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June 30, 1999



Ms. Susan Hugo  
Senior Hazardous Materials Specialist  
Alameda County Health Agency  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, CA 94502

Subject: Groundwater Monitoring and Sampling Report, First Quarter 1999  
Former Aboveground Storage Tank Area, Emeryville, California

Dear Ms. Hugo:

Enclosed is a copy of the report, *Groundwater Monitoring and Sampling Report, Pacific Gas & Electric's Emeryville Materials Facility, 4525 Hollis Street, Emeryville, California, First Quarter 1999*. The report summarizes the groundwater flow direction, hydraulic gradient, and the results of chemical analyses of groundwater samples collected in February 1999.

Findings of the groundwater monitoring performed during the first quarter 1999 include:

- *The depth to groundwater ranges from 10.04 to 12.39 feet below the surface. Groundwater flow was to the north with a gradient of 0.02 ft/ft between Wells ESE-2 and MW4, and to the north-northeast with a gradient of 0.11 ft/ft between Wells ESE-2 and ESE-1.*
- *All compounds were below the method detection limit in all wells sampled.*

Should you have any questions or comments, please call me at 415/972-5719.

Sincerely,

A handwritten signature in cursive script that reads 'Sue Fandel'.

Susan M. Fandel  
Environmental Specialist

A handwritten phone number '415 253 0158' with a circled area around the number.

99 JUL -2 PM 2:25  
ENVIRONMENTAL  
PROTECTION

Ms. Susan Hugo  
June 30, 1999  
Page 2

SMF:nem

CC: Mr. Derek Lee  
San Francisco Regional Water Quality Control Board

Enclosure

# TES

## **Groundwater Monitoring And Sampling Report**

**Former Aboveground  
Storage Tank  
4525 Hollis Street  
Emeryville, California**

**First Quarter 1999**

Prepared by  
**Technical and Ecological Services**

June 1999  
Report No.: 402.331-99.98

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**MONITORING WELL WATER LEVEL / FLOATING PRODUCT SURVEY FORM AND  
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**CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION**

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## **1 INTRODUCTION**

This report presents the results of groundwater monitoring performed during the first quarter 1999 in conjunction with the former aboveground storage tank 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 11, 1999, in wells ESE-1, ESE-2, ESE-3, and MW-4, using an electronic sounding device, and recorded on the water level / floating product survey form included in Appendix A. The groundwater elevations are summarized in Table 1. Well ESE-4 has been abandoned and is no longer part of the monitoring well network. The February data were used to construct a groundwater contour map (see Figure 2). February water levels ranged from 12.21 feet above mean sea level (MSL) in well ESE-1 to 18.10 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 0.11 ft/ft to the north-northeast between monitoring wells ESE-2 and ESE-1.

## **3 SAMPLING, ANALYSIS, AND MONITORING PROGRAM RESULTS**

Groundwater samples were collected from wells ESE-1 through ESE-3 on February 11, 1999, 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; polychlorinated biphenyls (PCBs) by USEPA Method 8080; 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 purging and sampling log sheets (see Appendix A). Field readings from the first quarter 1999 monitoring event are summarized in Table 1.

For the February 1999 sampling event, glass filtered groundwater samples were collected from the Emeryville Maintenance Facility site and analyzed for BTEX, PCBs, and TEPH as mineral oil. Sample preparation for TEPH analysis also included silica gel clean-up to remove non-petroleum hydrocarbons.

First quarter 1999 and historical analytical data are summarized in Table 2. Certified analytical reports and chain-of-custody records are included in Appendix B. The analytical results are discussed below.



- BTEX was not detected at or above the method reporting limit (MRL) in the filtered samples collected from wells ESE-1 through ESE-3.
- PCBs were not detected at or above the MRL in the filtered samples collected from wells ESE-1 through ESE-3.
- Mineral oil was not detected at or above the MRL in the filtered samples collected from wells ESE-1 through ESE-3.

