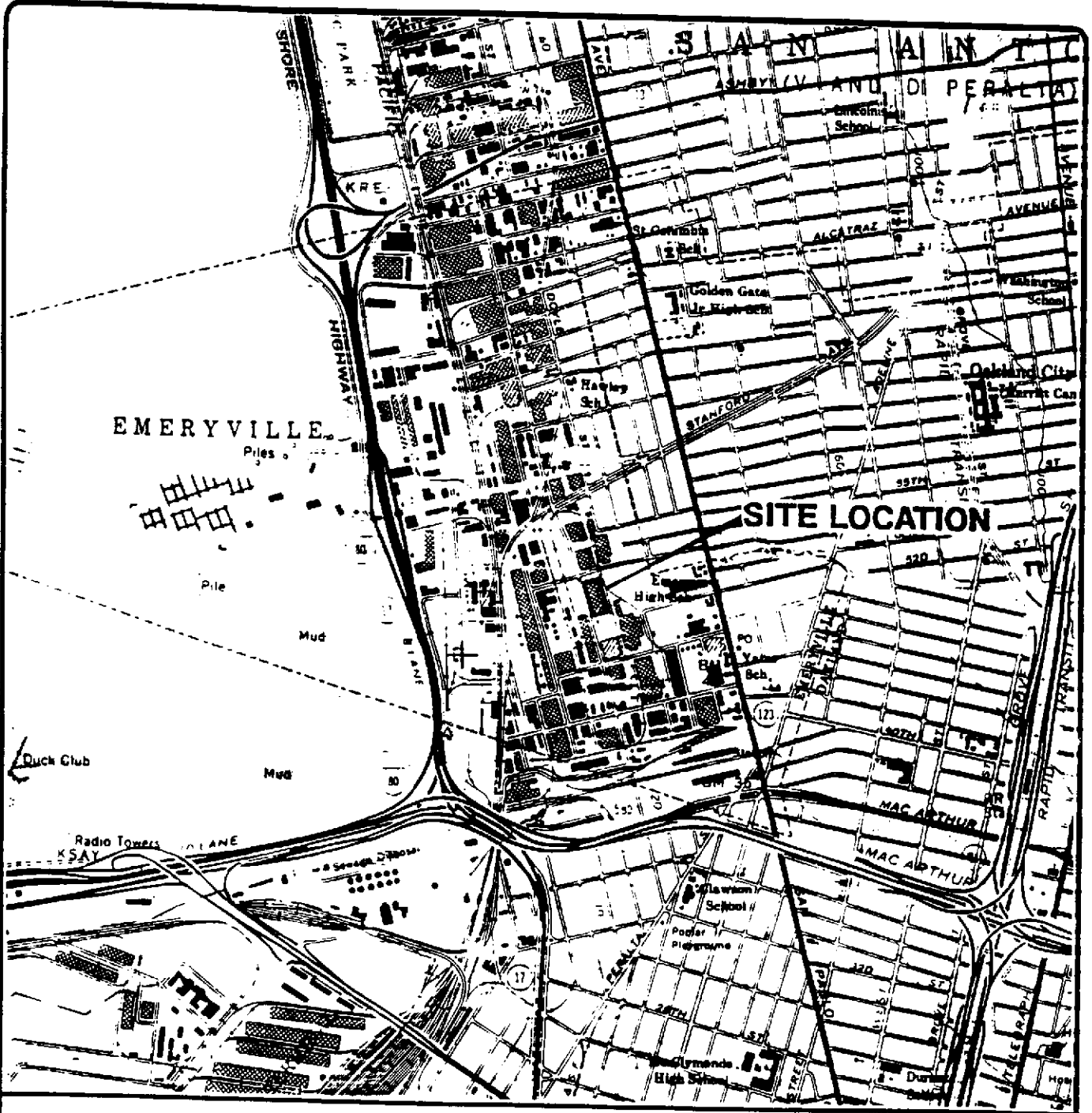
Sample Designation	Sampling Date	Polychlorinated					
		Biphenols	TEPH <sup>2</sup>	Benzene	Toluene	Ethylbenzene	Xylenes
ESE-3	12/15/95	<0.5	<50	<0.5	<0.5	<0.5	<0.5
ESE-3	03/15/96	<0.5	<59	<0.5	<0.5	<0.5	<0.5
ESE-3	06/14/96	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-3	10/07/96	<0.5	<100	<0.5	<0.5	<0.5	<0.5
ESE-3	12/04/96 <sup>6</sup>	NA <sup>7</sup>	NA	NA	NA	NA	NA
ESE-3	02/14/97	<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 <sup>5</sup>	<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 <sup>5</sup>	<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
ESE-4	12/04/96 <sup>6</sup>	NA	NA	NA	NA	NA	NA
ESE-4	02/14/97	<0.5	270 <sup>4</sup>	<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	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**  
**First Quarter 1997 and Historical Data**  
**Pacific Gas and Electric Company**  
**Emeryville, California**  
**(ug/l)<sup>1</sup>**