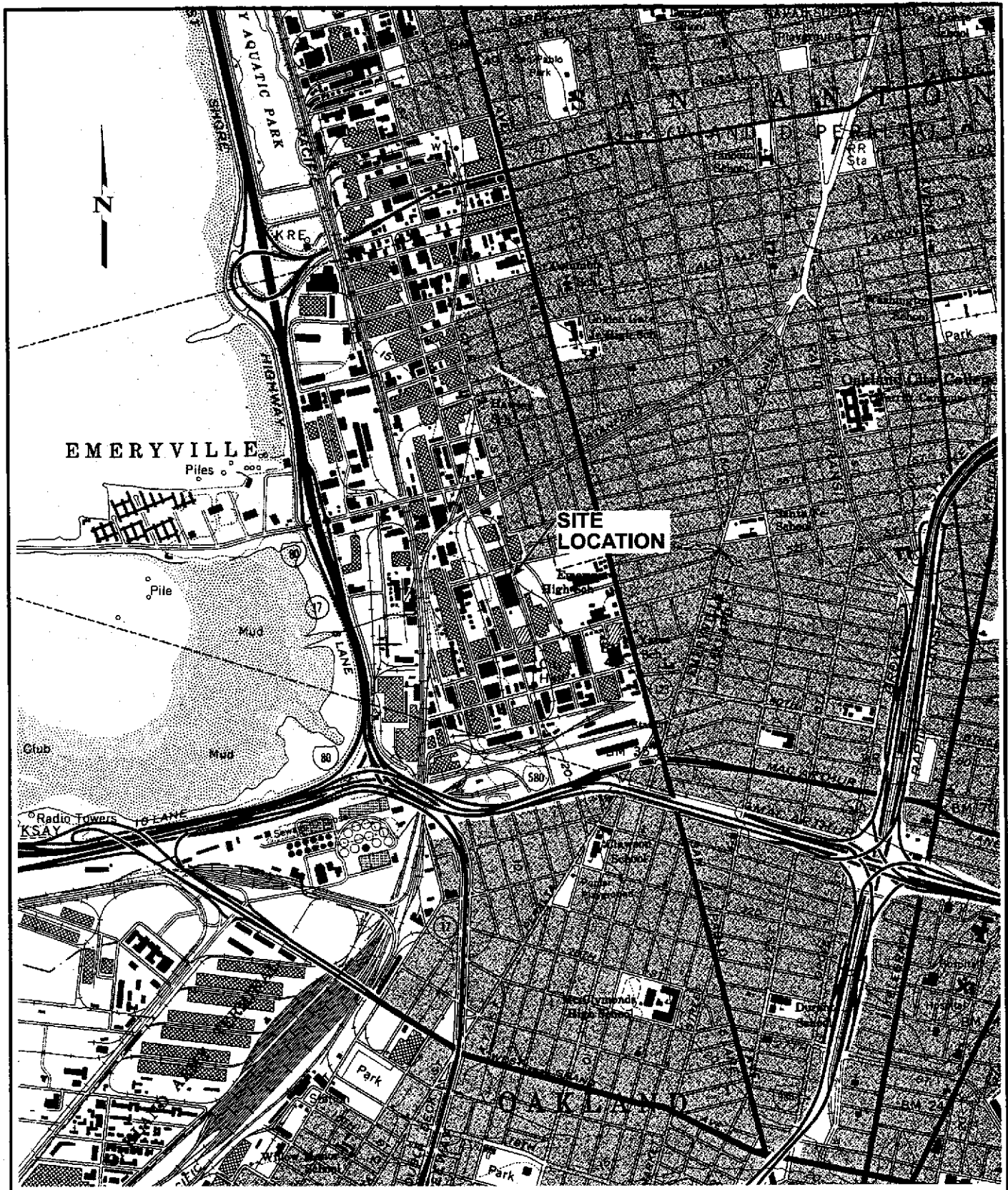
#### 4 FIELD LABORATORY QUALITY CONTROL RESULTS

Analytical data were evaluated for accuracy and precision based on laboratory quality control (QC) sample performance. Field QC was not completed during this monitoring event.

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. The MS results were within the laboratory acceptance limits.

The laboratory QC results indicated that the analytical data are of acceptable quality.

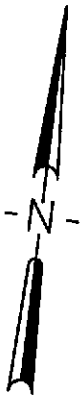


Base map from U.S. Geological Survey 7.5 minute series.  
 Quadrangle: Oakland West, Calif.

0 2000 Feet



Figure 1. Site Location Map of Emeryville Service Center



53RD STREET

ESE-4  
(ABANDONED)

ESE-3  
(13.47)

CHIRON CORPORATION

4525 Hollis St.

ESE-1  
(12.21)

ESE-2  
(15.41)

HOLLIS STREET

0.02

MW-4  
(18.10)

EXPLANATION

- ⊙ GROUNDWATER MONITORING WELL
- (17.49) GROUNDWATER ELEVATION (Ft-MSL)

--- GROUNDWATER ELEVATION CONTOUR (Ft-MSL)

0.11 → APPROXIMATE DIRECTION OF GROUNDWATER FLOW SHOWING GRADIENT (Ft/Ft)