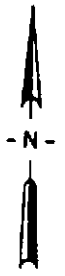
Sample Designation	Sampling Date	Polychlorinated Biphenols	TEPH <sup>2</sup>	Benzene	Toluene	Ethylbenzene	Xylenes
Field Blank	06/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	09/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	12/15/95	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	03/15/96	NA	NA	<0.5	<0.5	<0.5	<0.5
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
Field Blank	12/04/96	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	02/14/97	NA	NA	<0.5	<0.5	<0.5	<0.5

ug/l = micrograms per liter.  
<sup>2</sup> TEPH = total extractable petroleum hydrocarbons.  
<sup>3</sup> Compounds similar to client-supplied transformer oil were found.  
<sup>4</sup> Hydrocarbon reported does not match the pattern of laboratory standard for mineral oil.  
<sup>5</sup> Compounds in diesel range not similar to laboratory standard for transformer oil.  
<sup>6</sup> Wells not sampled due to construction in the area resulting in heavy traffic.  
<sup>7</sup> 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**

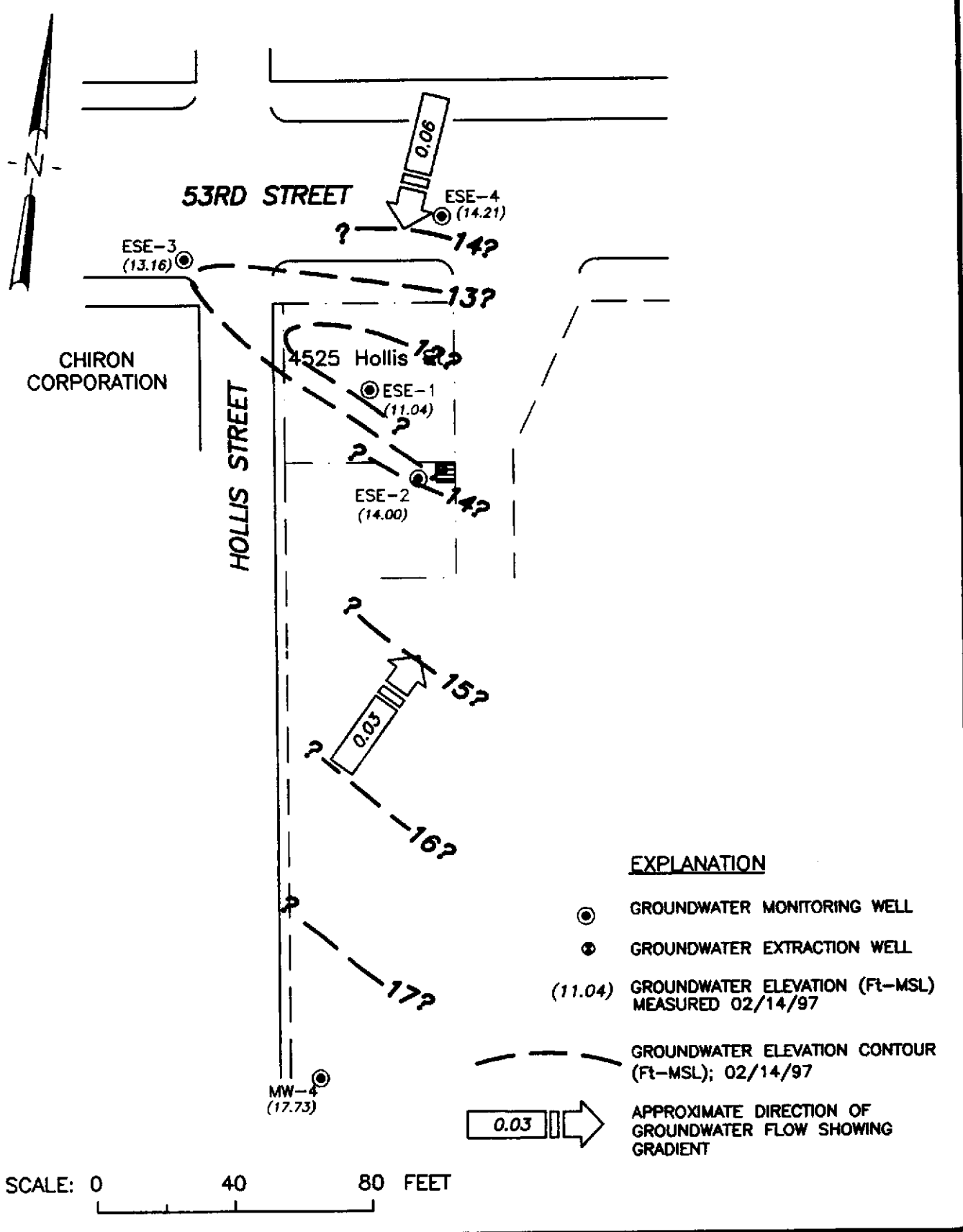
**1**

**PROJECT NO.  
143-014.02**

1: \DWGSET\PCAE\014G\WCM.DWG 11/18/97 09:13:53 1997

05-18-87

1: \DWGSET\PCAE\014G\WCM.DWG



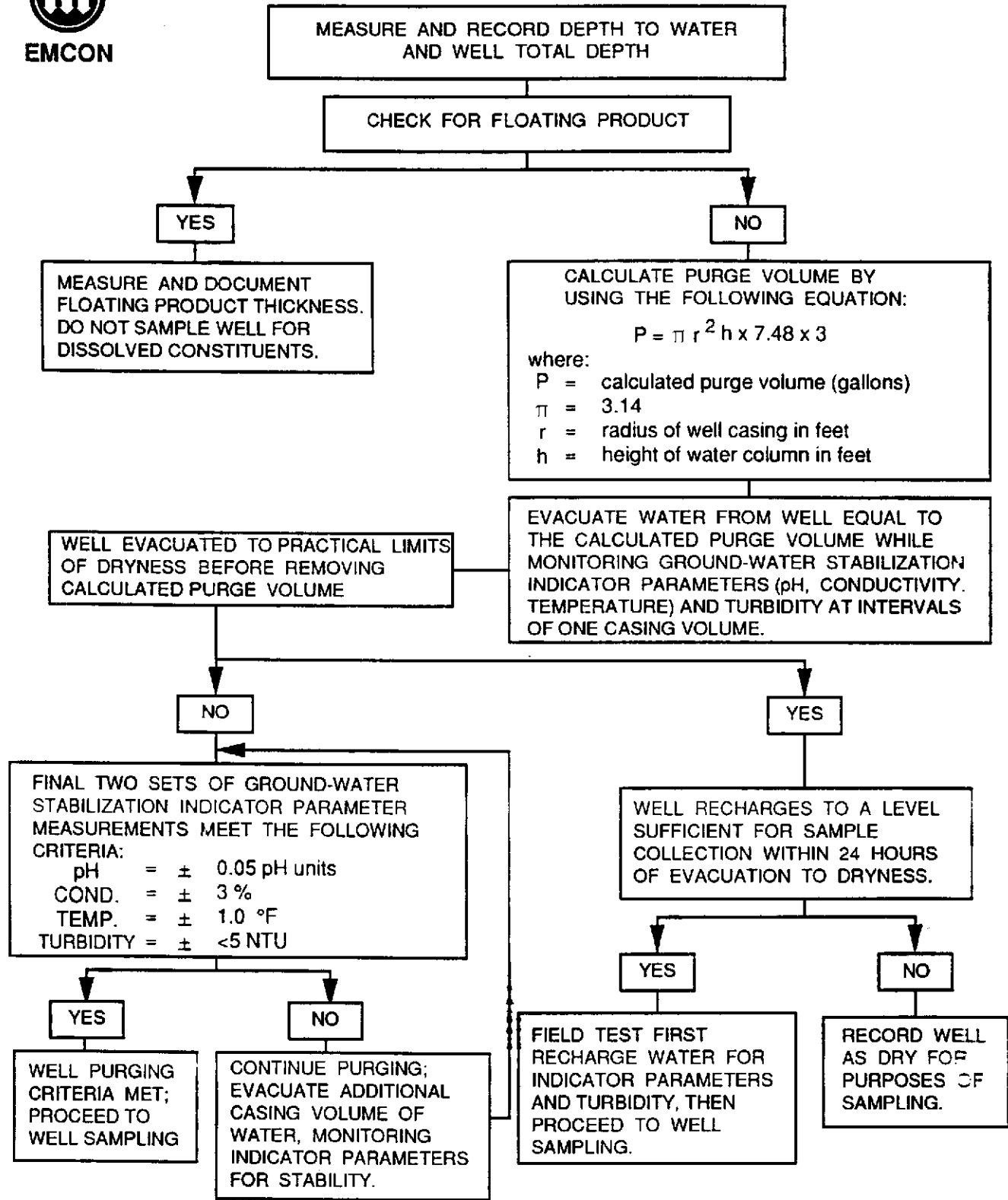
PACIFIC GAS AND ELECTRIC  
 EMERYVILLE MAINTENANCE FACILITY  
 EMERYVILLE, CALIFORNIA  
 QUARTERLY MONITORING REPORT  
 GROUNDWATER CONTOUR MAP  
 FIRST QUARTER 1997