SCALE: 0 40 80 FEET



**Emeryville Maintenance Facility  
Groundwater Contour Map - February 11, 1999**

TECHNICAL AND ECOLOGICAL SERVICES - LWQU

DRN:EMK	DATE : 6-7-99
CHK:F. Flint	SCALE: As Shown
APR:KDC	SHEET Emeryville

FIGURE 2

REV.  
0

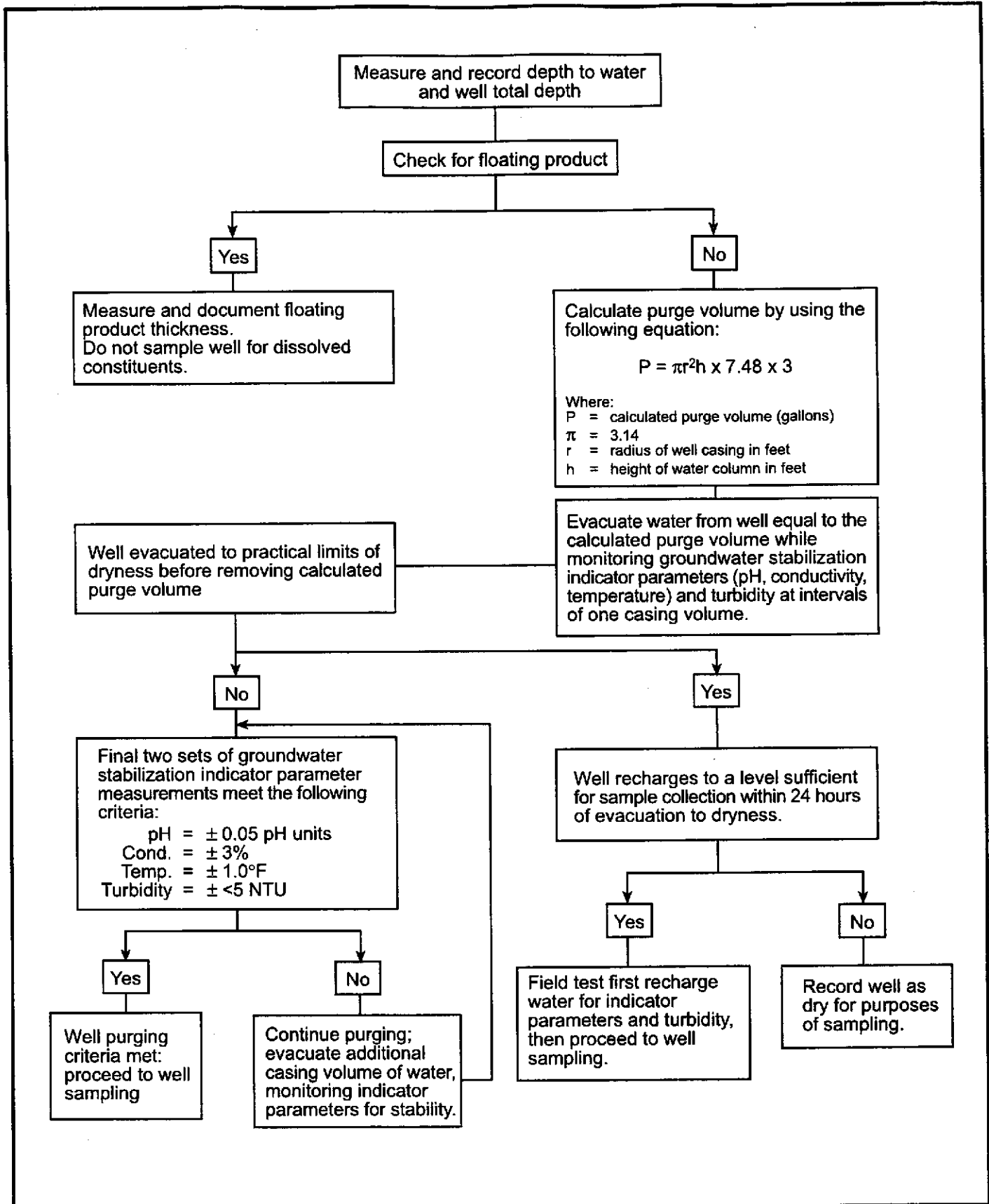


Figure 3. Monitoring Well Purging Protocol



**Table 1**  
**Emeryville Service Center**  
**First Quarter 1999 and Historical Field Measurement Data**

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-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-1	05/16/97	23.66	13.05	10.61	34.2	7.07	69.0	534
ESE-1	08/22/97	23.66	12.60	11.06	34.0	6.32	67.4	597
ESE-1	11/14/97	23.66	12.32	11.34	33.7	7.35	65.9	600
ESE-1	02/13/98	23.66	10.61	13.05	33.7	7.21	61.8	621
ESE-1	05/15/98	23.66	12.64	11.02	33.7	7.19	68.0	598
ESE-1	08/21/98	23.66	12.61	11.05	33.6	7.15	68.2	603
ESE-1	12/01/98	23.66	12.16	11.50	33.2	6.86	66.7	483
ESE-1	02/11/99	23.66	11.45	12.21	33.2	6.80	66.6	567
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

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**Table 1**  
**Emeryville Service Center**  
**First Quarter 1999 and Historical Field Measurement Data**

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-2	02/14/97	27.80	13.80	14.00	34.4	7.02	66.3	578
ESE-2	05/16/97	27.80	14.07	13.73	34.4	7.00	69.9	580
ESE-2	08/22/97	27.80	14.35	13.45	34.4	6.49	66.1	623
ESE-2	11/14/97	27.80	13.80	14.00	34.4	7.23	66.8	649
ESE-2	02/13/98	27.80	11.52	16.28	34.4	7.15	62.4	646
ESE-2	05/15/98	27.80	13.56	14.24	34.4	7.29	68.7	611
ESE-2	08/21/98	27.80	13.63	14.17	34.4	7.21	67.1	603
ESE-2	12/01/98	27.80	13.18	14.62	34.1	6.88	71.8	516
ESE-2	02/11/99	27.80	12.39	15.41	34.1	6.50	67.1	633
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-3	05/16/97	23.91	10.99	12.92	31.0	7.40	69.9	539
ESE-3	08/22/97	23.91	10.65	13.26	31.0	6.86	66.6	563
ESE-3	11/14/97	23.91	10.50	13.41	31.0	7.47	65.8	583
ESE-3	02/13/98	23.91	9.32	14.59	31.0	7.04	63.7	602
ESE-3	05/15/98	23.91	10.72	13.19	31.0	7.42	67.8	593
ESE-3	08/21/98	23.91	10.65	13.26	31.0	6.95	65.8	600
ESE-3	12/01/98	23.91	10.35	13.56	30.8	6.92	65.5	489
ESE-3	02/11/99	23.91	10.44	13.47	30.8	6.80	66.7	564

**Table 1**  
**Emeryville Service Center**  
**First Quarter 1999 and Historical Field Measurement Data**

Sample Designation	Date	Top-of-Casing		Groundwater		Measured Well		pH (units)	Temperature (°F)	Electrical Conductivity (umhos/cm)
		Elevation (ft/MSL) <sup>1</sup>	Depth to Water (feet)	Elevation (ft/MSL)	Depth (feet)	Depth (feet)				
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		
ESE-4	05/16/97	24.33	10.56	13.77	31.6	7.40	69.1	559		
ESE-4	08/22/97 <sup>5</sup>	24.33	NM	NM	NM	NM	NM	NM		
ESE-4	11/14/97	24.33	10.20	14.13	31.5	7.52	65.5	576		
ESE-4	02/13/98 <sup>6</sup>	24.33	NM	NM	NM	NM	NM	NM		
ESE-4	Well Abandoned									
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		
MW-4	05/16/97	28.14	10.78	17.36	14.7	NS	NS	NS		
MW-4	08/22/97	28.14	10.55	17.59	14.7	NS	NS	NS		

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**Table 1**  
**Emeryville Service Center**  
**First Quarter 1999 and Historical Field Measurement Data**

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	11/14/97	28.14	10.15	17.99	14.7	NS	NS	NS
MW-4	02/13/98	28.14	9.75	18.39	14.7	NS	NS	NS
MW-4	05/15/98	28.14	10.29	17.85	14.7	NS	NS	NS
MW-4	08/21/98	28.14	10.65	17.49	14.7	NS	NS	NS
MW-4	12/01/98	28.14	9.86	18.28	14.5	NS	NS	NS
MW-4	02/11/99	28.14	10.04	18.10	14.5	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.  
<sup>6</sup> Unable to locate well. Well area covered with mud and crushed rock from road construction.



Table 2

**Emeryville Service Center  
First Quarter 1999 and Historical Analytical Data**

1 of 4

All results reported in micrograms per liter ( $\mu\text{g/L}$ )

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-1	05/16/97	<0.5	510 <sup>8</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	08/22/97	<0.5	740 <sup>8</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	11/14/97	<0.5	410 <sup>8</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	02/13/98	<0.5	<100 <sup>8</sup>	<0.5	<0.5	<0.5	<0.5
ESE-1	05/15/98	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-1	08/21/98	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-1	12/01/98	<0.50 / <0.54 <sup>A</sup>	180 / <100 <sup>A</sup>	<0.50	<0.50	<0.50	<0.50
ESE-1	02/11/99	<0.50	<100 <sup>B</sup>	<0.50	<0.50	<0.50	<0.50
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

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Table 2

**Emeryville Service Center  
First Quarter 1999 and Historical Analytical Data**

2 of 4

All results reported in micrograms per liter ( $\mu\text{g/L}$ )

Sample Designation	Sampling Date	Polychlorinated					
		Biphenols	TEPH <sup>2</sup>	Benzene	Toluene	Ethylbenzene	Xylenes
ESE-2	05/16/97	<0.5	190 <sup>B</sup>	<0.5	<0.5	<0.5	<0.5
ESE-2	08/22/97	<0.5	<100 <sup>B</sup>	<0.5	<0.5	0.51	<0.5
ESE-2	11/14/97	<0.52	<100 <sup>B</sup>	<0.5	<0.5	<0.5	<0.5
ESE-2	02/13/98	<0.5	<100 <sup>B</sup>	<0.5	<0.5	<0.5	<0.5
ESE-2	05/15/98	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-2	08/21/98	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-2	12/01/98 ✓	<0.50 / <0.54 <sup>A</sup>	<100 / <100 <sup>A</sup>	<0.50	<0.50	<0.50	<0.50
ESE-2	02/11/99	<0.50	<100 <sup>B</sup>	<0.50	<0.50	<0.50	<0.50
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
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-3	05/16/97	<0.5	<110 <sup>B</sup>	<0.5	<0.5	<0.5	<0.5
ESE-3	08/22/97	<0.5	<100 <sup>B</sup>	<0.5	<0.5	<0.5	<0.5
ESE-3	11/14/97	<0.5	<100 <sup>B</sup>	<0.5	<0.5	<0.5	<0.5
ESE-3	02/13/98	<0.5	<100 <sup>B</sup>	<0.5	<0.5	<0.5	<0.5
ESE-3	05/15/98	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-3	08/21/98	<0.5	<500	<0.5	<0.5	<0.5	<0.5
ESE-3	12/01/98 ✓	<0.50 / <0.53 <sup>A</sup>	<100 / <100 <sup>A</sup>	<0.50	<0.50	<0.50	<0.50
ESE-3	02/11/99	<0.50	<100 <sup>B</sup>	<0.50	<0.50	<0.50	<0.50