FIGURE  
**2**  
 PROJECT NO.  
 20143-014.02



EMCON

# MONITORING WELL PURGING PROTOCOL



EMCON

MONITORING WELL PURGING PROTOCOL

FIGURE

3

**APPENDIX A**

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

*[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	03/15/96		11.79	11.79	ND	33.6	Time: 1030 Lock: None
	06/14/96		12.68	12.68	ND	33.6	
	12/04/96		12.67	12.67	ND	34.2	
	2-19-97		12.62	12.62	ND	34.2	
ESE-2	03/15/96		12.87	12.87	ND	34.1	Time: 1035 Lock: Dolphin
	06/14/96		13.94	13.94	ND	34.1	
	12/04/96		14.20	14.20	ND	34.4	
			13.80	13.80	ND	74.4	
ESE-3	03/15/96		10.02	10.02	ND	30.9	Time: 1040 Lock: 3210
	06/14/96		10.65	10.65	ND	30.9	
	12/04/96		10.67	10.67	ND	30.9	
			10.75	10.75	ND	30.9	
ESE-4	03/15/96		9.29	9.29	ND	31.5	Time: 1043 Lock: 3210
	06/14/96		10.23	10.23	ND	31.5	
	12/04/96		10.31	10.31	ND	31.5	
			10.12	10.12	ND	31.5	
MW-4	03/15/96		8.12	8.12	ND	14.7	Time: 1025 Lock: None
	06/14/96		10.78	10.78	ND	14.7	
	12/04/96		10.44	10.44	ND	14.7	
			10.41	10.41	ND	14.7	





EMCON ASSOCIATES

# WATER SAMPLE FIELD DATA SHEET

Rev. 3, 2/94

PROJECT NO: 20143-014.002

SAMPLE ID: ESK-1

PURGED BY: M. Ross

CLIENT NAME: P&H EMERYVILLE

SAMPLED BY: M. Ross

LOCATION: Emeryville, CA

TYPE: Ground Water  Surface Water  Treatment Effluent  Other

CASING DIAMETER (inches): 2  533 3  4  4.5  6  Other

CASING ELEVATION (feet/MSL): <u>NR</u>	VOLUME IN CASING (gal.): <u>3.52</u>
DEPTH TO WATER (feet): <u>12.62</u>	CALCULATED PURGE (gal.): <u>14.09</u>
DEPTH OF WELL (feet): <u>34.2</u>	ACTUAL PURGE VOL. (gal.): <u>14.5</u>

DATE PURGED: <u>2-14-97</u>	Start (2400 Hr) <u>1058</u>	End (2400 Hr) <u>1114</u>
DATE SAMPLED: <u>2-14-97</u>	Start (2400 Hr) <u>1125</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>1102</u>	<u>4.0</u>	<u>6.66</u>	<u>533</u>	<u>67.9</u>	<u>BRN</u>	<u>MD</u>
<u>1106</u>	<u>7.5</u>	<u>6.76</u>	<u>515</u>	<u>67.2</u>	<u>BRN</u>	<u>MD</u>
<u>1110</u>	<u>11.0</u>	<u>6.99</u>	<u>490</u>	<u>67.7</u>	<u>BRN</u>	<u>MD</u>
<u>1114</u>	<u>14.5</u>	<u>6.76</u>	<u>509</u>	<u>67.5</u>	<u>BRN</u>	<u>MD</u>

D. O. (ppm): NR      ODOR: NONE      COLOR: NR      TURBIDITY: NR

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

(COBALT 0 - 500)      (NTU 0 - 200 or 0 - 1000)

### PURGING EQUIPMENT

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

### SAMPLING EQUIPMENT

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

WELL INTEGRITY: OK      LOCK #: 3476

REMARKS: \_\_\_\_\_

Meter Calibration: Date: 2-14-97 Time: 1050 Meter Serial #: 9105 Temperature °F: 71.2

( EC 1000 971 / 1009 ) ( DI — ) ( pH 7 100 / 1700 ) ( pH 10 1000 / 1000 ) ( pH 4 395 / — )

Location of previous calibration: —

Signature: Mike Ross      Reviewed By: NR      Page 1 of 4



**EMCON**  
ASSOCIATES

# WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 20143-014,002

SAMPLE ID: ESE-2

PURGED BY: M. Ross

CLIENT NAME: PCE EMERYVILLE

SAMPLED BY: M. Ross

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>NR</u>	VOLUME IN CASING (gal.): <u>3.36</u>
DEPTH TO WATER (feet): <u>13.80</u>	CALCULATED PURGE (gal.): <u>13.45</u>
DEPTH OF WELL (feet): <u>34.4</u>	ACTUAL PURGE VOL (gal.): <u>13.5</u>

DATE PURGED: <u>2-14-97</u>	Start (2400 Hr) <u>1139</u>	End (2400 Hr) <u>1158</u>
DATE SAMPLED: <u>2-14-97</u>	Start (2400 Hr) <u>1210</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>1144</u>	<u>3.5</u>	<u>6.98</u>	<u>587</u>	<u>67.5</u>	<u>BREN</u>	<u>MOD</u>
<u>1149</u>	<u>7.0</u>	<u>6.99</u>	<u>588</u>	<u>66.2</u>	<u>BREN</u>	<u>MOD</u>
<u>1154</u>	<u>10.5</u>	<u>7.05</u>	<u>575</u>	<u>66.9</u>	<u>BREN</u>	<u>MOD</u>
<u>1158</u>	<u>13.5</u>	<u>7.02</u>	<u>578</u>	<u>66.3</u>	<u>BREN</u>	<u>MOD</u>

D. O. (ppm): NA      ODOR: NONE      NR      NA

(COBALT 0 - 500)      (NTU 0 - 200 or 0 - 1000)

Field QC samples collected at this well: FB-1 @ 1210      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 type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> ODL 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: OK      LOCK #: Dolphin

REMARKS: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Meter Calibration: Date: 2-14-97 Time: 1050 Meter Serial #: 9605 Temperature °F: \_\_\_\_\_

( EC 1000 \_\_\_\_\_ / \_\_\_\_\_ ) ( DI \_\_\_\_\_ ) ( pH 7 \_\_\_\_\_ / \_\_\_\_\_ ) ( pH 10 \_\_\_\_\_ / \_\_\_\_\_ ) ( pH 4 \_\_\_\_\_ / \_\_\_\_\_ )

Location of previous calibration: ESE-1

Signature: M. Ross      Reviewed By: NR      Page 2 of 4



EMCON ASSOCIATES

# WATER SAMPLE FIELD DATA SHEET

Rev. 3, 2/94

PROJECT NO: 20143-014-002

SAMPLE ID: FSE-3

PURGED BY: K. Peck

CLIENT NAME: PGE

SAMPLED BY: K. Peck

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>NR</u>	VOLUME IN CASING (gal.): <u>3.34</u>
DEPTH TO WATER (feet): <u>10.84</u>	CALCULATED PURGE (gal.): <u>13.36</u>
DEPTH OF WELL (feet): <u>31.3</u>	ACTUAL PURGE VOL. (gal.): <u>14.5</u>

DATE PURGED: <u>2/14/97</u>	Start (2400 Hr) <u>1230</u>	End (2400 Hr) <u>1308</u>
DATE SAMPLED: <u>2/14/97</u>	Start (2400 Hr) <u>1320</u>	End (2400 Hr) <u>    </u>

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (umhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
<u>1240</u>	<u>4.0</u>	<u>710</u>	<u>494</u>	<u>66.3</u>	<u>brown</u>	<u>mod</u>
<u>1250</u>	<u>7.5</u>	<u>710</u>	<u>502</u>	<u>65.8</u>	<u>↓</u>	<u>↓</u>
<u>1300</u>	<u>11.0</u>	<u>699</u>	<u>512</u>	<u>65.8</u>	<u>↓</u>	<u>↓</u>
<u>1308</u>	<u>14.5</u>	<u>701</u>	<u>506</u>	<u>65.9</u>	<u>↓</u>	<u>↓</u>

D. O. (ppm): NR      ODOR: none      COLOR: NR      TURBIDITY: NR  
(COBALT 0 - 500)      (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 type="checkbox"/> Centrifugal Pump | <input checked="" 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: \_\_\_\_\_

WELL INTEGRITY: OK      LOCK #: 3900

REMARKS: NEW lock - Given

Meter Calibration: Date: 2/14 Time: 10:50 Meter Serial #: 9105 Temperature °F: \_\_\_\_\_

(EC 1000 \_\_\_\_\_ / \_\_\_\_\_) (DI \_\_\_\_\_) (pH 7 \_\_\_\_\_ / \_\_\_\_\_) (pH 10 \_\_\_\_\_ / \_\_\_\_\_) (pH 4 \_\_\_\_\_ / \_\_\_\_\_)