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Table 2

**Emeryville Service Center  
First Quarter 1999 and Historical Analytical Data**

3 of 4

All results reported in micrograms per liter (µg/L)

Sample Designation	Sampling Date	Polychlorinated					
		Biphenols	TEPH <sup>2</sup>	Benzene	Toluene	Ethylbenzene	Xylenes
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>3</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
ESE-4	05/16/97	<0.5	<110 <sup>8</sup>	<0.5	<0.5	<0.5	<0.5
ESE-4	08/22/97 <sup>6</sup>	NA	NA	NA	NA	NA	NA
ESE-4	11/14/97	<0.5	<100 <sup>8</sup>	<0.5	<0.5	<0.5	<0.5
ESE-4	02/13/98 <sup>9</sup>	NA	NA	NA	NA	NA	NA
ESE-4	Well Abandoned						
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
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

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Table 2

**Emeryville Service Center  
First Quarter 1999 and Historical Analytical Data**

4 of 4

All results reported in micrograms per liter ( $\mu\text{g/L}$ )

Sample Designation	Sampling Date	Polychlorinated					
		Biphenols	TEPH <sup>2</sup>	Benzene	Toluene	Ethylbenzene	Xylenes
Field Blank	02/14/97	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	05/16/97	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	08/22/97	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	11/14/97	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	02/13/98	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	05/15/98	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	08/21/98	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	12/01/98	NA	NA	<0.50	<0.50	<0.50	<0.50
Field Blank	02/11/99	---	---	---	---	---	---

--- Samples not collected.

<sup>1</sup>  $\mu\text{g/L}$  = 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.<sup>8</sup> Quantitation for mineral oil is based on the response factor of diesel.<sup>9</sup> Unable to locate well. Well area covered with mud and crushed rock from road construction.<sup>A</sup> Analyses run on both unfiltered and filtered (silica gel) samples. Results reported as unfiltered / filtered. ✓<sup>B</sup> Analyses run on filtered (silica gel clean-up and glass filtration) samples. ✓

Appendix A  
**WATER LEVEL / FLOATING PRODUCT SURVEY FORM  
AND  
PURGING AND SAMPLING LOG SHEETS**

**FIELD REPORT**  
**WATER LEVEL / FLOATING PRODUCT SURVEY**  
**PG&E TECHNICAL AND ECOLOGICAL SERVICES**

Site Location: *Emeryville S.C.*

Survey Date: *2-11-99*

Sampler: *E.M. Kenzler*

Well ID	Casing Elevation (ft, MSL)	Time of Level	Total Depth (ft)	Depth to Water (ft)	Depth to Floating Product (ft)	Floating Product Thickness (ft)	Dissolved Oxygen (mg/L)	Temp. (°C)	Comments
<i>ESE-2</i>		<i>0948</i>	<i>34.10</i>	<i>12.49</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>No access to ESE-1 at this time</i> <i>departed to get window</i>
<i>MW-4</i>		<i>0953</i>	<i>14.51</i>	<i>10.00</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	
<i>MW-4</i>		<i>1229</i>	<i>14.51</i>	<i>10.04</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	
<i>ESE-2</i>		<i>1231</i>	<i>34.10</i>	<i>12.39</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	
<i>ESE-3</i>		<i>1237</i>	<i>30.84</i>	<i>10.44</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	
<i>ESE-1</i>		<i>1245</i>	<i>33.15</i>	<i>11.45</i>	<i>—</i>	<i>—</i>	<i>—</i>	<i>—</i>	

Comments:

*Fred. - Cell (510) 207 0656*

*E.M. Kenzler*  
Signature

# PG & E PURGING AND SAMPLING LOG

SITE Emerald JOB ID 0524 0E1  
 PURGE DATE 2-11-99 BY GWK  
 SAMPLE DATE 2-11-99 BY GWK

WELL # 55E-2  
 WEATHER Clear

### WATER ELEVATION / VOLUME CALCULATIONS

MEASURING POINT (MP) TOC @ Black Mark  
 DEPTH OF WELL (DTB) 30.6 34.3 FT  
 DEPTH TO WATER (DTW) 13.18 FT  
 TOTAL WATER DEPTH 21.12 FT  
 MEASUREMENT METHOD SOLINST SLOPE INDICATOR

HYDROCARBON ODOUR  YES  NO  
 THICKNESS Sheen

TOC ELEV. = \_\_\_\_\_ FT - DTW \_\_\_\_\_ FT = GW ELEV. \_\_\_\_\_ FT

### PURGE VOLUME CALCULATIONS

21.12 FT WATER \* CASING FACTOR = 3.6 GAL/CASING VOL. \* 4 VOLUMES = 14.4 TOTAL PURGED (GALS)  
 CASING FACTOR FOR 2" DIA = 0.17 GAL / FT  
 (CIRCLE ONE) FOR 3" DIA = 0.38 GAL / FT  
 FOR 4" DIA = 0.66 GAL / FT