Location of previous calibration: FSE1

Signature: K. Peck      Reviewed By: MLK      Page 3 of 4



# WATER SAMPLE FIELD DATA SHEET

**EMCON ASSOCIATES**

PROJECT NO: 20143-014.002

SAMPLE ID: ESE-4

PURGED BY: M. ROSS

CLIENT NAME: PG&E Emeryville

SAMPLED BY: M. ROSS

LOCATION: Emeryville, CA

TYPE: Ground Water  Surface Water  Treatment Effluent  Other

CASING DIAMETER (inches): 2.1 1.653 3  4  4.5  6  Other

CASING ELEVATION (feet/MSL):	<u>NR</u>	VOLUME IN CASING (gal.):	<u>3.5</u>
DEPTH TO WATER (feet):	<u>10.18</u>	CALCULATED PURGE (gal.):	<u>13.92</u>
DEPTH OF WELL (feet):	<u>31.5</u>	ACTUAL PURGE VOL (gal.):	<u>14.0</u>

DATE PURGED: <u>2-14-97</u>	Start (2400 Hr) <u>1234</u>	End (2400 Hr) <u>1250</u>
DATE SAMPLED: <u>2-14-97</u>	Start (2400 Hr) <u>1300</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>1236</u>	<u>3.5</u>	<u>7.07</u>	<u>532</u>	<u>68.2</u>	<u>BREN</u>	<u>MOD</u>
<u>1241</u>	<u>7.0</u>	<u>7.05</u>	<u>523</u>	<u>65.5</u>	<u>BREN</u>	<u>MOD</u>
<u>1246</u>	<u>18.5</u>	<u>7.08</u>	<u>523</u>	<u>65.6</u>	<u>BREN</u>	<u>MOD</u>
<u>1250</u>	<u>14.0</u>	<u>7.11</u>	<u>511</u>	<u>65.3</u>	<u>BREN</u>	<u>MOD</u>

D. O. (ppm): NR ODOR: NONE NR NR  
 (COBALT 0 - 500) (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 type="checkbox"/> Centrifugal Pump	<input checked="" type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> ODL 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: OK LOCK #: 3900

REMARKS: new lock - given

Meter Calibration: Date: 2-14-97 Time: 1030 Meter Serial #: 9105 Temperature °F: \_\_\_\_\_  
 ( EC 1000 \_\_\_\_\_ / \_\_\_\_\_ ) ( DI \_\_\_\_\_ ) ( pH 7 \_\_\_\_\_ / \_\_\_\_\_ ) ( pH 10 \_\_\_\_\_ / \_\_\_\_\_ ) ( pH 4 \_\_\_\_\_ / \_\_\_\_\_ )  
 Location of previous calibration: ESE-1

Signature: White Reviewed By: MR Page 4 of 4

EMCON - Drum Inventory Record

20143-014.002  
Project No

Emeryville, CA  
Location

2-14-97  
Date

PG&E  
Client

M. ROSS/K. PECK  
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
(A)	ESE-1, ESE-3 ESE-2, ESE-4	H <sub>2</sub> O	55.0 gal	2-14-97

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: **14-Feb-97**

**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  
Drop off samples at Chromalabs when you are finished.

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 ESE-2 ESE-3 ESE-4	2.0 2.0 2.0 2.0	30.6 34.3 31.0 31.6	<b>PCBs by EPA 8080 BTEX by EPA 602 TEPH as mineral oil by EPA 3510/8015</b>
FB-1	NA	NA	<b>BTEX by EPA 602</b>
MW-4	2.0	14.7	<b>Water Level &amp; Total Depth Only</b> <i>Completed</i> <i>2-14-97</i> <i>mrk, RP</i>

**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

MAR - 4 1997

EMCON/SACRAMENTO

February 19, 1997

Submission #: 9702182

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

Project#: 20143-014.002

re: One sample for BTEX compounds analysis.  
Method: EPA 8015M SW846 8020A Nov 1990

Client Sample ID: ESE-1

Spl#: 117884


Matrix: WATER


Sampled: February 14, 1997

Run#: 5348

Analyzed: February 19, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	97.5	1
TOLUENE	N.D.	0.50	N.D.	97.0	1
ETHYL BENZENE	N.D.	0.50	N.D.	96.0	1
XYLENES	N.D.	0.50	N.D.	98.7	1
MTBE	N.D.	5.0	N.D.	109	1

  
Kayvan Kimyai  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor



# CHROMALAB, INC.

Environmental Services (SDB)

February 19, 1997

Submission #: 9702182

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

Project#: 20143-014.002

re: One sample for BTEX compounds analysis.  
Method: EPA 8015M SW846 8020A Nov 1990

Client Sample ID: ESE-2

Spl#: 117885


Matrix: WATER


Sampled: February 14, 1997

Run#: 5349

Analyzed: February 18, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	99.0	1
TOLUENE	N.D.	0.50	N.D.	95.5	1
ETHYL BENZENE	N.D.	0.50	N.D.	94.5	1
XYLENES	N.D.	0.50	N.D.	94.2	1
MTBE	N.D.	5.0	N.D.	95.5	1

  
Kayvan Kimyai  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

February 19, 1997

Submission #: 9702182

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

Project#: 20143-014.002

re: One sample for BTEX compounds analysis.  
Method: EPA 8015M SW846 8020A Nov 1990

Client Sample ID: ESE-3

Spl#: 117886

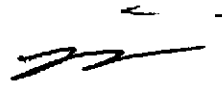
Matrix: WATER


Sampled: February 14, 1997

Run#: 5348

Analyzed: February 19, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	97.5	1
TOLUENE	N.D.	0.50	N.D.	97.0	1
ETHYL BENZENE	N.D.	0.50	N.D.	96.0	1
XYLENES	N.D.	0.50	N.D.	98.7	1
MTBE	N.D.	5.0	N.D.	109	1

  
Kayvan Kimyai  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

February 19, 1997

Submission #: 9702182

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

Project#: 20143-014.002

re: One sample for BTEX compounds analysis.  
Method: EPA 8015M SW846 8020A Nov 1990

Client Sample ID: ESE-4

Spl#: 117887

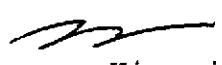
Matrix: WATER


Sampled: February 14, 1997

Run#: 5348

Analyzed: February 19, 1997

<u>ANALYTE</u>	<u>RESULT</u> <u>(ug/L)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(ug/L)</u>	<u>BLANK</u> <u>RESULT</u> <u>(ug/L)</u>	<u>BLANK SPIKE</u> <u>(%)</u>	<u>DILUTION</u> <u>FACTOR</u>
BENZENE	N.D.	0.50	N.D.	97.5	1
TOLUENE	N.D.	0.50	N.D.	97.0	1
ETHYL BENZENE	N.D.	0.50	N.D.	96.0	1
XYLENES	N.D.	0.50	N.D.	98.7	1
MTBE	N.D.	5.0	N.D.	109	1

  
Kayvan Kimyai  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

February 19, 1997

Submission #: 9702182

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

Project#: 20143-014.002

re: One sample for BTEX compounds analysis.  
Method: EPA 8015M SW846 8020A Nov 1990

Client Sample ID: FB-1

Spl#: 117888


Matrix: WATER


Sampled: February 14, 1997

Run#: 5348

Analyzed: February 19, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	97.5	1
TOLUENE	N.D.	0.50	N.D.	97.0	1
ETHYL BENZENE	N.D.	0.50	N.D.	96.0	1
XYLENES	N.D.	0.50	N.D.	98.7	1
MTBE	N.D.	5.0	N.D.	109	1

  
Kayvan Kimyai  
Chemist

  
Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

February 25, 1997

Submission #: 9702182

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

Project#: 20143-014.002


re: One sample for TEPH analysis.  
Method: EPA 8015M

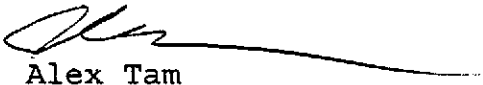
Client Sample ID: ESE-1

Spl#: 117884 Matrix: WATER  
Sampled: February 14, 1997 Run#: 5421

Extracted: February 22, 1997  
Analyzed: February 23, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	1600	100	N.D.	72.5	1

  
Bruce Havlik *FRK*  
Chemist

  
Alex Tam  
Semivolatiles Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

February 25, 1997

Submission #: 9702182

EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

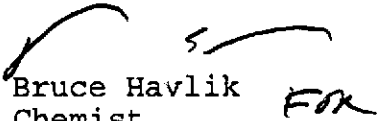
Project#: 20143-014.002


re: One sample for TEPH analysis.  
Method: EPA 8015M

Client Sample ID: ESE-2

Spl#: 117885 Matrix: WATER Extracted: February 22, 1997  
Sampled: February 14, 1997 Run#: 5421 Analyzed: February 23, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	510	100	N.D.	72.5	1

  
Bruce Havlik  
Chemist

  
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Semivolatiles Supervisor

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Project#: 20143-014.002

re: One sample for TEPH analysis.  
Method: EPA 8015M

Client Sample ID: ESE-4

Spl#: 117887

Matrix: WATER

Extracted: February 22, 1997

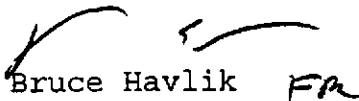
Sampled: February 14, 1997


Run#: 5421

Analyzed: February 23, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	270	100	N.D.	72.5	1

Note: Hydrocarbon reported is in the late Mineral Oil range and does not match our Mineral Oil standard.