### PURGING

TIME		CUMULATIVE DISCHARGE (GAL)	pH	CONDUCTIVITY umho/cm	TURBIDITY	°C TEMP	COMMENTS
START	END						
1306	1310	5	5.8	667	27	18.8	only Sheen - GRAY color
	1312	10	6.3	644	7	19.5	Hydrocarbon odor
	1314	15	6.5	633	4	19.5	Clean water - No odor

METHOD OF DISCHARGE DISPOSAL GROUND BARREL POND (CIRCLE ONE)  
 METHOD OF PURGING HOMELITE BAILER HAND PUMP SUBMERSIBLE WATERRA (CIRCLE ONE)  
 METHOD OF SAMPLING WELL WIZARD TEFLON BAILER HAND PUMP DISPOSABLE BAILER (CIRCLE ONE)  
 METHOD OF CLEANING ALCONOX / DI WATER STEAM CLEANER / DI WATER (CIRCLE ONE)  
 PUMP LINES / BAILER ROPES NEW, CLEANED, OR DEDICATED (CIRCLE ONE)  
 pH METER YSI 3500 CALIBRATED YES NO COND. METER YSI 3500 CALIBRATED YES NO  
 TEMP. CORRECTED YES NO CALIBRATION DATA \_\_\_\_\_ pH 4 = 4.00 COND. 1,000 = 1,058  
 pH 7 = 7.00 COND. 10,000 = \_\_\_\_\_  
 pH 10 = \_\_\_\_\_

### SAMPLES

LAB ANALYSIS PCB'S BTEX TEPH  
 LABORATORY Chromalab  
 SAMPLE TIME 1330  
 REMARKS \_\_\_\_\_

# PG & E PURGING AND SAMPLING LOG

SITE Emeryville JOB ID 00534 DE1  
 PURGE DATE 2-11-99 BY EMK  
 SAMPLE DATE 2-11-99 BY EMK

WELL # ESE-3  
 WEATHER clear

### WATER ELEVATION / VOLUME CALCULATIONS

MEASURING POINT (MP) TOC @ Black Mark HYDROCARBON ODOR YES NO  
 DEPTH OF WELL (DTB) 30.84 FT THICKNESS Slight  
 DEPTH TO WATER (DTW) 10.44 FT  
 TOTAL WATER DEPTH 20.4 FT  
 MEASUREMENT METHOD SOLINST SLOPE INDICATOR

TOC ELEV. = \_\_\_\_\_ FT - DTW \_\_\_\_\_ FT = GW ELEV. \_\_\_\_\_ FT

### PURGE VOLUME CALCULATIONS

20.4 FT WATER \* CASING FACTOR = 3.47 GAL/CASING VOL. \* 3 VOLUMES = 13.9 TOTAL PURGED (GALS)  
 CASING FACTOR FOR 2" DIA = 0.17 GAL / FT  
 (CIRCLE ONE) FOR 3" DIA = 0.38 GAL / FT  
 FOR 4" DIA = 0.66 GAL / FT

### PURGING

TIME		CUMULATIVE DISCHARGE (GAL)	pH	CONDUCTIVITY umho/cm	TURBIDITY	°C TEMP	COMMENTS
START	END						
1401	1402	7	10.8	558	67	19.1	
	1410	10	6.8	564	48	19.2	
	1414	14	6.8	564	33	19.3	cloudy color

METHOD OF DISCHARGE DISPOSAL GROUND BARREL POND (CIRCLE ONE)  
 METHOD OF PURGING HOMELITE BAILER HAND PUMP SUBMERSIBLE WATERRA (CIRCLE ONE)  
 METHOD OF SAMPLING WELL WIZARD TEFLON BAILER HAND PUMP DISPOSABLE BAILER (CIRCLE ONE)  
 METHOD OF CLEANING ALCONOX / DI WATER STEAM CLEANER / DI WATER (CIRCLE ONE)  
 PUMP LINES / BAILER ROPES NEW, CLEANED, OR DEDICATED (CIRCLE ONE)  
 pH METER \_\_\_\_\_ CALIBRATED YES NO COND. METER \_\_\_\_\_ CALIBRATED YES NO  
 TEMP. CORRECTED YES NO CALIBRATION DATA \_\_\_\_\_ pH 4 = \_\_\_\_\_ COND. 1,000 = \_\_\_\_\_  
 see ESE-2 for Cal pH 7 = \_\_\_\_\_ COND. 10,000 = \_\_\_\_\_  
 pH 10 = \_\_\_\_\_

### SAMPLES

LAB ANALYSIS PCB'S DTEX TEPH  
 LABORATORY Microanal  
 SAMPLE TIME 1430  
 REMARKS \_\_\_\_\_



# PG & E PURGING AND SAMPLING LOG

SITE Emeryville JOB ID \_\_\_\_\_  
 PURGE DATE 2-11-99 BY CMK  
 SAMPLE DATE 2-11-99 BY CMK

WELL # ESE-1  
 WEATHER clear

*Pond Sump not operating.  
 1-2 ft water in lined pond.*

**WATER ELEVATION / VOLUME CALCULATIONS**

MEASURING POINT (MP) TOC @ Black Marks HYDROCARBON OOR YES NO  
 DEPTH OF WELL (DTB) 33.15 FT THICKNESS \_\_\_\_\_  
 DEPTH TO WATER (DTW) 11.45 FT  
 TOTAL WATER DEPTH 21.7 FT  
 MEASUREMENT METHOD SOLINST SLOPE INDICATOR \_\_\_\_\_

TOC ELEV = \_\_\_\_\_ FT - DTW \_\_\_\_\_ FT = GW ELEV. \_\_\_\_\_ FT

**PURGE VOLUME CALCULATIONS**

21.7 FT WATER \* CASING FACTOR = 3.7 GAL/CASING VOL. \* 4 VOLUMES = 14.76 TOTAL PURGED (GALS)  
 CASING FACTOR FOR 2" DIA = 0.17 GAL / FT  
 (CIRCLE ONE) FOR 3" DIA = 0.38 GAL / FT  
 FOR 4" DIA = 0.66 GAL / FT

**PURGING**

TIME		CUMULATIVE DISCHARGE (GAL)	pH	CONDUCTIVITY umho/cm	TURBIDITY	°C TEMP	COMMENTS
START	END						
1438	1442	10	6.7	562	637	19.3	Brown
		12.5	6.8	567	567 <sup>240</sup>	19.2	light brown
	1446	15	6.8	567	208	19.2	clear

METHOD OF DISCHARGE DISPOSAL GROUND BARREL POND (CIRCLE ONE)  
 METHOD OF PURGING HOMEITE BAILER HAND PUMP SUBMERSIBLE WATERRA (CIRCLE ONE)  
 METHOD OF SAMPLING WELL WIZARD TEFLON BAILER HAND PUMP DISPOSABLE BAILER (CIRCLE ONE)  
 METHOD OF CLEANING ALCONOX / DI WATER STEAM CLEANER / DI WATER (CIRCLE ONE)  
 PUMP LINES / BAILER ROPES NEW CLEANED, OR DEDICATED (CIRCLE ONE)  
 pH METER \_\_\_\_\_ CALIBRATED YES NO COND. METER \_\_\_\_\_ CALIBRATED YES NO  
 TEMP. CORRECTED YES NO CALIBRATION DATA \_\_\_\_\_ pH 4 = \_\_\_\_\_ COND. 1,000 = \_\_\_\_\_  
*See ESE-2 for Cal data.* pH 7 = \_\_\_\_\_ COND. 10,000 = \_\_\_\_\_  
 pH 10 = \_\_\_\_\_

SAMPLES \_\_\_\_\_  
 LAB ANALYSIS PCB'S WPCX TAP  
 LABORATORY Enviro  
 SAMPLE TIME 15:30  
 REMARKS Pond Sump not operating, pond level 2 ft below well casing top.

Appendix B

**CERTIFIED ANALYTICAL REPORTS AND  
CHAIN-OF-CUSTODY DOCUMENTATION**

# CHROMALAB, INC.

Environmental Services (SDB)

February 26, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.

Project#: 005240E1

Received: February 12, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.  
Method: SW846 Method 8080A Sept 1994

Client Sample ID: ESE-1

Spl#: 228693

Matrix: WATER

Extracted: February 17, 1999

Sampled: February 11, 1999

Run#: 17422

Analyzed: February 23, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D. ✓	0.50	N.D.	104	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
OCOR 1260	N.D.	0.50	N.D.	112	1

*for Rene Boongaling*

Rene Boongaling  
Analyst

*Michael Verona*

Michael Verona  
Laboratory Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

February 19, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.

Project#: 005240E1

Received: February 12, 1999

re: One sample for TEPH with Silica Gel Cleanup analysis.  
Method: EPA 8015M

Client Sample ID: ESE-1

Spl#: 228693

Matrix: WATER

Extracted: February 16, 1999

Sampled: February 11, 1999

Run#:17400

Analyzed: February 17, 1999

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: Silica gel cleanup.

  
Carolyn House  
Analyst

  
Bruce Havlik  
Analyst

# CHROMALAB, INC.

Environmental Services (SDB)

February 18, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.

Project#: 005240E1

Received: February 12, 1999

re: One sample for BTEX analysis.  
Method: SW846 8020A Nov 1990

Client Sample ID: ESE-1

Spl#: 228693

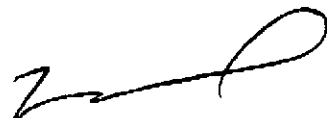
Matrix: WATER


Sampled: February 11, 1999

Run#: 17397

Analyzed: February 16, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE FACTOR (%)	DILUTION FACTOR
BENZENE	N.D. ✓	0.50	N.D.	98	1
TOLUENE	N.D. ✓	0.50	N.D.	101	1
ETHYL BENZENE	N.D. ✓	0.50	N.D.	98	1
XYLENES	N.D. ✓	0.50	N.D.	99	1

  
 Vincent Vancil  
 Analyst

  
 Michael Verona  
 Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

February 26, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.  
Received: February 12, 1999

Project#: 005240E1

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.  
Method: SW846 Method 8080A Sept 1994

Client Sample ID: ESE-2

Spl#: 228694  
Sampled: February 11, 1999

Matrix: WATER  
Run#: 17422

Extracted: February 17, 1999  
Analyzed: February 23, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	104	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

*for Reg Number*

Rene Boongaling  
Analyst

*[Signature]*  
Michael Verona  
Laboratory Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

February 19, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.