  
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Received: February 14, 1997

Project#: 20143-014.002

re: One sample for TEPH analysis.  
Method: EPA 8015M


Client Sample ID: ESE-3


Spl#: 117886  
Sampled: February 14, 1997

Matrix: WATER  
Run#: 5449

Extracted: February 24, 1997  
Analyzed: February 24, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
MINERAL OIL	N.D.	100	N.D.	89.5	1

  
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EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997


Project#: 20143-014.002

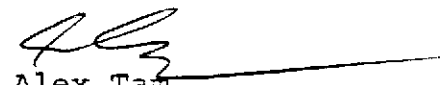
re: One sample for Polychlorinated Biphenyls (PCBs) analysis.  
Method: SW846 Method 8080A Nov 1990

Client Sample ID: ESE-1

Spl#: 117884 Matrix: WATER Extracted: February 22, 1997  
Sampled: February 14, 1997 Run#: 5441 Analyzed: February 24, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	--	--
AROCLOR 1221	N.D.	0.50	N.D.	--	--
AROCLOR 1232	N.D.	0.50	N.D.	--	--
AROCLOR 1242	N.D.	0.50	N.D.	--	--
AROCLOR 1248	N.D.	0.50	N.D.	--	--
AROCLOR 1254	N.D.	0.50	N.D.	--	--
AROCLOR 1260	N.D.	0.50	N.D.	91.0	--

  
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EMCON ASSOCIATES-SACRAMENTO

Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

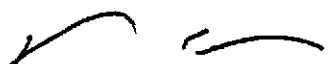
Project#: 20143-014.002

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.  
Method: SW846 Method 8080A Nov 1990

Client Sample ID: ESE-2

Spl#: 117885 Matrix: WATER Extracted: February 22, 1997  
Sampled: February 14, 1997 Run#: 5441 Analyzed: February 24, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	--	--
AROCLOR 1221	N.D.	0.50	N.D.	--	--
AROCLOR 1232	N.D.	0.50	N.D.	--	--
AROCLOR 1242	N.D.	0.50	N.D.	--	--
AROCLOR 1248	N.D.	0.50	N.D.	--	--
AROCLOR 1254	N.D.	0.50	N.D.	--	--
AROCLOR 1260	N.D.	0.50	N.D.	91.0	--

  
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Atten: J.C. Isham

Project: PG&E EMERYVILLE  
Received: February 14, 1997

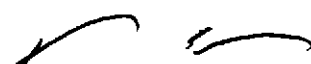
Project#: 20143-014.002


re: One sample for Polychlorinated Biphenyls (PCBs) analysis.  
Method: SW846 Method 8080A Nov 1990

Client Sample ID: ESE-3

Spl#: 117886 Matrix: WATER Extracted: February 22, 1997  
Sampled: February 14, 1997 Run#: 5441 Analyzed: February 24, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	--	--
AROCLOR 1221	N.D.	0.50	N.D.	--	--
AROCLOR 1232	N.D.	0.50	N.D.	--	--
AROCLOR 1242	N.D.	0.50	N.D.	--	--
AROCLOR 1248	N.D.	0.50	N.D.	--	--
AROCLOR 1254	N.D.	0.50	N.D.	--	--
AROCLOR 1260	N.D.	0.50	N.D.	91.0	--

  
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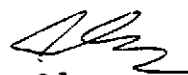
re: One sample for Polychlorinated Biphenyls (PCBs) analysis.  
Method: SW846 Method 8080A Nov 1990

Client Sample ID: ESE-4

Spl#: 117887 Matrix: WATER Extracted: February 22, 1997  
Sampled: February 14, 1997 Run#: 5441 Analyzed: February 24, 1997

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	--	--
AROCLOR 1221	N.D.	0.50	N.D.	--	--
AROCLOR 1232	N.D.	0.50	N.D.	--	--
AROCLOR 1242	N.D.	0.50	N.D.	--	--
AROCLOR 1248	N.D.	0.50	N.D.	--	--
AROCLOR 1254	N.D.	0.50	N.D.	--	--
AROCLOR 1260	N.D.	0.50	N.D.	91.0	--

  
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**CHROMALAB, INC.**

Environmental Service (SDB)

**Sample Receipt Checklist**

Client Name: EMCON Date/Time Received: 2/14/97 1450

Reference/Subm #: 32083/9702/82 Received by: MP Date / Time

Checklist completed by: Chris Rowley 2/18/97 Reviewed By: SA 2/18/97  
Signature Date Initial/Date

Matrix: H2O Carrier name Client C/L -

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present
- Custody seals intact on sample bottles? Yes  No  Not Present
- 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
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Container/Temp Blank temperature in compliance? Temp: 6.5 °C Yes  No
- Water - VOA vials have zero headspace? No VOA vials submitted Yes  No
- Water - pH acceptable upon receipt? Yes adjusted?  Checked by MP /chemist for VOAs

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client contacted: \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted: \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corrective Action: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_