Project#: 005240E1

Received: February 12, 1999

re: One sample for TEPH with Silica Gel Cleanup analysis.  
Method: EPA 8015M

Client Sample ID: ESE-2

Spl#: 228694

Matrix: WATER

Extracted: February 16, 1999

Sampled: February 11, 1999

Run#:17400

Analyzed: February 17, 1999

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: Silica gel cleanup.

  
Carolyn House  
Analyst

  
Bruce Havlik  
Analyst

# CHROMALAB, INC.

Environmental Services (SDB)

February 18, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.

Project#: 005240E1

Received: February 12, 1999

re: One sample for BTEX analysis.  
Method: SW846 8020A Nov 1990

Client Sample ID: ESE-2

Spl#: 228694


Matrix: WATER

Sampled: February 11, 1999

Run#:17398

Analyzed: February 16, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	110	1
TOLUENE	N.D.	0.50	N.D.	109	1
ETHYL BENZENE	N.D.	0.50	N.D.	106	1
XYLENES	N.D.	0.50	N.D.	103	1

  
Vincent Vancil  
Analyst

  
Michael Verona  
Operations Manager



# CHROMALAB, INC.

Environmental Services (SDS)

February 26, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.

Project#: 005240E1

Received: February 12, 1999

re: One sample for Polychlorinated Biphenyls (PCBs) analysis.  
Method: SW846 Method 8080A Sept 1994

Client Sample ID: ESE-3

Spl#: 228695

Matrix: WATER

Extracted: February 17, 1999

Sampled: February 11, 1999

Run#: 17422

Analyzed: February 24, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE SPIKE (%)	DILUTION FACTOR
AROCLOR 1016	N.D.	0.50	N.D.	104	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

Note: Surrogate recovery for DECACHLOROBIPHENYL was outside of QA/QC limits due to matrix interference

*for Oley Muehler*

Rene Boongaling  
Analyst

*Michael Verona*

Michael Verona  
Laboratory Operations Manager

# CHROMALAB, INC.

Environmental Services (SDB)

February 19, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.

Project#: 005240E1

Received: February 12, 1999

re: One sample for TEPH with Silica Gel Cleanup analysis.  
Method: EPA 8015M

Client Sample ID: ESE-3

Spl#: 228695

Matrix: WATER  
Run#:17400

Extracted: February 16, 1999  
Analyzed: February 17, 1999

Sampled: February 11, 1999

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: Silica gel cleanup.

  
Carolyn House  
Analyst

  
Bruce Havlik  
Analyst

# CHROMALAB, INC.

Environmental Services (SDB)

February 18, 1999

Submission #: 9902165

P.G. & E. WATER QUAL GP S RAMON

Atten: Fred Flint

Project: EMERYVILLE SC.

Project#: 005240E1

Received: February 12, 1999

re: One sample for BTEX analysis.  
Method: SW846 8020A Nov 1990

Client Sample ID: ESE-3

Spl#: 228695


Matrix: WATER


Sampled: February 11, 1999

Run#:17397

Analyzed: February 16, 1999

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
BENZENE	N.D.	0.50	N.D.	98	1
TOLUENE	N.D.	0.50	N.D.	101	1
ETHYL BENZENE	N.D.	0.50	N.D.	98	1
XYLENES	N.D.	0.50	N.D.	99	1

  
Vincent Vancil  
Analyst

  
Michael Verona  
Operations Manager



# CHAIN OF CUSTODY RECORD

## Pacific Gas & Electric Company

3400 Crown Canyon Rd,  
San Ramon

Ship To: Chromalab

Attention: Sample Control Phone: \_\_\_\_\_

Page \_\_\_\_\_ of \_\_\_\_\_

Job Number: 00524 DE1 Project Name: EMERYVILLE SC. Project Manager: Fred Flint

Samplers: (Signatures) Eric M. Keizer Field Team Leader: Eric Keizer

PCH'S  
 BTEX  
 TSPH as Minn. 0011  
 8880  
 602  
 7570/8015

SAMPLE NUMBER	DATE	TIME	SAMPLE TYPE	SAMPLE INFORMATION	NO. OF CNTRS.				REMARKS
ESE-1	2-11-99	1530	GW		6	X	X	X	10 DAY TAT
ESE-2	2-11-99	1430	↓		6	X	X	X	
ESE-3	2-11-99	1330			6	X	X	X	
									Use Silica Gel Cleanup
									AND GLASS FILTRATION (0.7 MICRON OR LESS)

Relinquished By: (Signature) <u>Eric Keizer</u>	Date/Time: <u>2-11-99 4:00</u>	Received By: (Signature) <u>Heaven Salinas</u>	Date/Time: <u>2/11/99 15:35</u>	Ship Via: <u>Courier</u>
Relinquished By: (Signature) <u>T. Kudo</u>	Date/Time: <u>2-11-99 5:30</u>	Received By: (Signature)	Date/Time:	BL/AIR Number:
Relinquished By: (Signature)	Date/Time:	Received By: (Signature)	Date/Time:	Date: