

**Pacific Gas and Electric Company**

February 9, 2001

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Subject: Remedial Action Report for PG&E's Emeryville Materials Facility, 4525 Hollis St.,  
Emeryville

Dear Ms. Hugo:

Your copy of the "Emeryville Materials Facility Aboveground and Underground Storage Tank Report of Remedial Action" is attached. This report documents the implementation of the remedial action plan dated July 1999. The report provides details on the destruction of the nine monitoring wells, the soil and groundwater investigation of two former underground storage tanks (USTs), and the remediation of soils in the vicinity of four former above ground tanks (ASTs).

The nine monitoring wells were abandoned according to California Well Standards under permit from the Alameda County Department of Public Works. Each well was drilled out and grouted to the surface or, where drilling out was impractical, pressure grouted to the surface.

Three soil borings were advanced in the vicinity of the former USTs to allow for collection of soil and ground water samples. While minor amounts of PCBs were detected in one of the soil borings, all groundwater samples were devoid of contamination.

Approximately 530 tons of PCB affected soil and debris was removed from the former AST area. The highest remaining concentration of PCB at the site is 17.2 mg/kg at a depth of 14 ft below grade. The mean concentration of PCBs remaining at the site is 3 mg/kg while the 95% Upper Confidence Limit is 4 mg/kg. These remaining concentrations and depths of PCBs at the site are more than adequate to protect the health of construction, utility and industrial workers as identified in the Risk Based Corrective Action (RBCA) Report.

Please call me at (415) 972-5719 with any questions.

Sincerely,

A handwritten signature in cursive script that reads "Susan Fandel".

Susan Fandel  
Environmental Specialist

Attachment

cc: Barbara Cook- DTSC

**bcc:** Clyde Broussard  
Korbin Creek  
Fred Flint  
Dave Gilbert  
Jesus Luna  
Rudy Promani  
Tom Wilson

# TES

**Emeryville Materials Facility  
Aboveground and Underground  
Storage Tank Report of  
Remedial Action**

Prepared by  
**Technical and Environmental Services**

Prepared for  
**Environmental Field Services**

January 2001

Report No.: 402.331-00.240

**Pacific Gas and Electric Company  
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Prepared by:



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## INTRODUCTION

In July 1999, the Pacific Gas and Electric Company ("the Company") proposed a remedial action plan (PG&E 1999) for the Company's Emeryville Materials Facility (EMF) to assess the underground storage tanks (USTs) located at 4227 Hollis Street and 4525 Hollis Street, abandon nine existing monitoring wells, and remediate by excavating soil beneath the former aboveground storage tank (AST) farm located along 53rd Street.

All USTs have been previously removed, followed by confirmation sampling. At both locations, overexcavation and resampling occurred based on analytical results. The ASTs were removed and several subsurface investigations were conducted consisting of soil borings, the installation of monitoring wells and a risk based corrective action (RBCA) analysis.

### **Purpose**

The purpose of this report is to document the clean-up efforts undertaken at the AST area, the procedures used to achieve well abandonment and to present the results of the UST groundwater investigation. This report includes summaries of all analytical data and an update of the risk-based analysis. This report includes a description of field procedures, quality assurance/quality control, and waste disposal. A detailed summary of past site activities is also presented.

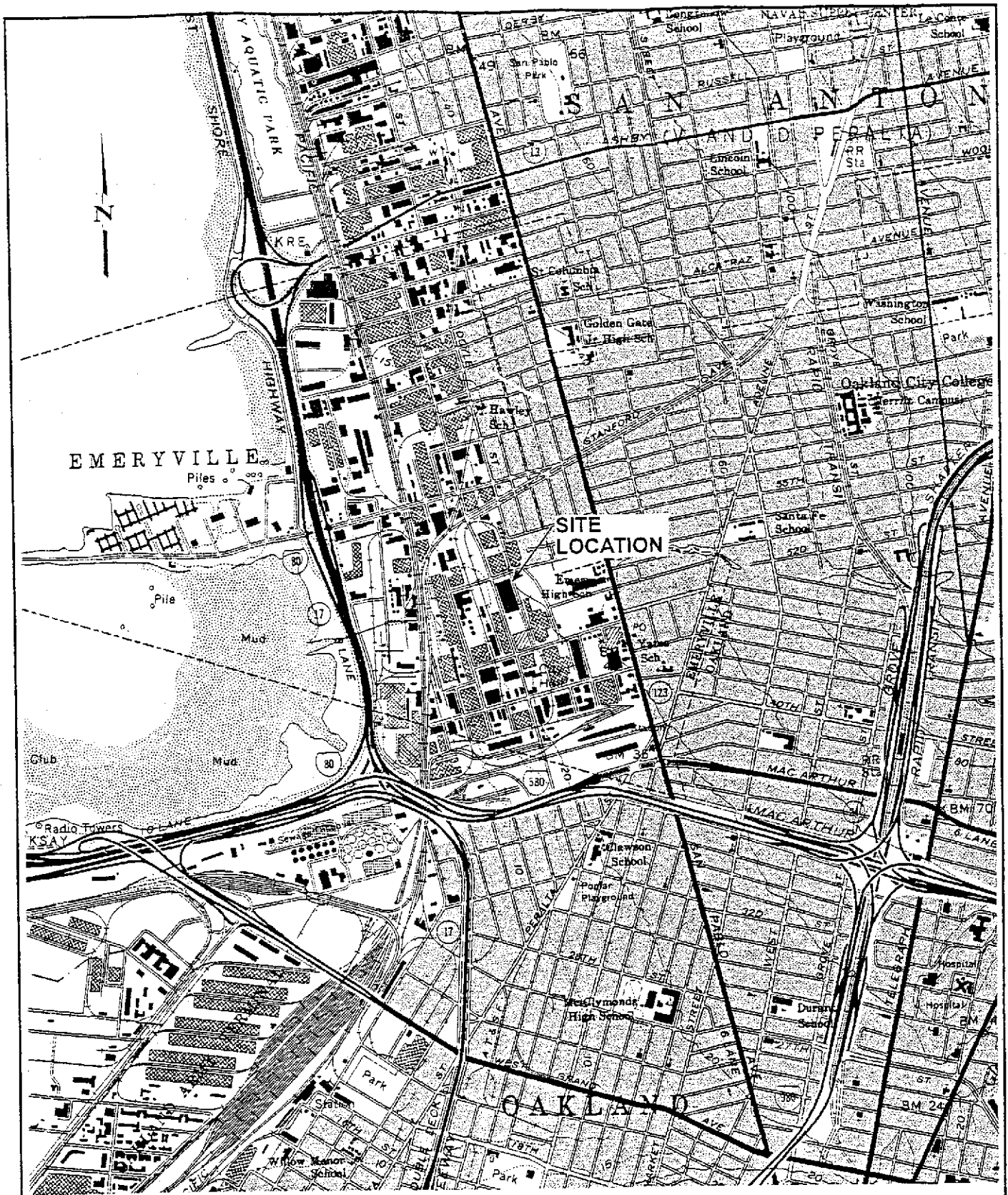
### **Site Description**

The EMF is located at 4525 Hollis Street in the city of Emeryville, and extends from an area south of 45th Street to 53rd Street (Figure 1). The property occupies approximately 16.5 acres in an area zoned for industrial use.

The site was constructed on artificial fill ranging from three to eight feet above the natural ground surface at an elevation of approximately 25 feet above mean sea level (USGS 1980). The nearest drainage is Temescal Creek, which flows through an underground culvert toward San Francisco Bay. Figure 2 is a layout of the EMF showing the approximate location of the former UST and AST areas. Also shown in Figure 2 are a series of six monitoring wells installed at the facility in 1984 (E&E 1984) and three installed in 1994 near the AST area (PG&E 1994).

Since construction in the early 1920s, the EMF has been a warehouse, repair shop, and storage yard. Transformers, capacitors, oil circuit breakers and other miscellaneous equipment used in the electrical





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

0 2000 Feet

Figure 1. Topographic map of Emeryville Materials Facility.

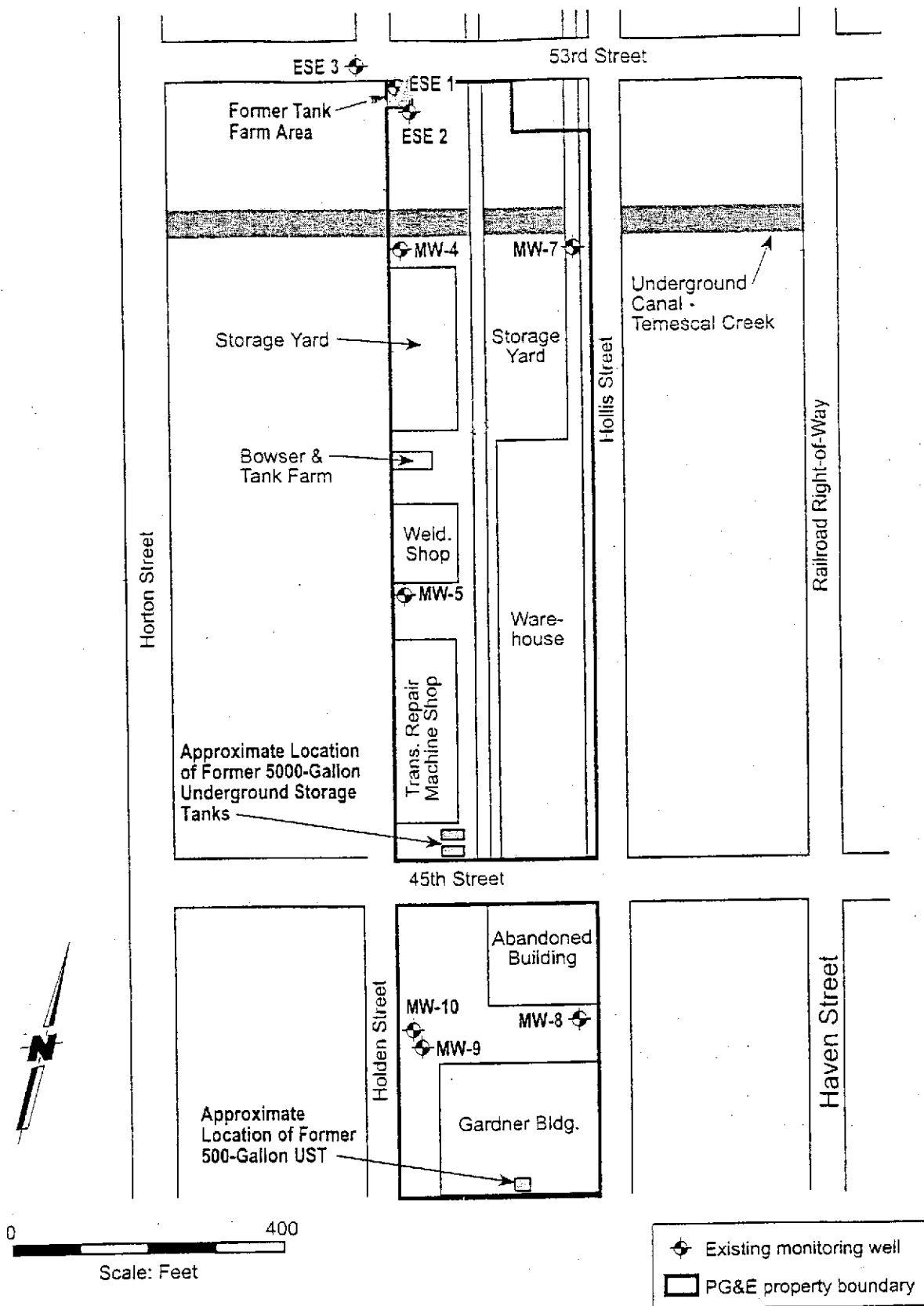


Figure 2. Layout of Emeryville Materials Facility showing former tank farm area, underground storage tank sites and existing monitoring well locations.

transmission and distribution system are brought to the facility for repair and storage.

### **Geology and Hydrogeology**

The facility is located in a lowland area along the eastern shore of San Francisco Bay, a flooded river valley in a northwest trending structural trough formed in Franciscan bedrock. Tectonic forces in place during the Pleistocene epoch (approximately 2 million years ago) created the San Francisco Bay depression, as the Oakland/Berkeley hills were undergoing uplift. Erosion and deposition of material from the Oakland/Berkeley hills created coalescing alluvial fan deposits along the east shore of the bay.

Alluvial deposits along the East Bay margin include:

- Pleistocene alluvial fan deposits consisting of silty and sandy clays with gravelly lenses which grade laterally into margin sediments (Alameda Formation).
- Upper Pleistocene Merrit Sand consisting of fine grained lenticular sands and silty sands that occur irregularly and vary in thickness from a few inches to 65 feet.
- Late Pleistocene to Holocene alluvial deposits consisting of interbedded clayey gravels, sand and silty clays, and sand-silt-clay mixtures that grade laterally into Merrit Sand (Temescal Formation).
- Holocene stream deposits.

Previous investigations indicate that the facility is underlain by approximately 3 to 8 feet of fill (PG&E 1994a). This fill is underlain by Pleistocene alluvial fan deposits consisting of thick sequences of silty and sandy clay with thinly interbedded and discontinuous gravel lenses. Shallow groundwater occurs at an elevation of about 6 to 8 feet above sea level, 12.5 to 14.5 feet below ground surface (ft bgs). Groundwater flow-direction is generally westerly toward the bay. Previously issued reports are listed in Appendix A.

## Section 2

### UNDERGROUND STORAGE TANK HISTORY

In October 1991, one 500-gallon underground storage tank (UST) was removed at 4227 Hollis Street at the EMF. The tank was probably used to store kerosene. Two 5,000-gallon, steel, single-wall tanks, used for storing non-PCB mineral oil were located near Hollis Street (Figure 3). Excavation of these tanks, which were decommissioned in 1986, occurred on December 22, 1993. The former tank sites were filled following an excavation audit, and capped with concrete. Locations of each tank are shown in Figure 3.

#### **500-Gallon UST**

The Company acquired the property in 1955 and, with the purchase, an undocumented 500-gallon UST presumed to have contained kerosene. PG&E never used the UST and removed the tank once discovered. Following excavation of the single 500-gallon UST in October 1991, a soil sample was collected from the west bottom end. The materials of concern included total petroleum hydrocarbons (TPH) as -gasoline, and kerosene; total oil and grease (TOG); polychlorinated biphenyls (PCBs); and metals (cadmium, chromium, lead, nickel, and zinc). Following a limited overexcavation in November 1991, additional soil samples were collected from the bottom and side walls of the excavation. Approximate sample locations are shown in Figure 3.

Table 1 is a summary of the soils analytical data collected near the former 500-gallon UST. The confirmation soil samples of November 1991, indicated no detectable levels of PCB, TPH-gasoline, TPH-kerosene, or TOG. Metals present in the confirmation samples were below threshold limit concentrations and are considered representative of background concentrations.

#### **Two 5,000-Gallon USTs**

Removal of the two, 5,000-gallon USTs occurred on December 22, 1993, and four soil samples were collected from the ends of the tanks at a depth of ten feet below grade. On December 29, 1993, additional excavation at the site extended the UST vault depth to 12 feet. Soil samples collected after the overexcavation were used to determine the effectiveness of source removal. Figure 3 shows the approximate soil sampling locations for the two investigations.

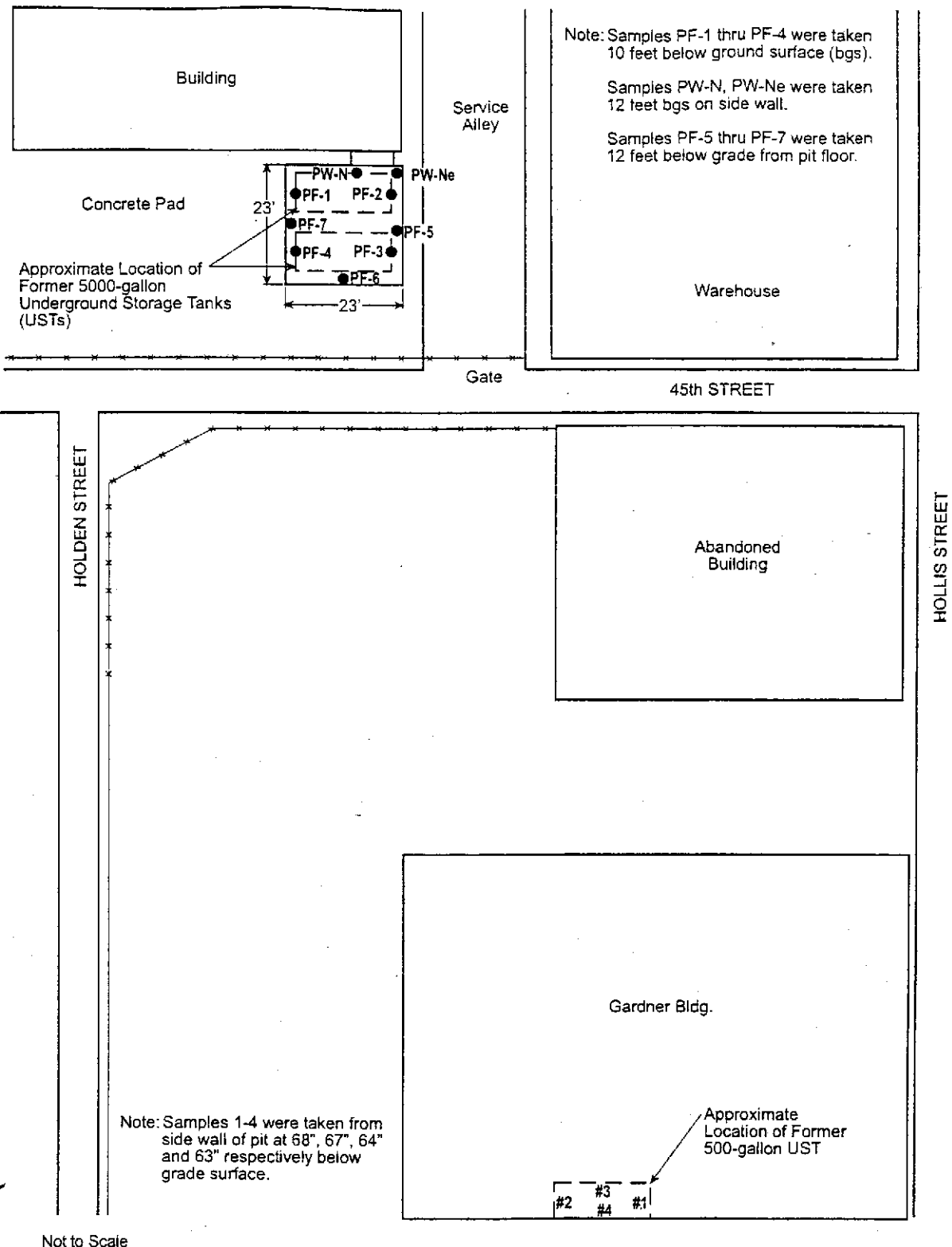


Figure 3. Soil sampling locations at former underground storage tank sites, Emeryville Materials Facility.

**Table 1**  
**Emeryville Materials Facility**  
**Former 500-Gallon Underground Storage Tank Area**  
**Soils Analytical Data**  
(all concentration units are in mg/kg)

ANALYSES	After Excavation on October 24, 1991			After Over-excavation on November 11, 1991			
	Sample Location			Sample Location			
	West End	East End	Composite	West wall	East wall	North wall	South wall
PCB's <sup>a</sup> by EPA 8080	0.1	<0.1	0.2	<0.5	<0.5	<0.5	<0.5
Oil & Grease by EPA 9071	115	<50	<50	<10	<10	<10	<10
TPH as Kerosene <sup>b,c</sup>	6230	<10	<10	<1.0	<1.0	<1.0	<1.0
TPH as Gasoline: EPA 5030	460	<1.0	1.9	<1.0	<1.0	<1.0	<1.0
Metals by EPA 6010							
Zinc	88	115.3	193.5	43.0	32.8	45.7	35.2
Cadmium	1.43	1.0	2.0	3.5	2.94	2.85	2.78
Lead	21.3	6.1	300	2.0	1.37	2.28	1.62
Nickel	<1.5	28.7	39.6	28.0	25.5	25.2	29.2
Chromium	27.5	16.5	26.5	28.5	26.5	27.1	26.8
Semi-Volatile Organics: EPA 8270							
2-methyl naphthalene	0.40	<0.20	<0.20	na	na	na	na
Acenaphthene	<0.04	<0.04	0.30	na	na	na	na
Bis-(2-ethylhexyl phthalate)	0.30	<0.10	<0.10	na	na	na	na
Phenanthrene	<0.10	<0.10	0.40	na	na	na	na
Benzo(a)pyrene	<0.09	<0.09	0.12	na	na	na	na
Benzo(b)fluoranthene	<0.20	<0.20	0.30	na	na	na	na

Notes:

na = not available

&lt; = not detected at or above the indicated reporting limit

<sup>a</sup> = Only Aroclor 1260 was detected above the reporting limit<sup>b</sup> = Samples collected on 10/24/91 were analyzed according to Department of Health Extraction Methods<sup>c</sup> = Samples collected on 11/11/91 were analyzed according to EPA Method 3550

Results of soil samples collected after the December 22, 1993 excavation (Table 2) indicate that the site was impacted by TPH-diesel (2,600 mg/kg), oil and grease (2,400 mg/kg), PCBs (1.4 mg/kg), cadmium (2.2 mg/kg) chromium (51 mg/kg), lead (47mg/kg), nickel (110 mg/kg) and zinc (57 mg/kg).

Following the overexcavation of December 29, 1993, remaining soil concentrations were: TPH-diesel (300 mg/kg), oil and grease (310 mg/kg), PCBs (0.086 mg/kg), cadmium (1.6 mg/kg), chromium (48 mg/kg), lead (11 mg/kg), nickel (220 mg/kg) and zinc (50 mg/kg). Metals concentrations are well below total threshold limit concentrations and are considered background levels. The analytical results are summarized in Table 2.

**Table 2**  
**Emeryville Materials Facility**  
**Two 5000-Gallon Underground Storage Tank Site**  
**Soil Analytical Data**  
(all concentration units are in mg/kg)

After Excavation on December 22, 1993					After Over-Excavation on December 29, 1993				
ANALYSES	Sample Number				Sample Number				
	PF-1	PF-2	PF-3	PF-4	PF-5	PF-6	PF-7	PW-n	PW-ne
Benzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Toluene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Xylene	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
TPH as Gasoline	<0.50	0.97	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
TPH as Diesel	< 10	2,600	< 10	< 10	36	< 10	41	300	210
TPH as Motor Oil & Grease	< 10	< 50	< 10	10	< 10	< 10	< 10	< 10	< 10
	< 50	2,400	< 50	< 50	< 50	< 50	80	310	90
(EPA 8270) <sup>a</sup>	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70	<0.70
(EPA 8010) <sup>b</sup>	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
(EPA 8080) PCBs <sup>c</sup>	<0.033	1.4	0.23	0.17	<0.033	<0.033	<0.033	0.086	0.036
<u>Five Metals:</u>									
Cadmium	1.8	2.2	1.7	2	1.4	1.6	0.99	1.5	1.4
Chromium	51	44	41	51	48	39	30	45	47
Lead	< 10	47	< 10	< 10	11	< 10	< 10	< 10	< 10
Nickel	73	110	61	61	110	80	83	210	220
Zinc	46	57	40	43	42	47	32	47	50

Note:

< = not detected at or above the indicated reporting limit

<sup>a</sup> = This analysis is for Semi-Volatile Organic compounds

<sup>b</sup> = This analysis is for Halogenated Volatile Organic compounds

<sup>c</sup> = Only Aroclor 1260 was detected above the reporting limit



## Section 3

### ABOVEGROUND STORAGE TANK HISTORY

An above ground tank farm used for the storage of mineral oil was located along the western edge of the property adjacent to 53rd Street. This corner of the property contained a lowered 4 foot concrete pad (50' x 50'), that supported four aboveground storage tanks (ASTs) and an oil transfer pump. Three of the tanks had a capacity of 10,000 gallons each, while the fourth had a capacity of 11,000 gallons. These tanks were removed between March and September 1993, and the site remained inactive under an impermeable plastic cover installed in 1995.

Three subsurface investigations, two soil and one groundwater, have been conducted at the site as well as quarterly groundwater monitoring and a RBCA analysis. Results of the three soil investigations conducted on the site between 1993 and 1996 are summarized in Table 3.

#### October 1993 Soil Investigation

A preliminary soil investigation was performed in October 1993 to determine the presence of mineral oil in subsurface soils beneath the ASTs (PG&E 1994a). During this soil investigation nine soil borings were installed within the AST area (B1, B2, B4, B7, B9, B10, B12, B14 and B16) (Figure 4).

Results of the preliminary investigation indicated that:

1. Shallow soils beneath the site consist of sand, clayey sand, silt, and clay.
2. Groundwater was not encountered to a depth of 9 feet.
3. PCBs, characterized as Aroclor 1260, were present at concentrations ranging from non-detection (<1 mg/kg) to 385 mg/kg.
4. Total extractable petroleum hydrocarbons (TEPH) was present at concentrations ranging from 640 mg/kg to 16,000 mg/kg.

#### March 1994 Groundwater Investigation

The second investigation assessed the impact to groundwater by mineral oil (PG&E 1994b). The groundwater investigation consisted of the installation of four monitoring wells to the first water bearing zone (ESE 1-4) (Figure 4). This groundwater investigation determined:

1. The site is underlain by silt and clay with small lenses of gravel to depths of 18 to 20 feet. Beneath the silt and clay is gravel ranging in thickness from 10 to 15 feet to depths of 35 feet below ground level (ft bgs).
2. Groundwater beneath the site exists under confining conditions at depths from 10 to 11.8 ft bgs.

Table 3

**Emeryville Materials Facility - Former Aboveground Storage Tanks**  
**Summary of Results - 1993-1996**  
**Soil Analytical Data**

Boring Designation	Sampling Date	Approximate Sample		Benzene (ug/kg)	Toluene (ug/kg)	Ethyl-Benzene (ug/kg)	Total Xylenes (ug/kg)	TPH-MinO (mg/kg)	Polychlorinated Biphenyls - Aroclor <sup>a</sup>						
		Depth (ft bgs)	Elevation (feet)						1016 (mg/kg)	1221 (mg/kg)	1232 (mg/kg)	1242 (mg/kg)	1248 (mg/kg)	1254 (mg/kg)	1260 (mg/kg)
B1	10/06/93	0-1.5	23.7-22.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	38
B1	10/06/93	1.5-3.0	22.2-20.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	<1
B1	10/06/93	3.0-4.5	20.7-19.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	385
B1	10/06/93	4.5-6.0	19.2-17.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	350
B1	10/06/93	6.0-7.5	17.7-16.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	295
B1	10/06/93	7.5-9.0	16.2-14.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	2
B2	10/06/93	1.0-2.0	22.7-21.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	4
B2	10/06/93	2.0-3.0	21.7-20.0	---	---	---	---	---	<1	<1	<1	<1	<1	<1	<1
B2	10/06/93	4.0-6.0	19.7-17.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	<1
B2	10/06/93	6.0-6.5	17.7-17.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	19
B4	10/06/93	0-1.5	23.7-22.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	<1
B4	10/06/93	1.5-3.0	22.2-20.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	<1
B4	10/06/93	3.0-4.5	20.7-19.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	<1
B4	10/06/93	4.5-6.0	19.2-17.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	<1
B4	10/06/93	6.0-7.5	17.7-16.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	11
B4	10/06/93	7.5-9.0	16.2-14.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	8
B7	10/06/93	1.5-3.0	22.2-20.7	---	---	---	---	1950	<1	<1	<1	<1	<1	<1	<1
B7	10/06/93	4.5-6.0	19.2-17.7	---	---	---	---	640	<1	<1	<1	<1	<1	<1	<1
B7	10/06/93	7.5-9.0	16.2-14.7	---	---	---	---	7700	<1	<1	<1	<1	<1	<1	<1
B9	10/06/93	0-1.5	23.7-22.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	2
B9	10/06/93	1.5-3.0	22.2-20.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	1
B9	10/06/93	3.0-4.5	20.7-19.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	2
B9	10/06/93	4.5-6.0	19.2-17.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	4
B9	10/06/93	6.0-7.5	17.7-16.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	93
B9	10/06/93	7.5-9.0	16.2-14.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	13
B10	10/06/93	1.5-3.0	22.2-20.7	---	---	---	---	5200	<1	<1	<1	<1	<1	<1	<1
B10	10/06/93	4.5-6.0	19.2-17.7	---	---	---	---	10000	<1	<1	<1	<1	<1	<1	<1
B10	10/06/93	7.5-9.0	16.2-14.7	---	---	---	---	1600	<1	<1	<1	<1	<1	<1	<1

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3-2

Table 3

**Emeryville Materials Facility - Former Aboveground Storage Tanks**  
**Summary of Results - 1993-1996**  
**Soil Analytical Data**

Boring Designation	Sampling Date	Approximate Sample		Benzene (ug/kg)	Toluene (ug/kg)	Ethyl-Benzene (ug/kg)	Total Xylenes (ug/kg)	TPH-MinO (mg/kg)	Polychlorinated Biphenyls - Aroclor <sup>a</sup>						
		Depth (ft bgs)	Elevation (feet)						1016 (mg/kg)	1221 (mg/kg)	1232 (mg/kg)	1242 (mg/kg)	1248 (mg/kg)	1254 (mg/kg)	1260 (mg/kg)
B12	10/06/93	1.5-3.0	22.2-20.7	---	---	---	---	11000	<1	<1	<1	<1	<1	<1	<1
B12	10/06/93	4.5-6.0	19.2-17.7	---	---	---	---	8400	<1	<1	<1	<1	<1	<1	<1
B12	10/06/93	7.5-9.0	16.2-14.7	---	---	---	---	16000	<1	<1	<1	<1	<1	<1	<1
B14	10/06/93	2.5-3.0	21.2-20.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	<1
B14	10/06/93	3.0-4.5	20.7-19.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	5
B14	10/06/93	4.5-6.0	19.2-17.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	15
B14	10/06/93	6.0-7.5	17.7-16.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	12
B14	10/06/93	7.5-9.0	16.2-14.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	16
B16	10/06/93	0-1.5	23.7-22.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	185
B16	10/06/93	1.5-3.0	22.2-20.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	10
B16	10/06/93	3.0-4.5	20.7-19.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	32
B16	10/06/93	4.5-6.0	19.2-17.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	0.5
B16	10/06/93	6.0-7.5	17.7-16.2	---	---	---	---	---	<1	<1	<1	<1	<1	<1	18
B16	10/06/93	7.5-9.0	16.2-14.7	---	---	---	---	---	<1	<1	<1	<1	<1	<1	9
ESE-1	03/22/94	5	18.66	6	29	<3	21	270	<1	<1	<1	<1	<1	<1	<1
ESE-1	03/22/94	10	13.66	10	29	3	25	1800	<1	<1	<1	<1	<1	<1	<1
ESE-1	03/22/94	16	8.66	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-1	03/22/94	19	3.66	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-2	03/22/94	5	22.8	<3	<3	<3	<3	8	<1	<1	<1	<1	<1	<1	<1
ESE-2	03/22/94	9	18.8	9	28	3	21	2100	<1	<1	<1	<1	<1	<1	<1
ESE-2	03/22/94	10	17.8	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-2	03/22/94	15	12.8	<3	<3	<3	<3	1900	<1	<1	<1	<1	<1	<1	<1
ESE-3	03/22/94	5	18.91	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-3	03/22/94	10	13.91	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-3	03/22/94	13	10.91	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-3	03/22/94	19	4.91	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-4	03/22/94	5	19.33	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-4	03/22/94	10	14.33	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1
ESE-4	03/22/94	15	9.33	<3	<3	<3	<3	<5	<1	<1	<1	<1	<1	<1	<1

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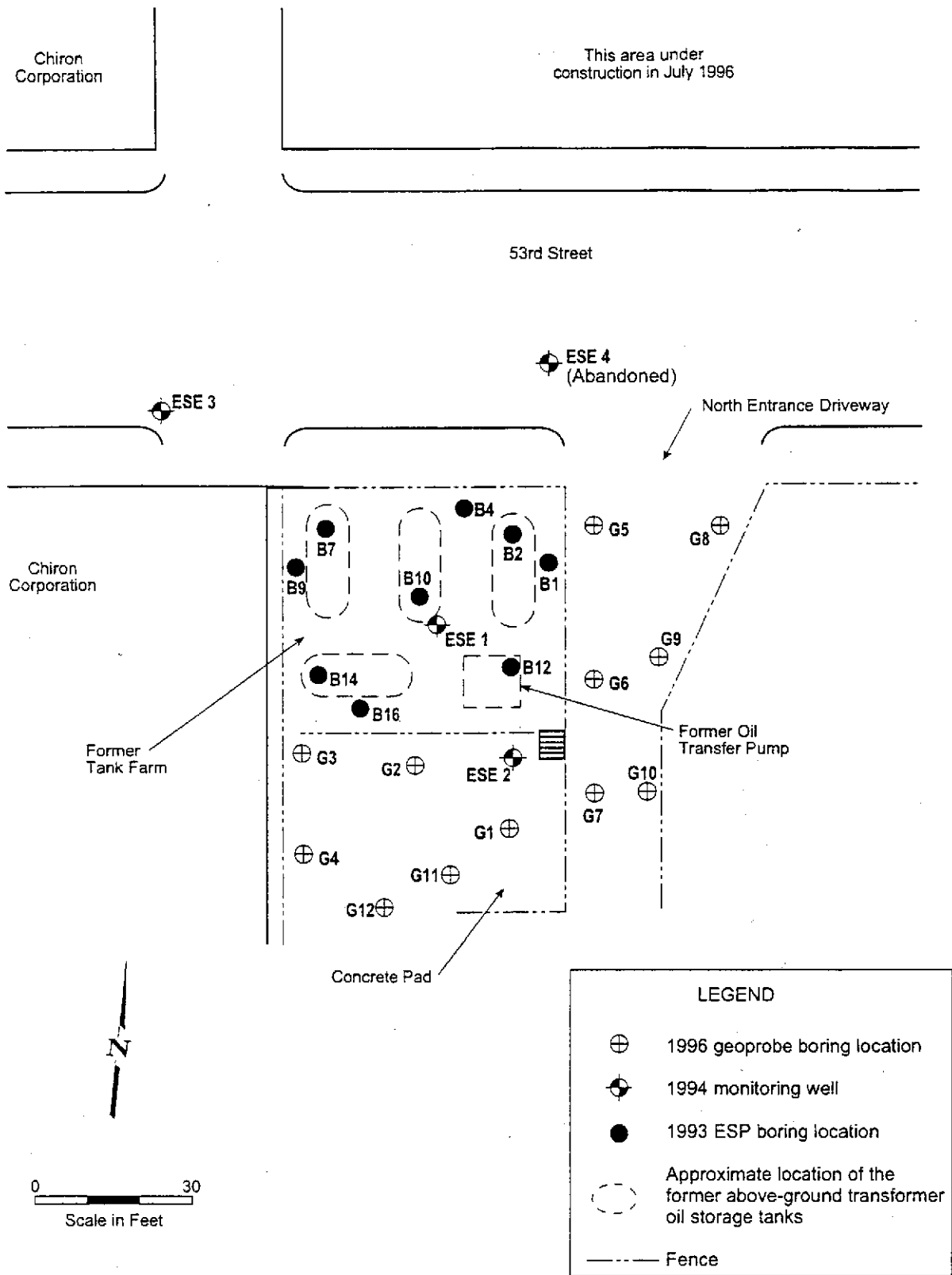


Figure 4. Site map showing test boring and monitoring well locations, Emeryville Materials Facility.

3. Groundwater beneath the site generally flows north with a gradient of 0.04 ft/ft. In the vicinity of the tank farm, groundwater flows west with a gradient of 0.02 ft/ft.
4. PCBs were not reported in soil or groundwater samples.
5. TEPH as mineral oil was present in soil from borings ESE-1 and ESE-2 at concentrations up to 2,100 mg/kg and in groundwater in wells ESE-1 and ESE-2 up to a concentration of 340 µg/l.
6. Volatile organic compounds as benzene, toluene, ethylbenzene and xylenes (BTEX) were present in soil borings ESE-1 and ESE-2. The highest concentrations were present in soils obtained from ESE-1 from a depth of 10 feet, which contained benzene (10 µg/kg), toluene (29 µg/kg), ethylbenzene (3 µg/kg), and xylenes (25 µg/kg). Groundwater from well ESE-2 contained benzene (0.8 µg/l), toluene (1.5 µg/l) and xylenes (2.7 µg/l).

### **October 1996 Soil Investigation**

An additional investigation to determine the horizontal extent of soils impacted by past transformer operations was performed in October 1996. Twelve borings (G1-G12) were advanced around the former AST area, as shown in Figure 4. Six of the borings were advanced on a concrete pad south of the former AST, and six were advanced in the facility's north entrance driveway east of the former AST. The results of this investigation were:

1. The area of investigation is underlain by a variable thickness of heterogeneous, clayey to gravelly fill ranging from four to nine feet deep, and mixtures of alluvial silt, sand, and gravel soils.
2. Concentrations of mineral oil was found present in subsurface soils up to 2000 mg/kg. The presence of detectable mineral oil generally coincided with soils which exhibited oily product odor, discolored soils, or both.
3. BTEX was not detected in any of the tested samples, and TEPH-Mineral Oil was present at seven locations at concentrations of up to 13,000 mg/kg. PCB Aroclor 1260 was detected at two locations in concentrations of 0.13 to 0.26 mg/kg, and no PCBs were detected in any other samples.
4. The highest concentrations of TEPH were in the southeastern quadrant of the former AST, near the former oil transfer pump.

### **Groundwater Monitoring Program**

Quarterly sampling commenced at the former AST site on March 18, 1994. Table 4 is a summary of quarterly groundwater data collected through August 16, 2000. Since November 1997, no petroleum compounds or PCBs have been present above the detection limit in any of the wells. TEPH as mineral oil was present in well ESE-1 from March 1994 through November 1997, with the highest concentration occurring in February 1997 at 1,600 µg/l. TEPH as mineral oil was present intermittently in well ESE-2

Table 4

**Emeryville Service Center  
Third Quarter 2000 and Historical Analytical Data**

Sample Designation	Sampling Date	PCBs <sup>10</sup> (µg/L) <sup>1</sup>	TEPH <sup>2</sup> as Motor Oil (µg/L)	MTBE <sup>11</sup> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
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>B</sup>	---	<0.5	<0.5	<0.5	<0.5
ESE-1	11/14/97	<0.5	410 <sup>B</sup>	---	<0.5	<0.5	<0.5	<0.5
ESE-1	02/13/98	<0.5	<100 <sup>B</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-1	05/12/99	<1	<500 <sup>B</sup>	<5	<0.50	<0.50	<0.50	<0.50
ESE-1	11/24/99	<0.5	<100	<5.0	<0.50	<0.50	<0.50	<0.50
ESE-1	02/15/00	<0.50	<100 <sup>B</sup>	<5.0	<0.50	<0.50	<0.50	<0.50
ESE-1	05/26/00	<0.50	<100 <sup>B</sup>	<5.0	<0.50	<0.50	<0.50	<0.50
ESE-1	08/16/00	<0.50	<100 <sup>B</sup>	<5.0	<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

Table 4

Emeryville Service Center  
Third Quarter 2000 and Historical Analytical Data

Sample Designation	Sampling Date	PCBs <sup>10</sup> (µg/L) <sup>1</sup>	TEPH <sup>2</sup> as Motor Oil (µg/L)	MTBE <sup>11</sup> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
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
ESE-3	05/12/99	<1	<500 <sup>B</sup>	<5	<0.50	<0.50	<0.50	<0.50
ESE-3	11/29/99	<0.50	<100	<5.0	<0.50	<0.50	<0.50	<0.50
ESE-3	02/15/00	<0.50	<100 <sup>B</sup>	<5.0	<0.50	<0.50	<0.50	<0.50
ESE-3	05/26/00	<0.50	<100 <sup>B</sup>	<5.0	<0.50	<0.50	<0.50	<0.50
ESE-3	08/16/00	<0.50	<100 <sup>B</sup>	<5.0	<0.50	<0.50	<0.50	<0.50
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
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

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Table 4

Emeryville Service Center  
Third Quarter 2000 and Historical Analytical Data

Sample Designation	Sampling Date	PCBs <sup>10</sup> (µg/L) <sup>1</sup>	TEPH <sup>2</sup> as Motor Oil (µg/L)	MTBE <sup>11</sup> (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)
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
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	---	<0.5	<0.5	<0.5	<0.5
Field Blank	02/11/99	---	---	---	---	---	---	---
Field Blank	05/12/99	NA	NA	<5	<0.5	<0.5	<0.5	<0.5
Field Blank	11/29/99	NA	NA	<5.0	<0.5	<0.5	<0.5	<0.5
Field Blank	02/15/00	NA	NA	<5.0	<0.5	<0.5	<0.5	<0.5
Field Blank	05/26/00	NA	NA	NA	<0.5	<0.5	<0.5	<0.5
Field Blank	08/16/00	NA	NA	<5.0	<0.5	<0.5	<0.5	<0.5

--- Samples not collected.

<sup>1</sup> µg/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>10</sup> PCBs = Polychlorinated Biphenols.

<sup>11</sup> MTBE = Methyl Tertiary Butyl Ether.

<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.

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from March 1994 through May 1997, with the highest concentration occurring in February 1997 at 510 µg/l. TEPH as mineral oil was present intermittently in well ESE-4 from March 1995 through February 1997, with the highest concentration occurring in February 1997 at 270 µg/l. On March 28, 1994, benzene (0.8µg/l), toluene (1.5 µg/l), and xylene (2.7 µg/l) were detected in the groundwater from well ESE-2. On March 13, 1995, the PCB concentration in the groundwater sample from well ESE-1 was 1.3 µg/l.

As shown in Figure 5, the groundwater gradient on February 11, 1999, was 0.12 ft/ft to the north-northeast between monitoring wells ESE-2 and ESE-1.

#### **Lateral and Vertical Distribution of TEPH and PCBs in Soils**

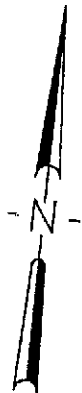
Soils data collected in 1993, 1994, and 1996 were used to construct the lateral and vertical distribution of TEPH as mineral oil and PCBs around the former AST farm.

Figure 6 shows the maximum concentration of TEPH as mineral oil measured at the EMF. The highest concentrations were in the vicinity of the oil transfer pump, boring B12 (16,000 mg), with decreasing concentrations toward the north, east, and south.

The lateral and vertical distribution of PCBs in soils at the site is depicted in Figure 7. Elevated PCB concentrations are in isolated areas surrounding borings B1, B9 and B16. The maximum PCB concentrations at these locations were 385, 93 and 185 mg/kg, respectively. Outside of the AST area, only two borings, G6 and G9, indicate the presence of PCBs at 0.26 and 0.13 mg/kg, respectively.

#### **Risk Based Corrective Action (RBCA) Analysis**

A RBCA was conducted on the available data in 1997. The RBCA evaluation of the soil and groundwater contaminants consisted of two stages: Tier 1 and Tier 2. The Tier 1 risk based screening levels (RBSLs) used were the USEPA Region IX table of Preliminary Remediation Goals (PRGs) (USEPA, 1996a), except as noted. Where applicable, Cal-EPA modified PRGs were used. PRGs are available for exposure by resident or commercial receptors to chemicals in soil, and for domestic use of groundwater. For soil PRGs, potential pathways include incidental ingestion, dermal contact, and inhalation of dusts (for nonvolatile chemicals) or vapors (for volatile chemicals).



53RD STREET

ESE-4  
(ABANDONED)

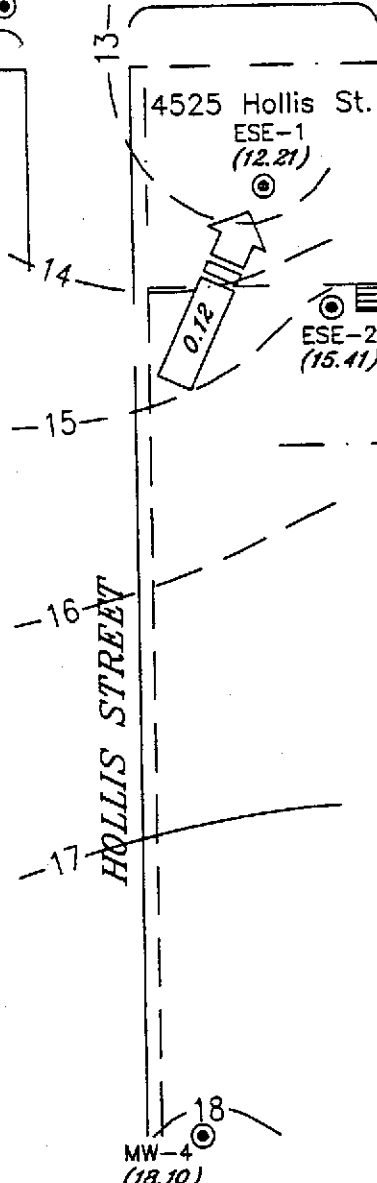
ESE-3  
(13.47)

CHIRON CORPORATION

4525 Hollis St.

ESE-1  
(12.21)

ESE-2  
(15.41)



EXPLANATION

- ⊙ GROUNDWATER MONITORING WELL
- (15.41) GROUNDWATER ELEVATION (Ft-MSL)
- - - GROUNDWATER ELEVATION CONTOUR (Ft-MSL)
- 0.12 → 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 5

REV.  
0

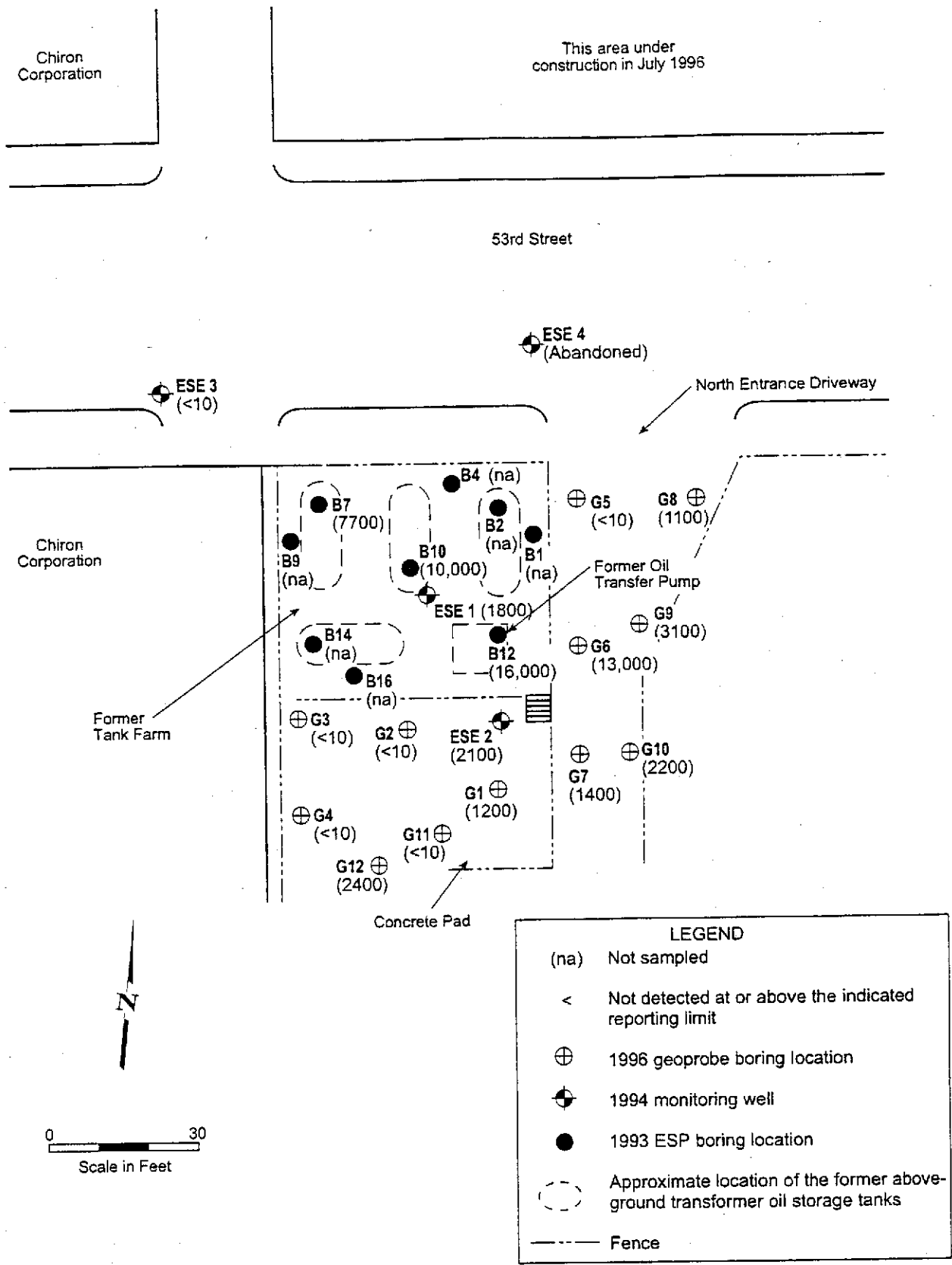
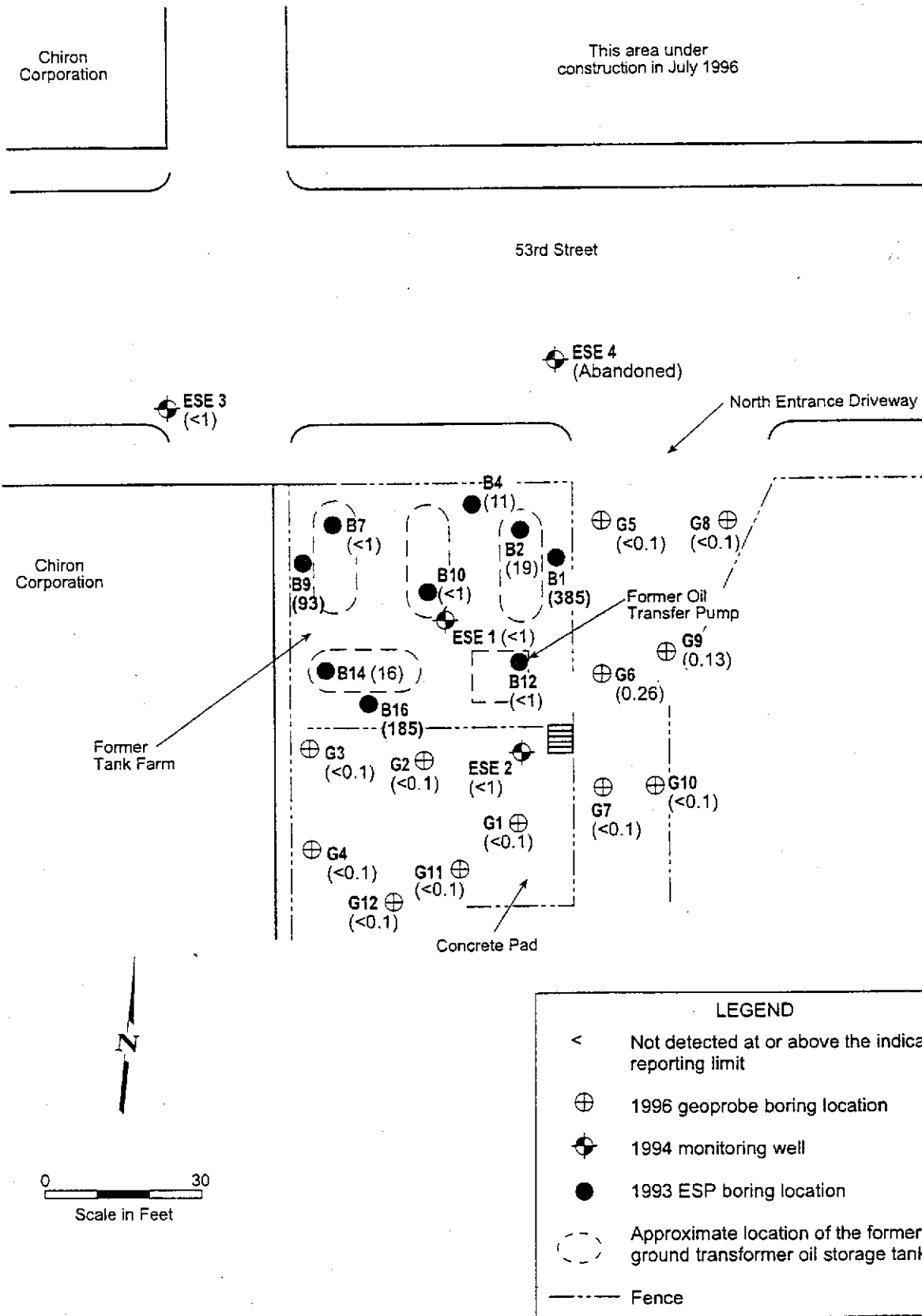


Figure 6. Site map showing test boring and monitoring well locations with the maximum concentration of TEPH as mineral oil (mg/kg), Emeryville Materials Facility.



As Table 5 shows, the maximum historic detected concentrations for all chemicals except PCBs were significantly less than commercial-based PRGs. PRGs are not available for TEPH. The Electric Power Research Institute (EPRI) recently completed a comprehensive field and lab study of mineral oils, which involved chemical testing, fate and transport evaluations, and a preliminary screening-level risk evaluation. EPRI concluded that the hazardous constituents of mineral oil are present at extremely low concentrations (EPRI, 1996). Therefore, the TEPH detected in the soil at the site likely poses no significant health hazards for potentially-exposed receptors.

<b>Table 5</b> Tier 1 Lookup Table for Soil <sup>1</sup> Risk Based Corrective Action Report Former Aboveground Storage Tank Farm Area Emeryville Materials Facility		
Chemical Compound	Maximum detected soil concentration (mg/kg) <sup>2</sup>	Tier 1 Lookup value/EPA Region IX PRG <sup>3</sup> (mg/kg)
Benzene <sup>4</sup>	0.01	4.1
Ethylbenzene	0.003	230
PCB <sup>5</sup>	<b>385</b>	3.4
TEPH	16000	NA
Toluene	0.029	880
Xylenes	0.025	320
NA = Not Available		
mg/kg = milligrams per kilogram		
<b>Concentration in bold is greater than Tier 1 Lookup Values</b>		
<sup>1</sup> Based on ASTM 1995.		
<sup>2</sup> Based on soils data (see Table 3) collected between October 6, 1993 and July 25, 1996 at borings B1 through B16, borings ESE-1 through ESE-4, and borings G1 through G12.		
<sup>3</sup> Industrial Preliminary Remediation goals from USEPA, 1996a.		
<sup>4</sup> Adjusted for California cancer slope factor of 0.1 (mg/kg-day) <sup>-1</sup> (California, 1994) and California commercial target risk of 1 x 10 <sup>-5</sup> .		
<sup>5</sup> Polychlorinated biphenyls; only Aroclor- 1260 was detected. Adjusted for California commercial risk of 1 x 10 <sup>-5</sup> .		

The maximum historic PCB concentration measured in the soil exceeded the recommended PRG. Therefore, a more site-specific assessment was necessary to evaluate possible exposures to PCBs in soil using a Tier 2 RBCA evaluation.

In general, PCBs sorb strongly to soils, have low vapor pressures and thus have low soil volatilization. Also, dust generation at the site was not expected to lead to significant exposures because of moist soil conditions. Therefore, only direct contact with site soils (i.e., ingestion and dermal contact) was quantitatively evaluated in Tier 2.

Because the EMF is in an area zoned for commercial use, three types of workers were considered as receptors in the Tier 2 analysis: construction workers, utility line workers, and industrial workers. For this analysis, it was assumed that future construction and utility workers would come into contact with site soils as deep as 10 feet below grade. For future on-site industrial workers, the assumption was that portions of the site will be unpaved and they might be in direct contact with soils down to 2 feet below grade.

Under Tier 2, the site specific threshold level (SSTL) results for the three receptor types are compared with arithmetic mean PCB concentrations calculated using subsets of the data, in addition to the maximum detected concentrations. As Table 6 shows, the site prior to excavation was acceptable for construction and utility worker receptors. The mean PCB concentration in soils from 0 to 10 ft bgs was only 30 mg/kg, and the SSTLs computed for these two receptors were 88 and 106 mg/kg, respectively, based on the 1997 RBCA.

Without a cap at the site, the mean PCB concentration from 0 to 2 ft bgs (28 mg/kg), would not be acceptable for an industrial worker due to long term exposures.

SSTLs were recently reevaluated based on revised cancer scope factors for PCBs. A letter dated September 18, 2000 from SECOR International Inc. documents the revised values for the appropriate receptors (Appendix B) and are also shown in Table 6. While the site as it existed with the vinyl cap was protective of human health, analysis determined that the site would be suitable for the industrial receptor regardless of depth if the soils in the vicinity of borings B1, B9 and B16 were excavated to a depth of approximately nine feet from the bottom of the pit (4ft bgs). Following the excavation, the area around these borings would be filled with clean base rock to existing site elevation. Under these conditions the mean PCB soil concentration would be <5 mg/kg for depths of 0 to 2 ft bgs, the depth of exposure for the industrial worker as well as at greater depths.

**Table 6**  
**Tier 2 Results for Soil**  
**Risk Based Corrective Action Report**  
**Former Aboveground Storage Tank Farm Area**  
**Emeryville Materials Facility**

Receptor	Site Specific Threshold Level (mg/kg)	Maximum detected PCB soil concentration (mg/kg)	Mean detected PCB soil concentration	
			Full Data Site Undisturbed (ft bgs) <sup>1</sup>	Full Data Site Undisturbed (ft bgs) <sup>2</sup>
Construction Worker	88	385	30	NA
Revised Construction Worker	339			
Utility Worker	106	385	30	NA
Revised Utility Worker	408			
Industrial Worker	1.3	385	NA	28
Revised Industrial Worker	5			

mg/kg = milligrams per kilograms

ft bgs = feet below ground level

NA = not applicable

- 1 All data down to 10 ft bgs is used for the calculation of the mean exposure concentration for the construction and utility worker at the undisturbed site.
- 2 All data down to 2 ft bgs is used for the calculation of the mean exposure concentration for the industrial worker at the undisturbed site.

## METHODS

### Overview

The Company assessed the possible impact to groundwater from materials stored in the two former USTs, abandoned existing monitoring wells present at the EMF site and removed soils in the AST area where PCB concentrations exceeded 25 mg/kg.

### Personnel and Procedures

All work was performed under the supervision of a California Registered Geologist. An experienced geologist logged the soil borings collected subsurface samples, and coordinated delivery of the soil and groundwater samples to a State of California certified analytical laboratory.

### Push Technology Soil Sampling

A track-mounted Ryno Rig using hollow stem augers was used to collect soil samples at three locations (SB1 through SB3) in the vicinity of the two 5,000-gallon USTs (Figure 8). Soil samples for analysis were collected in a split-spoon sampler lined with brass sleeves.

The core was inspected to assess the occurrence of petroleum residues. The following procedures were used during soil sample collection and handling:

1. Before sampling, the sampler and sample liners were thoroughly washed with a trisodium phosphate solution and rinsed with potable water.
2. The samples were retained in the sample liners with the ends covered with Teflon® sheets and plastic end caps.
3. Each sample was labeled using waterproof ink with the job name, job number, boring number, sample depth, and date collected.
4. The soil samples were described on a boring log by the field geologist. This description included soil classification (ASTM D-2487-83), color, moisture content and consistency (in relative terms), and estimated degree of hydrocarbon content (i.e., organic vapor analyzer measurements).



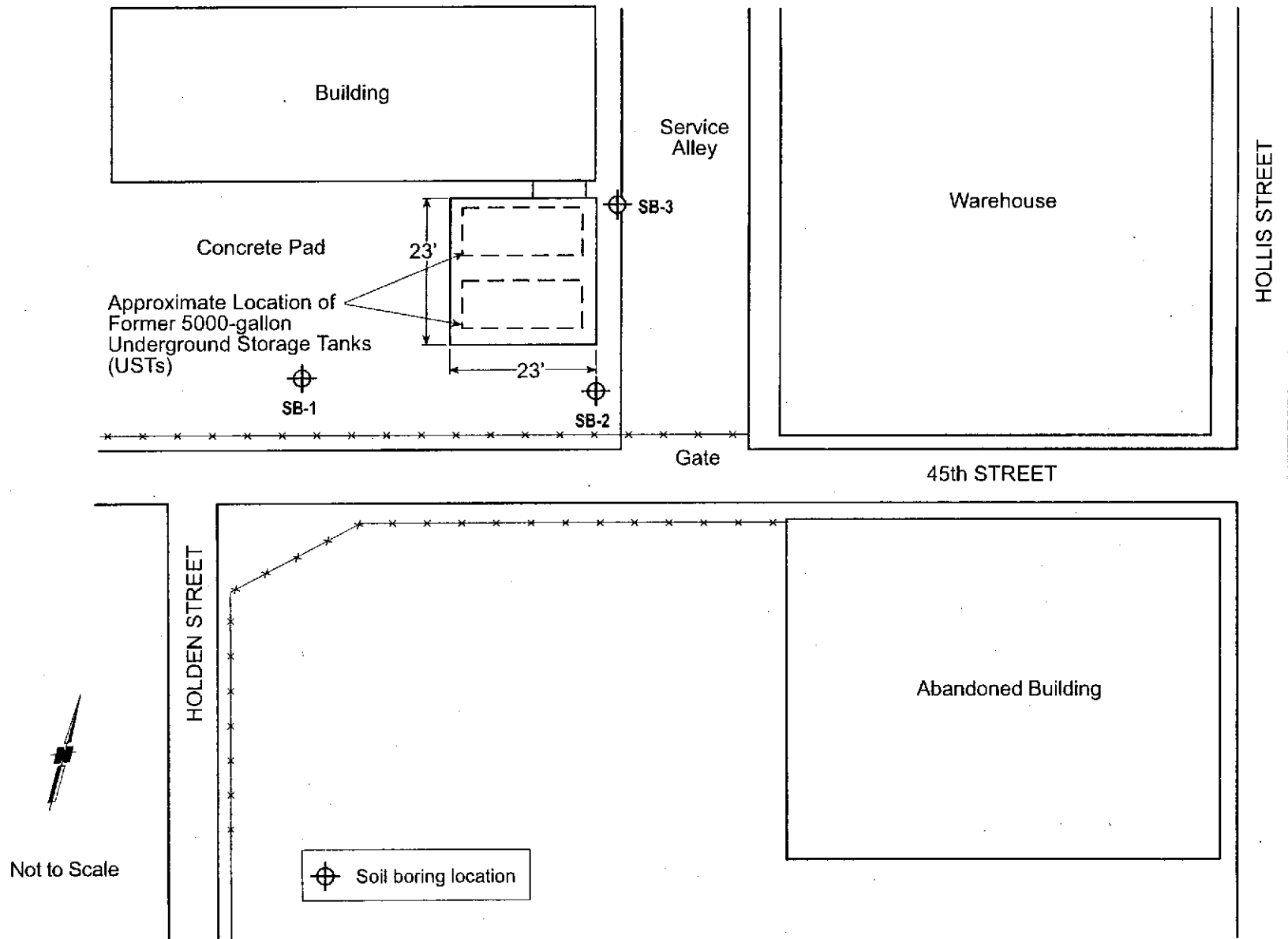


Figure 8. Soil boring locations at former 5000-gallon underground storage tank site, Emeryville Materials Facility.

Immediately after sample collection and labeling, the samples were sealed in a plastic bag and placed in a sturdy ice chest containing either "blue" or dry ice. The temperature in the ice chest was maintained at or below 4 degrees C.

5. When the ice chest was full, a completed chain-of-custody form was inserted and the chest was closed and sealed.
6. The ice chest(s) was transferred to Chromalab, Pleasanton, where samples were selected for chemical analyses. All remaining samples were placed in a freezer for storage for no fewer than 14 days.

Available soil material was described using the Unified Soil Classification System. The description included visible staining and Munsell Soil Chart color. Upon completion of sampling, the hole was backfilled with bentonite.

### **Groundwater Sampling**

Grab groundwater samples were collected by inserting a clean disposable bailer through the hollow stem augers. Groundwater retrieved from the boring was discharged directly into the sample containers.

### **Well Destruction**

The three existing monitoring wells (ESE 1-3) near the AST site, as well as the well network (MW4-10) installed in 1987, were destroyed per DWR Bulletin 74-90. Each well was destroyed either by pressure grouting or by overdrilling and removing all well material within the original borehole, including well casing, filter pack from the well annulus, and the annular seal. The cleared annulus was filled with appropriate sealing material under pressure using a tremie pipe. Well ESE-1 was abandoned by pressure grouting on August 18, 2000. Wells ESE-2, ESE-3 and MW8 were abandoned by over drilling the entire length of the casing on November 13-15, 2000. Wells MW4, MW5, MW7, MW9 and MW10 were pressure grouted on November 14 and 15 2000. Well destruction reports are included in Appendix C.

### **Aboveground Storage Tank Excavation**

Selected soils within the AST area were excavated and disposed of at an appropriate facility authorized to accept PCB-laden waste. The existing plastic liner was removed and selected soils were excavated within the former AST area were removed (Figure 9). Confirmation soil samples were collected to determine that remedial objectives were achieved. Once remedial objectives were met, the area was filled with clean base rock to existing site elevation. Clean fill was placed in 18" lifts and compacted to 95%. The site was then capped with 6" concrete.

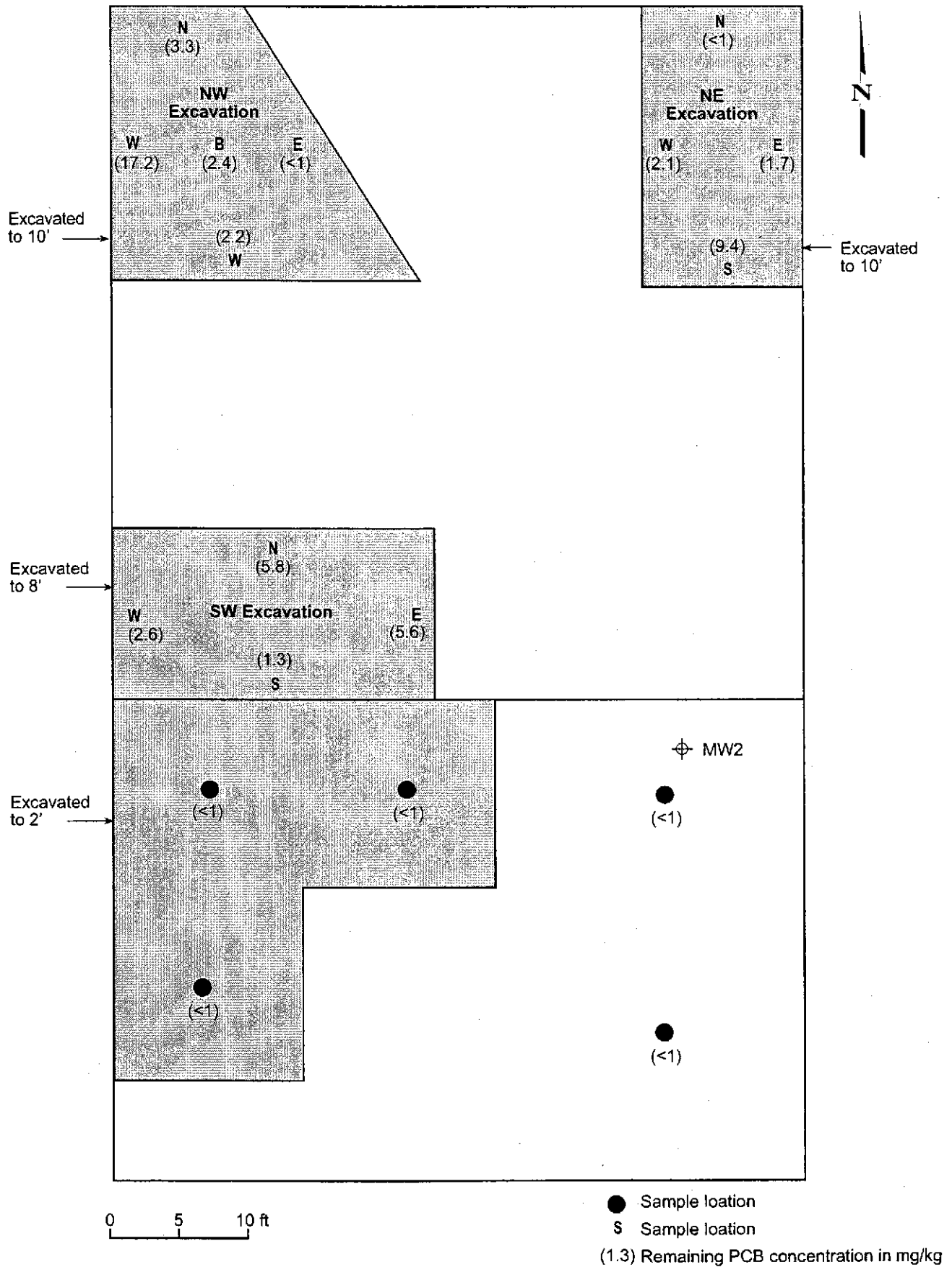


Figure 9. Emeryville Materials Facility, areas of excavation and confirmation sampling.

### **Field and Laboratory Analysis Procedures**

Selected samples collected from the UST area were analyzed for TEPH as mineral oil by EPA Method 3510/8015 and polychlorinated biphenyls (PCBs) by EPA method 8080. Samples collected from the AST area were analyzed for PCBs by EPA Method 8080. All analysis were conducted by an analytical laboratory certified by the state of California.

### **Quality Assurance/Quality Control and Chain-of-Custody Procedures**

Quality assurance samples were used to evaluate the quality and accuracy of data obtained from the field program. Established QA/QC procedures for the analyses included sample custody procedures, analyses of matrix spikes and method blanks, data reduction, verification of raw analytical data, and maintenance of control charts to monitor analytical performance. These procedures are outlined in the laboratory's Quality Assurance/Quality Control Plan and Standard Operating Procedures which are available upon request. Organic chemical analyses were performed in conformance with the standard procedures established by the United States Environmental Protection Agency (EPA) in "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act" (40 CFR Part 136, October 1984).

Chain-of-custody procedures were used to identify and ensure the traceability and integrity of the samples collected. These procedures were also used to document the handling and shipping procedures of the samples. The procedures traced the samples from collection, through all custody transfers, and finally to the storage facility or the analytical laboratory, where the laboratory's internal procedures will govern until final disposition of the samples. This information was recorded on the chain-of-custody form, which remained with the samples at all times. The chain-of-custody forms were used for a packaged lot of samples.

## Section 5

# RESULTS

### Underground Storage Tanks

Three soil borings were advanced in the vicinity of the former USTs. Soils encountered beneath the vicinity included clay and silty clay to depths of 11ft below ground surface (bgs) followed by silty sand to a depth of 18ft bgs. All borings terminated at a depth of 18ft bgs. Groundwater was encountered at each location at approximately 15ft bgs. Soil boring logs are included in Appendix D.

Soil and groundwater samples collected the three borings near the former USTs were analyzed for PCBs and TEPH as hydraulic oil. Table 7 provides a summary of the analytical results and the Analytical Data Sheets are included in Appendix E.

Borings SB1 and SB2 were devoid of all PCBs and TEPH as hydraulic oil above the method detection limits. Soil samples from boring SB3 contained PCBs as Aroclor 1260 in the sample from 6' bgs (0.86 mg/kg) and 11' bgs (0.058 mg/kg). These samples also contained TEPH as hydraulic oil (6.0', 59 mg/kg; 11.0', 46 mg/kg).

None of the groundwater samples contained either of the tested compounds above the method detection limits.

### Above Ground Storage Tanks

Excavation of the AST area progressed in those areas previously identified as containing elevated PCB concentrations until residual concentrations were below the target cleanup level of 25 mg/kg. Excavation occurred in 3 discrete areas of the former AST area (NW excavation, NE excavation and SW excavation) as well as a portion of the area immediately to the south of the AST area. All areas of excavation are represented in Figure 9.

The NE and NW excavations were advanced to an approximate depth of 10ft (14ft bgs). The SW excavation was advanced to an approximate depth of 8ft (12ft bgs). The area south of the former AST tank farm was excavated to an approximate depth of 2ft bgs.

The NW corner of the AST area was excavated to an approximate depth of 10ft below the surface of the tank farm (14ft bgs). The maximum concentration of PCB remaining in this area is 17.2 mg/kg, collected from the western wall, with an average remaining concentration of 3.5 mg/kg.

**Table 7**  
**Emeryville Materials Facility**  
**Soil and Groundwater Analytical Data**

Sample	PCB* mg/kg	TEPH mg/kg
SB1@6.0'	<0.05	<2.0
SB1@10.0'	<0.05	<2.0
SB1@16.0'	<0.05	<2.0
SB2@6.0'	<0.05	<2.0
SB2@10.5'	<0.05	<2.0
SB2@16.0'	<0.05	<2.0
SB3@6.0'	0.86*	59
SB3@11.0'	0.058*	46
SB3@16.0'	<0.05	<2.0

Groundwater	ug/l	ug/l
SB1	<0.69	<140
SB2	<0.67	<130
SB3	<0.66	<120

< Quantity is less than the value indicated  
PCB Polychlorinated Biphenyls  
TEPH Total Extractable Petroleum Hydrocarbons as Hydraulic Oil  
\* All PCBs characterized as Aroclor 1260

The NE corner was excavated to an approximate depth of 10ft (14ft bgs). The maximum concentration of PCBs remaining in the area is 9.4 mg/kg collected from the south wall at a depth of 5ft. A second sample was collected from the location at a depth of 10ft and contained a PCB concentration of 3.3 mg/kg. The average remaining concentration for this area is 4 mg/kg.

The SW corner was excavated to an average depth of 7ft below grade and sampled. The east and south wall samples contained elevated concentration of PCBs so excavation in these areas continued to a depth of approximately 8ft (12ft bgs). The maximum concentration of PCB remaining in the SW area was from the north wall at a concentration of 5.8 mg/kg. The average remaining concentration in the SW area is 3.8 mg/kg.

Concrete from the area south of the AST farm was exposed and was tested for PCBs. One sample at a depth of 6" bgs contained PCBs at a concentration of 12 mg/kg. The area was excavated to a depth of 2ft bgs as shown in Figure 9 and sampled again. All re-samples were devoid of PCBs above the method detection limit of 1 mg/kg.

Table 8 tabulates the remaining concentration of PCBs as well as those from un-excavated areas of the AST farm. The maximum remaining concentration is found in the NW area at a concentration of 17.2 mg/kg at a depth of 14ft bgs. The arithmetic mean concentration of PCBs in the AST area is 3 mg/kg and the 95% upper confidence limit for the site is 4 mg/kg.

Soils removed from the excavation were stockpiled on site, profiled and shipped under hazardous waste manifest to Chemical Waste Management (Kettleman City, California). Approximately 399,000 kgs were manifested as Non-RCRA Hazardous Waste, Solid: Debris contaminated with 50-499 mg/kg PCB, and approximately 80,330 kgs were profiled as Non-RCRA Hazardous Waste, Solid: Debris contaminated with <50 mg/kg PCB. Hazardous waste manifests are included in Appendix G.

**Table 8**  
**Statistical Analysis**  
**PCBs in Soil Following Focused Excavation**  
**PG&E Materials Facility**  
**Emeryville, California**

Sample ID	Sample Date	Remaining PCB Concentration <sup>a</sup> ( mg/kg )
NW-N-1	09/20/00	2.7
NW-N-2	09/20/00	<1
NW-E-1	09/20/00	2.5
NW-S-1	09/20/00	<1
NW-B-1	09/20/00	2.4
NE-N-L1	09/20/00	<1
NE-E-L1	09/20/00	1.7
NE-W-L1	09/20/00	2.1
NE-S-L1	09/20/00	3.2
NW-N-L1	09/20/00	3.3
NW-E-L1	09/20/00	<1
NW-W-L1	09/20/00	17.2
NW-S-L1	09/20/00	2.2
NE-S-2	09/20/00	9.4
SW-N-L1	09/21/00	5.8
SW-W-L1	09/21/00	2.6
SW-E-L2	09/21/00	5.6
SW-S-L2	09/21/00	1.3
10' from wall	10/09/00	3.6
15' from wall	10/09/00	3.8
20' from wall	10/09/00	12
2' deep 20' from wall	10/10/00	<1
2' deep near wall 4' back	10/10/00	<1
2' deep near wall 20' back	10/10/00	<1
2' deep 20' from wall	10/10/00	<1
6" deep near well	10/10/00	<1
6" deep 20' from well	10/10/00	<1
<b>Statistical Analysis<sup>b</sup></b>		
Arithmetic Mean		3
Sample Size		27
Standard Deviation		4
95th Confidence Interval		1
95 Upper Confidence Limit (95UCL)		4

**Abbreviations:**

PCB - Polychlorinated biphenyl

**Footnotes:**

<sup>a</sup> Data from PG&E Report #: 441.81-00.19, 10/18/00

<sup>b</sup> One-half the detection limit is used to represent non-detect samples.



Section 6

**CONCLUSIONS**

The objectives outlined in the remedial action plan were successfully implemented for the site.

Nine monitoring wells (ESE-1, ESE-2, ESE-3, MW-4, MW-5, MW-7, MW-8, MW-9 and MW-10) were abandoned per the State of California well standards.

The investigation of the UST area demonstrated that the previous tank and source removal was effective and that groundwater in the area is not affected.

The remedial action at the AST area was successful and the three receptors identified in the RBCA are fully protected. Soils were excavated to a maximum depth of 14ft bgs and clean fill was added to the excavation to grade. The highest remaining concentration is 17.2 mg/kg of PCB at approximately 14ft bgs. The mean remaining concentration is 3 mg/kg and the 95 UCL is 4 mg/kg.

Section 7

**REFERENCES**

- California, 1994. California Cancer Potency Factors: Update. Memorandum from California Environmental Protection Agency, Office of Health Hazard Assessment, November 1.
- Ecology & Environment. 1984. Site Investigations of the Pacific Gas and Electric Company Materials Distribution Center in Emeryville, California. June 1984.
- EPRI. 1996. Insulating Oil Characteristics, Electric Power Research Institute, prepared by CH2M Hill and META Environmental, Final Report. December 1996.
- Pacific Gas and Electric Company 1994a. Investigation of Subsurface Soils at Emeryville Materials Facility, Emeryville, California. Technical and Ecological Services, San Ramon, California. Report No. 402.331-93.41. January 10, 1994.
- Pacific Gas and Electric Company. 1994b. Emeryville Materials Facility Above Groundwater Tank Groundwater Investigation, Emeryville, California. Technical and Ecological Services, San Ramon, California. Report No. 402.331-94.10. May 12, 1994.
- Pacific Gas and Electric Company. 1999. Emeryville Materials Facility Aboveground and Underground Storage Tank Summary Report and Remedial Action Plan. Technical and Ecological Services, San Ramon. Report No. 402.331-99.88. July 1999.
- Radbruch, Dorothy H. 1957. Areal and Engineering Geology of the Oakland West Quadrangle, California, United States Geological Survey Miscellaneous Geologic Investigation Map I-239, USGS, Washington DC
- RAMCON Engineering and Environmental Contracting Inc. Tank Removal Soil Remediation Summary Report, Pacific Gas and Electric - Emeryville. RAMCON Job #64900 1. February 22, 1994.
- United States Geological Survey. 1980. 7.5 minute Quadrangle. Oakland West, California.

- Ecology & Environment, 1984, *Site Investigation of the Pacific Gas & Electric Company Materials Distribution Center in Emeryville, California, San Francisco.*
- Ecology & Environment, 1990, *Results of Sampling of Existing Groundwater Monitoring Wells at Pacific Gas & Electric Company Materials Distribution Center in Emeryville, California, San Francisco,* November 27, 1990.
- Pacific Gas and Electric Co., 1994a, Investigation of Subsurface Soils at Emeryville Materials Facility, Emeryville, California, prepared by Technical and Ecological Services Land and Water Quality Unit for PG&E Central Repair and Recovery Services, Report No. 402.331-93.41, January 10, 1994.
- Ramcon Engineering and Environmental Inc., Tank Removal and Soil Remediation Summary Report: Pacific Gas & Electric Company - Emeryville, California, Ramon Job Number 649001, February 22, 1994.
- Pacific Gas and Electric Co., 1994b, Emeryville Materials Facility, Aboveground Tank Groundwater Investigation, Emeryville, California, prepared by Technical and Ecological Services Land and Water Quality Unit for PG&E Central Repair and Recovery Services, Report No. 402.331-94.10, May 12, 1994.
- EMCON, 1995, Groundwater Monitoring and Sampling Report, Pacific Gas and Electric Emeryville Materials Facility, Emeryville, California, prepared by EMCON, San Jose, California for Pacific Gas and Electric Company, Project 0143-014.02, February 17, 1995.
- EMCON, 1995, Groundwater Monitoring and Sampling Report, Pacific Gas and Electric Emeryville Materials Facility, Emeryville, California, prepared by EMCON, San Jose, California for Pacific Gas and Electric Company, Project 0143-014.02, April 1995.
- Pacific Gas and Electric Co., 1995, Work Plan for the Additional Investigation of Subsurface Soils at Emeryville Materials Facility, Emeryville, California, prepared by Technical and Ecological Services Land and Water Quality Unit for PG&E Central Repair and Recovery Services, May 25, 1995.
- Pacific Gas and Electric Co., 1995, Work Plan for the Investigation of Subsurface Soils at Emeryville Materials Facility, Emeryville, California, prepared by Technical and Ecological Services Land and Water Quality Unit for PG&E Central Repair and Recovery Services, June 2, 1995
- EMCON, 1995, Groundwater Monitoring and Sampling Report, Maintenance Facility, Emeryville, California, prepared by EMCON, San Jose, California for Pacific Gas and Electric Company, Project 0143-014.02, July 25, 1995.
- EMCON, 1995, Groundwater Monitoring and Sampling Report, Maintenance Facility, Emeryville, California, prepared by EMCON, San Jose, California for Pacific Gas and Electric Company, Project 0143-014.02, October 19, 1995.
- EMCON, 1995, Groundwater Monitoring and Sampling Report, Maintenance Facility, Emeryville, California, prepared by EMCON, San Jose, California for Pacific Gas and Electric Company, Project 0143-014.02, January 1996.
- EMCON, 1996, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, First Quarter 1996, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.02, April 1996.
- EMCON, 1996, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, Second Quarter 1996, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.02, July 1996.

Pacific Gas and Electric Co., 1996, Additional Soil Investigation Former Above Ground Mineral oil Storage Tank Area Emeryville Repair Facility, Emeryville, California, prepared by Technical and Ecological Services Land and Water Quality Unit for PG&E Materials and Fleet Services, October 1996.

EMCON, 1996, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, Third Quarter 1996, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.02, November 1996.

EMCON, 1997, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, Fourth Quarter 1996, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.02, January 1997 .

EMCON, 1997, Risk-Based Corrective Action Report, Former Aboveground Mineral Oil Storage Tank Area, Emeryville Materials Facility, Emeryville, California, prepared by EMCON, Sacramento, California, for Pacific Gas and Electric Company, Project 20143-014.004, March 7, 1997

EMCON, 1997, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, First Quarter 1997, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.02, March 1997.

EMCON, 1997, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, Second Quarter 1997, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.02, May 1997.

EMCON, 1997, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, Third Quarter 1997, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.02, September 1997.

EMCON, 1997, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, Fourth Quarter 1997, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.03, December 1997.

EMCON, 1998, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, First Quarter 1998, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.03, March 1998.

EMCON, 1998, Groundwater Monitoring and Sampling Report, Emeryville Maintenance Facility, Emeryville, California, Second Quarter 1998, prepared by EMCON, Sacramento, California for Pacific Gas and Electric Company, Project 0143-014.03, June 1998.

Pacific Gas and Electric Co., 1998, Groundwater Monitoring and Sampling Report, Former Aboveground Storage Tank, Emeryville, California, Third Quarter 1998, prepared by Technical and Ecological Services, San Ramon, California, Report No. 402.331-98.219, October 1998.

Pacific Gas and Electric Co., 1999, Groundwater Monitoring and Sampling Report, Former Aboveground Storage Tank, Emeryville, California, Fourth Quarter 1998, prepared by Technical and Ecological Services, San Ramon, California, Report No. 402.331-99.53, March 1999.

Pacific Gas and Electric Company. 1999. Emeryville Materials Facility Aboveground and Underground Storage Tank Summary Report and Remedial Action Plan. Technical and Ecological Services, San Ramon. Report No. 402.331-99.88. July 1999.

Appendix B

**ADDENDUM TO RISK ASSESSMENT**

September 18, 2000

Ms. Susan Hugo  
Alameda County Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, California 94502-6577

**RE: Remediation Goal for PCBs at the Pacific Gas and Electric Company Emeryville  
Materials Facility, 4525 Hollis Street, Emeryville, California (the Site)**

Dear Ms. Hugo,

SECOR International Incorporated (SECOR) has prepared this letter on behalf of Pacific Gas and Electric Company's (the Company) Technical and Ecological Services (TES), to support the risk-based soil remediation goal of 25 milligrams per kilogram (mg/kg) for polychlorinated biphenyls (PCBs) at the above-referenced site.

The remediation goal is based on a Tier 2 Risk-Based Corrective Action (RBCA) report prepared by EMCON dated March 7, 1997. In that report, the following site-specific target levels (SSTLs) for PCBs were developed:

- Industrial worker: 1.3 mg/kg;
- Construction worker: 88 mg/kg; and
- Utility worker: 106 mg/kg.

The arithmetic mean PCB concentration across the site in the absence of any excavation or remediation is about 30 mg/kg. Limited excavation of soil containing the highest PCB concentrations, located at soil borings B1, B9, and B16, would result in an arithmetic mean and a 95 percent upper confidence limit of the arithmetic mean (95UCL) PCB concentration in the upper two foot soil interval across the site of 1 and 2 mg/kg (as reported in Table 4-1 of EMCON, 1996). Therefore, the limited excavation option is preferred by the Company. Under this option, soil containing PCB concentrations above the proposed remediation goal of 25 mg/kg in shallow soils (i.e., 0 to 2 feet below ground surface [bgs]) will be removed from the site.

A telephone discussion regarding this 25 mg/kg level was held with you, Mr. Fred Flint of TES, and Dr. Mark Stelljes of SECOR on August 9, 2000. During this call, you requested that a letter be prepared justifying the selection of 25 mg/kg as a health-protective remediation target level. Additionally, you requested that additional information be provided beyond that contained in the original Tier 2 RBCA report. The following information was requested in order to gain approval of the 25 mg/kg remediation goal:

- Statistical evaluation of datasets used in the Tier 2 RBCA to identify 95 percent upper confidence limits of the arithmetic mean (95UCLs);
- Statistical evaluation of datasets (arithmetic mean and 95UCLs) if soil from B1, B9, and B16

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SECOR International Inc.

were removed from the Site;

- Further justification of site-specific exposure assumptions used in the Tier 2 RBCA report; and
- Clear discussion of why the 25 mg/kg target level is safe and protective of human health.

Each of these points is discussed below.

### **Statistical Evaluation**

Complete Soil Dataset. As reported in the Tier 2 RBCA, the arithmetic mean PCB concentration across the site is 30 mg/kg. This includes all samples between 0 and 10 feet bgs, as summarized in Table 1. As shown on the table, the 95UCL for this dataset is 50 mg/kg.

Soil Dataset with Limited Excavation. Also as reported in the Tier 2 RBCA, an arithmetic mean PCB soil concentration was calculated using the assumption that soil from the three boring locations with the highest PCB concentrations (B1 down to 7.5 feet, B9 to 7.5 feet, and B16 down to 4.5 feet) would be excavated and removed from the site. The arithmetic mean concentration of PCBs in the remaining soil is 4 mg/kg, and the 95UCL is 5 mg/kg (Table 1). This includes all remaining data points down to 10 bgs.

### **Additional Justification for Site-Specific Parameters Used in the RBCA**

The following exposure assumptions were listed as "site-specific" in the Tier 2 RBCA:

- Construction worker exposure duration (1 year);
- Construction worker exposure frequency (30 days);
- Utility line worker exposure duration (25 years); and
- Utility line worker exposure frequency (1 day/year).

Default assumptions have not been published by either the California EPA (CalEPA) or USEPA for these receptors. Therefore, these assumptions were compiled from CalEPA and USEPA sources for other receptors using upper percentile values and based on previous professional experience with California risk assessments. Further support for these parameters is discussed below.

Construction Worker Exposure Duration and Frequency. A construction worker represents someone involved with site development activities. Invasive activities that could lead to direct soil contact include constructing a building foundation. This activity is typically assumed to represent a one-time event because the same construction worker is not expected to be contracted to invasively work at the same site twice. Common risk assessment protocol assumes that the shortest exposure duration typically quantified is one year. Therefore, an exposure duration of one year was used for this receptor. This assumes that the invasive activities are completed within 365 days. The exposure frequency represents the number of days the same construction

worker is expected to be involved with invasive activities. Typical foundations are now constructed in a matter of a few days (e.g., two to five). Therefore, the exposure frequency for such a worker should be low. A period of 30 days was used for this receptor, which is expected to represent a reasonable maximum exposure (RME) frequency. This is more than 5 times the typical length of foundation construction. This assumes that the same person is digging in the ground for 30 days, and that all digging occurs at locations containing the exposure point concentration. In reality, many of the places where digging would occur contain no PCBs. Therefore, these assumptions are expected to be generally conservative and health-protective.

Utility Worker Exposure Duration and Frequency. Unlike the construction worker where a single event taking several days is assumed to occur, a utility worker receptor represents someone that may maintain or repair underground utilities on a long-term, but intermittent, basis at the site. Trench workers are typically from utility companies, and it is unlikely the same employee would be asked to repair a trench at the same site over a period of several years. Instead, different people would respond to service call requests at different times. Therefore, it was assumed that the exposure frequency would be no more than 1 day each year. This is still conservative because it assumes that a repair job takes a full day, requires soil excavation, and occurs in a location where PCBs are present at the assumed concentration. This conservatism is compounded through the use of an exposure duration of 25 years, which is the recommended upper-bound exposure duration for time spent by a worker at the same workplace (USEPA and CalEPA). Therefore, these two assumptions result in a total exposure of 25 days over a lifetime. This is very conservative, as it is very unlikely the same contracting employee would spend 25 days at the contaminated portion of this site over their career with the same employer.

#### **Summary of Health Protectiveness of Proposed Remediation Target Level**

USEPA changed the cancer potency of PCBs in late 1996. Prior to then, the cancer slope factor (SF) for PCBs was  $7.7 \text{ (mg/kg-day)}^{-1}$ . This value was used in the Tier 2 RBCA report. Subsequently, the SF was modified to incorporate a range of potencies depending on the exposure pathways. For the direct soil pathways evaluated in the RBCA report, an SF of  $2.0 \text{ (mg/kg-day)}^{-1}$  is relevant based on the recent USEPA guidance (USEPA, 1996, 2000). Recently, CalEPA also adopted this lower SF of  $2.0 \text{ (mg/kg-day)}^{-1}$  for some pathways (CalEPA, 2000). This SF is 3.85 times lower than the old value of 7.7. Therefore, all SSTLs reported by EMCON (1997) can be multiplied by 3.85 to account for recent toxicology knowledge of PCBs and humans. The lowest SSTL of 1.3 mg/kg, for the industrial worker, becomes 5.0 mg/kg. SSTLs for the other two receptors are both greater than 350 mg/kg. Only one location contained PCBs greater than 350 mg/kg (location B1), and this location will be excavated during site remediation. Therefore, the proposed excavation will result in all site concentrations below levels of concern to human health for these two receptors.

Following limited excavation of soil at B1, B9, and B16, the overall site PCB mean concentration is 4 mg/kg based on existing data. The 95UCL is 5 mg/kg (Table 1). Clean fill will be used to bring these two locations to grade, which will lower the overall site PCB concentration. Also, surface concentrations are generally lower than deeper concentrations. Exposure by an industrial worker receptor is only assumed to involve surface soils, which includes the depth interval between 0 and 2 feet only. The 95UCL for the 0 to 2 feet bgs soil interval following this proposed excavation is 2 mg/kg (Table 1), which is below the revised



September 18, 2000


SSTL of 5.0 mg/kg. Therefore, the proposed excavation is health protective for all receptors evaluated in the Tier 2 RBCA.

Based on the above information, the location of PCBs present in soils at the site, and the expected use of the area, the proposed remediation target of 25 mg/kg is health protective of all evaluated human receptors.

We hope this adequately addresses your concerns raised in the telephone conversation, and will enable you to approve the proposed limited excavation as protective of human health without additional remediation at the Site.

Sincerely,

**SECOR International Incorporated**

A handwritten signature in black ink, appearing to read "D. Jeffrey", written over a faint dotted line.

David Jeffrey, Ph.D.  
Risk Assessment Manager

cc: Mr. Fred Flint (Pacific Gas and Electric Company, TES)

## REFERENCES

California Environmental Protection Agency (CalEPA). 2000. Toxicity Criteria Database. Office of Environmental Health Hazard Assessment. Online at this address:  
<http://www.oehha.ca.gov/risk/chemicalDB/index.asp>.

EMCON, 1997. Risk-Based Corrective Action Report, Former Aboveground Mineral Oil Storage Tank Area, Emeryville Materials Facility, Emeryville, California. March 7.

U.S. Environmental Protection Agency (USEPA). 1996. PCBs: Cancer Dose-Response Assessment and Application to Environmental Mixtures. National Center for Environmental Assessment, Washington, D.C. EPA/600/P-96/001F. September.

U.S. Environmental Protection Agency (USEPA). 2000. Integrated Risk Information System. Online database. August.

**Table 1. Statistical Analysis<sup>a</sup>**  
**PCBs in Soil**  
**PG&E Materials Facility**  
**Emeryville, California**

Sample ID	Sample Depth (feet)	PCB Concentration <sup>b</sup>		
		Full Dataset (mg/kg)	Limited Excavation Dataset 0-10 feet bgs (mg/kg)	Limited Excavation Dataset 0-2 feet bgs (mg/kg)
B1	0-1.5	38		
B1	1.5-3.0	0.5		
B1	3.0-4.5	385		
B1	4.5-6.0	350		
B1	6.0-7.5	295		
B1	7.5-9.0	2	2	
B2	1.0-2.0	4	4	4
B2	2.0-3.0	0.5	0.5	
B2	4.0-6.0	0.5	0.5	
B2	6.0-6.5	19	19	
B4	0-1.5	0.5	0.5	0.5
B4	1.5-3.0	0.5	0.5	0.5
B4	3.0-4.5	0.5	0.5	
B4	4.5-6.0	0.5	0.5	
B4	6.0-7.5	11	11	
B4	7.5-9.0	8	8	
B7	1.5-3.0	0.5	0.5	0.5
B7	4.5-6.0	0.5	0.5	
B7	7.5-9.0	0.5	0.5	
B9	0-1.5	2		
B9	1.5-3.0	1		
B9	3.0-4.5	2		
B9	4.5-6.0	4		
B9	6.0-7.5	93		
B9	7.5-9.0	13	13	
B10	1.5-3.0	0.5	0.5	0.5
B10	4.5-6.0	0.5	0.5	
B10	7.5-9.0	0.5	0.5	
B12	1.5-3.0	0.5	0.5	0.5
B12	4.5-6.0	0.5	0.5	
B12	7.5-9.0	0.5	0.5	
B14	2.5-3.0	0.5	0.5	
B14	3.0-4.5	5	5	
B14	4.5-6.0	15	15	
B14	6.0-7.5	12	12	
B14	7.5-9.0	16	16	

**Table 1. Statistical Analysis<sup>a</sup>  
PCBs in Soil  
PG&E Materials Facility  
Emeryville, California**

Sample ID	Sample Depth (feet)	PCB Concentration <sup>b</sup>		
		Full Dataset (mg/kg)	Limited Excavation Dataset 0-10 feet bgs (mg/kg)	Limited Excavation Dataset 0-2 feet bgs (mg/kg)
B16	0-1.5	185		
B16	1.5-3.0	10		
B16	3.0-4.5	32		
B16	4.5-6.0	0.5	0.5	
B16	6.0-7.5	18	18	
B16	7.5-9.0	9	9	
ESE-1	5	0.5	0.5	
ESE-1	10	0.5	0.5	
ESE-2	5	0.5	0.5	
ESE-2	9	0.5	0.5	
ESE-2	10	0.5	0.5	
ESE-3	5	0.5	0.5	
ESE-3	10	0.5	0.5	
ESE-4	5	0.5	0.5	
ESE-4	10	0.5	0.5	
<b>Statistical Analysis</b>				
Arithmetic Mean		30	4	1
Sample Size		51	38	6
Standard Deviation		85	6	1
95th Confidence Interval		19	2	1
95 Upper Confidence Limit (95UCL)		50	5	2

**Abbreviations:**

PCB - Polychlorinated biphenyl

**Footnotes:**

<sup>a</sup> Raw data from EMCON (1997).

<sup>b</sup> One-half the detection limit is used to represent non-detect samples.

Appendix C

**WELL DESTRUCTION REPORTS**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**



**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

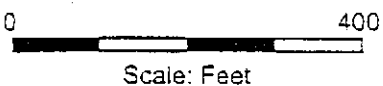
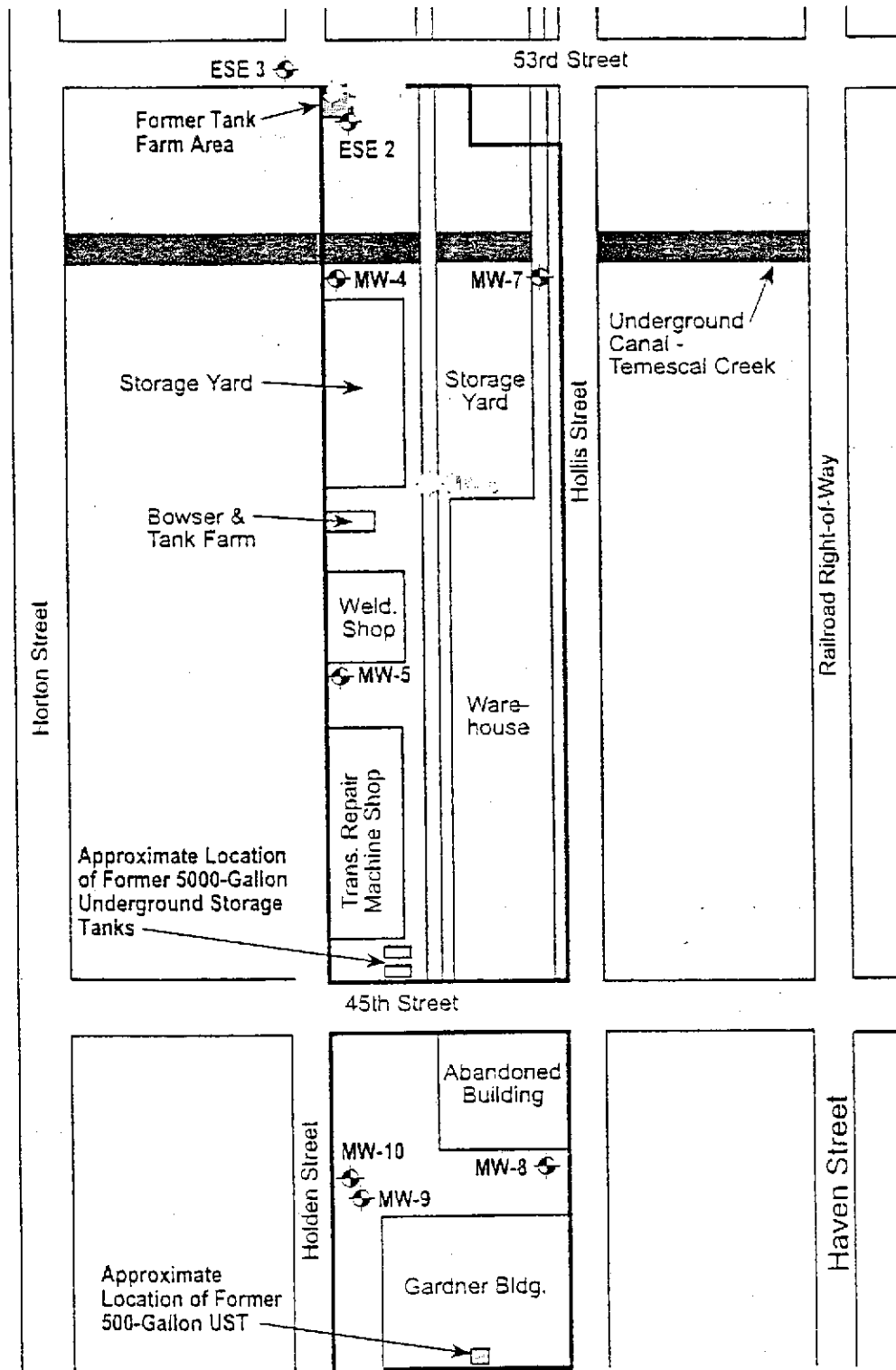
STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**



- ⊕ Existing monitoring well
- ▭ PG&E property boundary

Layout of Emeryville Materials Facility showing former tank farm area, underground storage tank sites and existing monitoring well locations.





# BORING LOG

SWIMS Job No.  
00524 0E1Boring No.  
SB1Sheet  
1 of 1Client  
Environmental AffairsBoring Location  
Emeryville Materials Facility

## DRILLING

Drilling Contractor  
GreggDriller  
DeasonRig  
Ryno

START TIME

FINISH TIME

0900

1010

Logged By  
F. FlintSurface Conditions  
ConcreteGroundwater Depth  
15 ft.DATE  
11/13/00DATE  
11/13/00Type & Diameter of Boring  
4" AugerSampling Method  
Split Spoon

SAMPLES			PID (ppm)	Ground Water	Depth (feet)	Sample Interval	Graphic Log	Soil Symbol	MATERIALS ENCOUNTERED AND DRILLING CONDITIONS
Inches Recovered	Blows/6"	Sampler							
					0				Concrete
					1				
					2				
					3				
					4				
					5			SC	FILL - CLAYEY SAND with gravel and rubble, moderate brown, slightly moist, no odor.
					6				
					7				
					8				
					9				
					10			SC	CLAYEY SAND - possibly fill, dark brown, some gravel, moist, no odor.
					11				
					12				
					13				
					14				
					15				
					16			SM	SILTY SAND - very fine grained, some pebbles, saturated, no odor.
					17				
					18				
					19				
					20				
									BOH



# BORING LOG

SWIMS Job No.  
00524 0E1

Boring No.  
SB2

Sheet  
1 of 1

Client  
Environmental Affairs

Boring Location  
Emeryville Materials Facility

## DRILLING

Drilling Contractor  
Gregg

Driller  
Deason

Rig  
Ryno

START TIME

FINISH TIME

1015

1100

Logged By  
DaSilva

Surface Conditions  
Concrete

Groundwater Depth  
15 ft.

DATE  
11/13/00

DATE  
11/13/00

Type & Diameter of Boring  
4" Auger

Sampling Method  
Split Spoon

SAMPLES				PID (ppm)	Ground Water	Depth (Feet)	Sample Interval	Graphic Log	Soil Symbol	MATERIALS ENCOUNTERED AND DRILLING CONDITIONS
Inches Recovered	Blows/6"	Sampler								
						0				Concrete
						1				
						2				
						3				
						4				
						5			SC	FILL - clayey sand with gravel, slightly moist, no odor.
						6				
						7				
						8				
						9				
						10			SC	CLAYEY SAND - possibly fill, moderate brown, some pebbles, moist, no odor.
						11				
						12				
						13				
						14				
						15				
						16			SM	SILTY SAND - very fine grained, moist, no odor.
						17				
						18				
						19				
						20				
										BOH



# BORING LOG

SWIMS Job No.  
00524 0E1Boring No.  
SB3Sheet  
1 of 1Client  
Environmental AffairsBoring Location  
Emeryville Materials Facility

## DRILLING

Drilling Contractor  
GreggDriller  
DeasonRig  
RynoSTART TIME  
1125FINISH TIME  
1300Logged By  
DaSilvaSurface Conditions  
ConcreteGroundwater Depth  
15 ft.DATE  
11/13/00DATE  
11/13/00Type & Diameter of Boring  
4" AugerSampling Method  
Split Spoon

SAMPLES			PID (ppm)	Ground Water	Depth (Feet)	Sample Interval	Graphic Log	Soil Symbol	MATERIALS ENCOUNTERED AND DRILLING CONDITIONS
Inches Recovered	Blows/6"	Sample							
					0				Concrete
					1				
					2				
					3				
					4				
					5			CI	SILTY CLAY - moderate brown, lean, non plastic, moist, no odor.
					6				
					7				
					8				
					9				
					10			CH	CLAY - medium gray, fat, plastic (Bay Mud), organic, moist, odor.
					11				
					12				
					13				
					14				
					15				
					16			SM	SILTY SAND - very fine grained, saturated, no odor.
					17				
					18				
					19				
					20				
									BOH

Appendix E  
**UNDERGROUND STORAGE TANKS**  
**ANALYTICAL DATA SHEETS**

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

Date: November 16, 2000

---

**P.G. & E TES**

3400 Crow Canyon Rd.  
San Ramon, CA 94583-1393

Attn.: Mr. Fred Flint

Project: Emeryville UST

Dear Fred,

Attached is our report for your samples received on Monday November 13, 2000  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after December 28, 2000  
unless you have requested otherwise. We appreciate the opportunity to be of service to you.  
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.  
My email address is: [gcook@chromalab.com](mailto:gcook@chromalab.com)

Sincerely,



Gary Cook

---

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

CA DHS ELAP#1096

PCBs

**P.G.& E TES**

✉ 3400 Crow Canyon Rd.  
San Ramon, CA 94583-1393  
Phone: (925) 866-5808 Fax: (925) 866-5681

Attn: Fred Flint

Project #:

Project: Emeryville UST

**Samples Reported**

Sample ID	Matrix	Date Sampled	Lab #
SB1 @ 6.0'	Soil	11/13/2000 09:45	1
SB1 @ 10.0'	Soil	11/13/2000 09:54	2
SB1 @ 16.0'	Soil	11/13/2000 10:00	3
SB2 @ 6.0'	Soil	11/13/2000 10:30	4
SB2 @ 10.5'	Soil	11/13/2000 10:40	5
SB2 @ 16.0'	Soil	11/13/2000 10:52	6
SB3 @ 6.0'	Soil	11/13/2000 12:34	7
SB3 @ 11.0'	Soil	11/13/2000 12:40	8
SB3 @ 16.0'	Soil	11/13/2000 12:45	9
SB1 @ 1300	Water	11/13/2000 13:00	10
SB2 @ 1300	Water	11/13/2000 13:00	11
SB3 @ 1259	Water	11/13/2000 12:59	12

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: SB1 @ 6.0'	Lab Sample ID: 2000-11-0255-001
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 09:45	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	11/15/2000 13:45	
Aroclor 1221	ND	0.050	mg/Kg	1.00	11/15/2000 13:45	
Aroclor 1232	ND	0.050	mg/Kg	1.00	11/15/2000 13:45	
Aroclor 1242	ND	0.050	mg/Kg	1.00	11/15/2000 13:45	
Aroclor 1248	ND	0.050	mg/Kg	1.00	11/15/2000 13:45	
Aroclor 1254	ND	0.050	mg/Kg	1.00	11/15/2000 13:45	
Aroclor 1260	ND	0.050	mg/Kg	1.00	11/15/2000 13:45	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	90.5	50-125	%	1.00	11/15/2000 13:45	
Decachlorobiphenyl	96.6	46-142	%	1.00	11/15/2000 13:45	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: SB1 @ 10.0'	Lab Sample ID: 2000-11-0255-002
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 09:54	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	11/15/2000 14:14	
Aroclor 1221	ND	0.050	mg/Kg	1.00	11/15/2000 14:14	
Aroclor 1232	ND	0.050	mg/Kg	1.00	11/15/2000 14:14	
Aroclor 1242	ND	0.050	mg/Kg	1.00	11/15/2000 14:14	
Aroclor 1248	ND	0.050	mg/Kg	1.00	11/15/2000 14:14	
Aroclor 1254	ND	0.050	mg/Kg	1.00	11/15/2000 14:14	
Aroclor 1260	ND	0.050	mg/Kg	1.00	11/15/2000 14:14	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	88.9	50-125	%	1.00	11/15/2000 14:14	
Decachlorobiphenyl	98.9	46-142	%	1.00	11/15/2000 14:14	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096



# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: <b>SB1 @ 16.0</b>	Lab Sample ID: <b>2000-11-0255-003</b>
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 10:00	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	11/15/2000 14:53	
Aroclor 1221	ND	0.050	mg/Kg	1.00	11/15/2000 14:53	
Aroclor 1232	ND	0.050	mg/Kg	1.00	11/15/2000 14:53	
Aroclor 1242	ND	0.050	mg/Kg	1.00	11/15/2000 14:53	
Aroclor 1248	ND	0.050	mg/Kg	1.00	11/15/2000 14:53	
Aroclor 1254	ND	0.050	mg/Kg	1.00	11/15/2000 14:53	
Aroclor 1260	ND	0.050	mg/Kg	1.00	11/15/2000 14:53	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	87.5	50-125	%	1.00	11/15/2000 14:53	
Decachlorobiphenyl	96.2	46-142	%	1.00	11/15/2000 14:53	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: SB2 @ 6.0'	Lab Sample ID: 2000-11-0255-004
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 10:30	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	11/15/2000 15:21	
Aroclor 1221	ND	0.050	mg/Kg	1.00	11/15/2000 15:21	
Aroclor 1232	ND	0.050	mg/Kg	1.00	11/15/2000 15:21	
Aroclor 1242	ND	0.050	mg/Kg	1.00	11/15/2000 15:21	
Aroclor 1248	ND	0.050	mg/Kg	1.00	11/15/2000 15:21	
Aroclor 1254	ND	0.050	mg/Kg	1.00	11/15/2000 15:21	
Aroclor 1260	ND	0.050	mg/Kg	1.00	11/15/2000 15:21	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	83.9	50-125	%	1.00	11/15/2000 15:21	
Decachlorobiphenyl	87.0	46-142	%	1.00	11/15/2000 15:21	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: SB2 @ 10.5'	Lab Sample ID: 2000-11-0255-005
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 10:40	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	11/15/2000 15:50	
Aroclor 1221	ND	0.050	mg/Kg	1.00	11/15/2000 15:50	
Aroclor 1232	ND	0.050	mg/Kg	1.00	11/15/2000 15:50	
Aroclor 1242	ND	0.050	mg/Kg	1.00	11/15/2000 15:50	
Aroclor 1248	ND	0.050	mg/Kg	1.00	11/15/2000 15:50	
Aroclor 1254	ND	0.050	mg/Kg	1.00	11/15/2000 15:50	
Aroclor 1260	ND	0.050	mg/Kg	1.00	11/15/2000 15:50	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	86.2	50-125	%	1.00	11/15/2000 15:50	
Decachlorobiphenyl	95.5	46-142	%	1.00	11/15/2000 15:50	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES  
Attn.: Fred Flint

Test Method: 8082  
Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: SB2 @16.0'	Lab Sample ID: 2000-11-0255-006
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 10:52	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	11/15/2000 16:18	
Aroclor 1221	ND	0.050	mg/Kg	1.00	11/15/2000 16:18	
Aroclor 1232	ND	0.050	mg/Kg	1.00	11/15/2000 16:18	
Aroclor 1242	ND	0.050	mg/Kg	1.00	11/15/2000 16:18	
Aroclor 1248	ND	0.050	mg/Kg	1.00	11/15/2000 16:18	
Aroclor 1254	ND	0.050	mg/Kg	1.00	11/15/2000 16:18	
Aroclor 1260	ND	0.050	mg/Kg	1.00	11/15/2000 16:18	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	93.3	50-125	%	1.00	11/15/2000 16:18	
Decachlorobiphenyl	99.1	46-142	%	1.00	11/15/2000 16:18	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: <b>SB3 @ 6.0'</b>	Lab Sample ID: <b>2000-11-0255-007</b>
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 12:34	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.25	mg/Kg	5.00	11/15/2000 16:47	
Aroclor 1221	ND	0.25	mg/Kg	5.00	11/15/2000 16:47	
Aroclor 1232	ND	0.25	mg/Kg	5.00	11/15/2000 16:47	
Aroclor 1242	ND	0.25	mg/Kg	5.00	11/15/2000 16:47	
Aroclor 1248	ND	0.25	mg/Kg	5.00	11/15/2000 16:47	
Aroclor 1254	ND	0.25	mg/Kg	5.00	11/15/2000 16:47	
Aroclor 1260	0.86	0.25	mg/Kg	5.00	11/15/2000 16:47	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	96.3	50-125	%	5.00	11/15/2000 16:47	
Decachlorobiphenyl	110.5	46-142	%	5.00	11/15/2000 16:47	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: SB3 @ 11.0'	Lab Sample ID: 2000-11-0255-008
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 12:40	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	11/15/2000 17:15	
Aroclor 1221	ND	0.050	mg/Kg	1.00	11/15/2000 17:15	
Aroclor 1232	ND	0.050	mg/Kg	1.00	11/15/2000 17:15	
Aroclor 1242	ND	0.050	mg/Kg	1.00	11/15/2000 17:15	
Aroclor 1248	ND	0.050	mg/Kg	1.00	11/15/2000 17:15	
Aroclor 1254	ND	0.050	mg/Kg	1.00	11/15/2000 17:15	
Aroclor 1260	0.058	0.050	mg/Kg	1.00	11/15/2000 17:15	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	73.5	50-125	%	1.00	11/15/2000 17:15	
Decachlorobiphenyl	88.4	46-142	%	1.00	11/15/2000 17:15	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: SB3 @ 16.0'	Lab Sample ID: 2000-11-0255-009
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 12:45	Extracted: 11/13/2000 13:49
Matrix: Soil	QC-Batch: 2000/11/13-01.14

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.050	mg/Kg	1.00	11/15/2000 17:43	
Aroclor 1221	ND	0.050	mg/Kg	1.00	11/15/2000 17:43	
Aroclor 1232	ND	0.050	mg/Kg	1.00	11/15/2000 17:43	
Aroclor 1242	ND	0.050	mg/Kg	1.00	11/15/2000 17:43	
Aroclor 1248	ND	0.050	mg/Kg	1.00	11/15/2000 17:43	
Aroclor 1254	ND	0.050	mg/Kg	1.00	11/15/2000 17:43	
Aroclor 1260	ND	0.050	mg/Kg	1.00	11/15/2000 17:43	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	89.0	50-125	%	1.00	11/15/2000 17:43	
Decachlorobiphenyl	93.0	46-142	%	1.00	11/15/2000 17:43	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: <b>SB1 @ 1300</b>	Lab Sample ID: <b>2000-11-0255-010</b>
Project: <b>Emeryville UST</b>	Received: <b>11/13/2000 15:35</b>
Sampled: <b>11/13/2000 13:00</b>	Extracted: <b>11/13/2000 18:02</b>
Matrix: <b>Water</b>	QC-Batch: <b>2000/11/13-03.14</b>
Sample/Analysis Flag ri ( See Legend & Note section )	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.69	ug/L	1.39	11/14/2000 19:50	
Aroclor 1221	ND	0.69	ug/L	1.39	11/14/2000 19:50	
Aroclor 1232	ND	0.69	ug/L	1.39	11/14/2000 19:50	
Aroclor 1242	ND	0.69	ug/L	1.39	11/14/2000 19:50	
Aroclor 1248	ND	0.69	ug/L	1.39	11/14/2000 19:50	
Aroclor 1254	ND	0.69	ug/L	1.39	11/14/2000 19:50	
Aroclor 1260	ND	0.69	ug/L	1.39	11/14/2000 19:50	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	84.2	62-123	%	1.39	11/14/2000 19:50	
Decachlorobiphenyl	55.7	56-136	%	1.39	11/14/2000 19:50	s

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: SB2 @ 1300	Lab Sample ID: 2000-11-0255-011
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 13:00	Extracted: 11/13/2000 18:02
Matrix: Water	QC-Batch: 2000/11/13-03.14
Sample/Analysis Flag rl ( See Legend & Note section )	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.67	ug/L	1.33	11/14/2000 20:15	
Aroclor 1221	ND	0.67	ug/L	1.33	11/14/2000 20:15	
Aroclor 1232	ND	0.67	ug/L	1.33	11/14/2000 20:15	
Aroclor 1242	ND	0.67	ug/L	1.33	11/14/2000 20:15	
Aroclor 1248	ND	0.67	ug/L	1.33	11/14/2000 20:15	
Aroclor 1254	ND	0.67	ug/L	1.33	11/14/2000 20:15	
Aroclor 1260	ND	0.67	ug/L	1.33	11/14/2000 20:15	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	132.2	62-123	%	1.33	11/14/2000 20:15	s
Decachlorobiphenyl	101.3	56-136	%	1.33	11/14/2000 20:15	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8082

Prep Method: 3510/8082  
3550/8082

PCBs

Sample ID: <b>SB3 @ 1259</b>	Lab Sample ID: <b>2000-11-0255-012</b>
Project: <b>Emeryville UST</b>	Received: <b>11/13/2000 15:35</b>
Sampled: <b>11/13/2000 12:59</b>	Extracted: <b>11/13/2000 18:02</b>
Matrix: <b>Water</b>	QC-Batch: <b>2000/11/13-03.14</b>
Sample/Analysis Flag rl ( See Legend & Note section )	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Aroclor 1016	ND	0.66	ug/L	1.32	11/14/2000 20:40	
Aroclor 1221	ND	0.66	ug/L	1.32	11/14/2000 20:40	
Aroclor 1232	ND	0.66	ug/L	1.32	11/14/2000 20:40	
Aroclor 1242	ND	0.66	ug/L	1.32	11/14/2000 20:40	
Aroclor 1248	ND	0.66	ug/L	1.32	11/14/2000 20:40	
Aroclor 1254	ND	0.66	ug/L	1.32	11/14/2000 20:40	
Aroclor 1260	ND	0.66	ug/L	1.32	11/14/2000 20:40	
<b>Surrogate(s)</b>						
2,4,5,6-Tetrachloro-m-xylene	122.5	62-123	%	1.32	11/14/2000 20:40	
Decachlorobiphenyl	105.5	56-136	%	1.32	11/14/2000 20:40	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Test Method: 8082

Attn.: Fred Flint

Prep Method: 3510/8082  
3550/8082

## Batch QC Report PCBs

<b>Method Blank</b>	<b>Soil</b>	<b>QC Batch # 2000/11/13-01.14</b>
MB: 2000/11/13-01.14-001		Date Extracted: 11/13/2000 13:49

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Aroclor 1016	ND	0.05	mg/Kg	11/14/2000 16:03	
Aroclor 1221	ND	0.05	mg/Kg	11/14/2000 16:03	
Aroclor 1232	ND	0.05	mg/Kg	11/14/2000 16:03	
Aroclor 1242	ND	0.05	mg/Kg	11/14/2000 16:03	
Aroclor 1248	ND	0.05	mg/Kg	11/14/2000 16:03	
Aroclor 1254	ND	0.05	mg/Kg	11/14/2000 16:03	
Aroclor 1260	ND	0.05	mg/Kg	11/14/2000 16:03	
<b>Surrogate(s)</b>					
2,4,5,6-Tetrachloro-m-xylene	104.6	50-125	%	11/14/2000 16:03	
Decachlorobiphenyl	84.6	46-142	%	11/14/2000 16:03	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Test Method: 8082

Attn.: Fred Flint

Prep Method: 3510/8082

3550/8082

## Batch QC Report PCBs

Method Blank	Water	QC Batch # 2000/11/13-03.14
MB: 2000/11/13-03.14-001		Date Extracted: 11/13/2000 18:02

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Aroclor 1016	ND	0.5	ug/L	11/14/2000 17:19	
Aroclor 1221	ND	0.5	ug/L	11/14/2000 17:19	
Aroclor 1232	ND	0.5	ug/L	11/14/2000 17:19	
Aroclor 1242	ND	0.5	ug/L	11/14/2000 17:19	
Aroclor 1248	ND	0.5	ug/L	11/14/2000 17:19	
Aroclor 1254	ND	0.5	ug/L	11/14/2000 17:19	
Aroclor 1260	ND	0.5	ug/L	11/14/2000 17:19	
<b>Surrogate(s)</b>					
2,4,5,6-Tetrachloro-m-xylene	131.6	62-123	%	11/14/2000 17:19	S
Decachlorobiphenyl	90.4	56-136	%	11/14/2000 17:19	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Test Method: 8082

Attn: Fred Flint

Prep Method: 3510/8082  
3550/8082

## Batch QC Report

PCBs

Laboratory Control Spike (LCS/LCSD)		Soil		QC Batch # 2000/11/13-01.14	
LCS:	2000/11/13-01.14-002	Extracted:	11/13/2000 13:49	Analyzed	11/15/2000 10:55
LCSD:	2000/11/13-01.14-003	Extracted:	11/13/2000 13:49	Analyzed	11/15/2000 11:23

Compound	Conc. [mg/Kg]		Exp. Conc. [mg/Kg]		Recovery [%]			Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD [%]	Recovery	RPD	LCS	LCSD
Aroclor 1016	0.0591	0.0457	0.0667	0.0667	88.6	68.5	25.6	65-135	30		
Aroclor 1260	0.0602	0.0481	0.0667	0.0667	90.3	72.1	22.4	65-135	30		
<b>Surrogate(s)</b>											
2,4,5,6-Tetrachloro-m-xyI	43.0	32.6	50	50	86.0	65.2		50-125			
Decachlorobiphenyl	43.8	35.7	50	50	87.6	71.4		46-142			

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Test Method: 8082

Attn: Fred Flint

Prep Method: 3510/8082  
3550/8082

## Batch QC Report

PCBs

### Laboratory Control Spike (LCS/LCSD)

Water

QC Batch # 2000/11/13-03.14

LCS: 2000/11/13-03.14-002

Extracted: 11/13/2000 18:02

Analyzed 11/15/2000 11:52

LCSD: 2000/11/13-03.14-003

Extracted: 11/13/2000 18:02

Analyzed 11/15/2000 12:20

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%] RPD			Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD [%]	Recovery	RPD	LCS	LCSD
Aroclor 1016	1.68	1.79	2.00	2.00	84.0	89.5	6.3	65-135	30		
Aroclor 1260	1.83	1.88	2.00	2.00	91.5	94.0	2.7	65-135	30		
<b>Surrogate(s)</b>											
2,4,5,6-Tetrachloro-m-xyl	41.1	45.9	50	50	82.2	91.8		62-123			
Decachlorobiphenyl	43.9	46.1	50	50	87.8	92.2		56-136			

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& ETES

Test Method: 8082

Attn.: Fred Flint

Prep Method: 3550/8082

## Batch QC Report

PCBs

<b>Matrix Spike ( MS / MSD )</b>	<b>Soil</b>	<b>QC Batch # 2000/11/13-01.14</b>
Sample ID: <b>SB3 @ 16.0</b>		Lab Sample ID: 2000-11-0255-009
MS: 2000/11/13-01.14-004	Extracted: 11/13/2000 13:49	Analyzed: 11/15/2000 12:49 Dilution: 1.0
MSD: 2000/11/13-01.14-005	Extracted: 11/13/2000 13:49	Analyzed: 11/15/2000 13:17 Dilution: 1.0

Compound	Conc. [mg/Kg]		Sample	Exp. Conc. [mg/Kg]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	MS	MSD		MS	MSD	MS	MSD		Recovery	RPD	MS	MSD
Aroclor 1016	0.0597	0.0582	ND	0.0667	0.0661	89.5	88.0	1.7	65-135	30		
Aroclor 1260	0.0625	0.0618	ND	0.0667	0.0661	93.7	93.5	0.2	65-135	30		
<b>Surrogate(s)</b>												
2,4,5,6-Tetrachloro-m-xy	44.1	43.8		50	50	88.2	87.6		50-125			
Decachlorobiphenyl	47.2	46.3		50	50	94.4	92.6		46-142			

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To: P.G.& E TES

Attn: Fred Flint

Test Method: 8082

Prep Method: 3510/8082

3550/8082

## Legend & Notes

PCBs

### Analysis Flags

rl

Reporting limits raised due to reduced sample size.

### Analyte Flags

s

One surrogate recovery out of control, but second surrogate within QC limits confirms test performance.



Total Extractable Petroleum Hydrocarbons (TEPH)

<b>P.G. &amp; E TES</b>	<input checked="" type="checkbox"/> 3400 Crow Canyon Rd. San Ramon, CA 94583-1393
Attn: Fred Flint	Phone: (925) 866-5808 Fax: (925) 866-5681
Project #:	Project: Emeryville UST

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
SB1 @ 6.0'	Soil	11/13/2000 09:45	1
SB1 @ 10.0'	Soil	11/13/2000 09:54	2
SB1 @ 16.0'	Soil	11/13/2000 10:00	3
SB2 @ 6.0'	Soil	11/13/2000 10:30	4
SB2 @ 10.5'	Soil	11/13/2000 10:40	5
SB2 @ 16.0'	Soil	11/13/2000 10:52	6
SB3 @ 6.0'	Soil	11/13/2000 12:34	7
SB3 @ 11.0'	Soil	11/13/2000 12:40	8
SB3 @ 16.0'	Soil	11/13/2000 12:45	9
SB1 @ 1300	Water	11/13/2000 13:00	10
SB2 @ 1300	Water	11/13/2000 13:00	11
SB3 @ 1259	Water	11/13/2000 12:59	12

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M

3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB1 @ 6.0'	Lab Sample ID: 2000-11-0255-001
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 09:45	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	2.0	mg/Kg	1.00	11/14/2000 21:39	
<i>Surrogate(s)</i> o-Terphenyl	86.4	60-130	%	1.00	11/14/2000 21:39	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M

3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB1 @ 10.0	Lab Sample ID: 2000-11-0255-002
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 09:54	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	2.0	mg/Kg	1.00	11/14/2000 22:17	
<b>Surrogate(s)</b> o-Terphenyl	90.4	60-130	%	1.00	11/14/2000 22:17	

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Printed on: 11/15/2000 16:04

Page 3 of 19

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB1 @ 16.0'	Lab Sample ID: 2000-11-0255-003
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 10:00	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	2.0	mg/Kg	1.00	11/14/2000 22:55	
<i>Surrogate(s)</i> o-Terphenyl	85.1	60-130	%	1.00	11/14/2000 22:55	

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Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB2 @ 6.0'	Lab Sample ID: 2000-11-0255-004
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 10:30	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	2.0	mg/Kg	1.00	11/14/2000 23:33	
<b>Surrogate(s)</b> o-Terphenyl	85.0	60-130	%	1.00	11/14/2000 23:33	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB2 @ 10.5'	Lab Sample ID: 2000-11-0255-005
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 10:40	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep. Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	2.0	mg/Kg	1.00	11/15/2000 00:11	
<b>Surrogate(s)</b> o-Terphenyl	82.8	60-130	%	1.00	11/15/2000 00:11	

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB3 @ 11.0'	Lab Sample ID: 2000-11-0255-008
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 12:40	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	46	2.0	mg/Kg	1.00	11/15/2000 11:23	rd
<b>Surrogate(s)</b> o-Terphenyl	95.5	60-130	%	1.00	11/15/2000 11:23	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB3 @ 16.0'	Lab Sample ID: 2000-11-0255-009
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 12:45	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	2.0	mg/Kg	1.00	11/15/2000 05:17	
<i>Surrogate(s)</i> o-Terphenyl	82.4	60-130	%	1.00	11/15/2000 05:17	



# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB1 @ 1300	Lab Sample ID: 2000-11-0255-010
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 13:00	Extracted: 11/13/2000 18:01
Matrix: Water	QC-Batch: 2000/11/13-06.10
Sample/Analysis Flag rl ( See Legend & Note section )	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	140	ug/L	1.43	11/15/2000 12:54	
<i>Surrogate(s)</i> o-Terphenyl	45.6	60-130	%	1.43	11/15/2000 12:54	sl

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: <b>SB2 @ 1300</b>	Lab Sample ID: <b>2000-11-0255-011</b>
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 13:00	Extracted: 11/13/2000 18:01
Matrix: Water	QC-Batch: 2000/11/13-06.10
Sample/Analysis Flag rl ( See Legend & Note section )	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	130	ug/L	1.32	11/15/2000 13:33	
<b>Surrogate(s)</b> o-Terphenyl	98.5	60-130	%	1.32	11/15/2000 13:33	

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB3 @ 1259	Lab Sample ID: 2000-11-0255-012
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 12:59	Extracted: 11/13/2000 18:01
Matrix: Water	QC-Batch: 2000/11/13-06.10
Sample/Analysis Flag r l ( See Legend & Note section )	

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	120	ug/L	1.19	11/15/2000 12:54	
<i>Surrogate(s)</i> o-Terphenyl	78.9	60-130	%	1.19	11/15/2000 12:54	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Test Method: 8015M

Attn.: Fred Flint

Prep Method: 3510/8015M

3550/8015M

## Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

<b>Method Blank</b>	<b>Soil</b>	<b>QC Batch # 2000/11/13-07.10</b>
MB: 2000/11/13-07.10-001		Date Extracted: 11/13/2000 18:53

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	1	mg/Kg	11/14/2000 18:25	
Mineral Oil	ND	2	mg/Kg	11/14/2000 18:25	
<b>Surrogate(s)</b> o-Terphenyl	91.5	60-130	%	11/14/2000 18:25	

1220 Quarry Lane \* Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Test Method: 8015M

Attn.: Fred Flint

Prep Method: 3510/8015M

3550/8015M

## Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

<b>Method Blank</b>	<b>Soil</b>	<b>QC Batch # 2000/11/13-07.10</b>
MB: 2000/11/13-07.10-001		Date Extracted: 11/13/2000 18:53

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	1	mg/Kg	11/14/2000 18:25	
Mineral Oil	ND	2	mg/Kg	11/14/2000 18:25	
<b>Surrogate(s)</b> o-Terphenyl	91.5	60-130	%	11/14/2000 18:25	

1220 Quarry Lane \* Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Test Method: 8015M

Attn.: Fred Flint

Prep Method: 3510/8015M

3550/8015M

## Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

<b>Method Blank</b>	<b>Water</b>	<b>QC Batch # 2000/11/13-06.10</b>
MB: 2000/11/13-06.10-001		Date Extracted: 11/13/2000 18:01

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	50	ug/L	11/15/2000 12:16	
Mineral Oil	ND	100	ug/L	11/15/2000 12:16	
<b>Surrogate(s)</b> o-Terphenyl	98.0	60-130	%	11/15/2000 12:16	

1220 Quarry Lane \* Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G. & E TES

Test Method: 8015M

Attn: Fred Flint

Prep Method: 3510/8015M  
3550/8015M

## Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD)	Soil	QC Batch # 2000/11/13-07.10
LCS: 2000/11/13-07.10-002	Extracted: 11/13/2000 18:53	Analyzed 11/14/2000 19:04
LCSD: 2000/11/13-07.10-003	Extracted: 11/13/2000 18:53	Analyzed 11/14/2000 19:43

Compound	Conc. [mg/Kg]		Exp. Conc. [mg/Kg]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Diesel	39.9	39.4	41.7	41.7	95.7	94.5	1.3	60-130	25		
<b>Surrogate(s)</b> o-Terphenyl	19.7	19.1	20.0	20.0	98.5	95.5		60-130			

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Test Method: 8015M

Attn: Fred Flint

Prep Method: 3510/8015M

3550/8015M

## Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2000/11/13-06.10
LCS: 2000/11/13-06.10-002	Extracted: 11/13/2000 18:01	Analyzed 11/15/2000 13:33
LCSD: 2000/11/13-06.10-003	Extracted: 11/13/2000 18:01	Analyzed 11/15/2000 14:11

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]			RPD		Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD [%]	Recovery	RPD	LCS	LCSD		
Diesel	850	1090	1250	1250	68.0	87.2	24.7	60-130	25				
<b>Surrogate(s)</b> o-Terphenyl	22.5	24.6	20.0	20.0	112.5	123.0		60-130					

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096



# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Test Method: 8015M

Attn.: Fred Flint

Prep Method: 3550/8015M

## Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

<b>Matrix Spike ( MS / MSD )</b>	<b>Soil</b>	<b>QC Batch # 2000/11/13-07.10</b>
Sample ID: SB1 @ 6.0'		Lab Sample ID: 2000-11-0255-001
MS: 2000/11/13-07.10-004	Extracted: 11/13/2000 18:53	Analyzed: 11/14/2000 20:21 Dilution: 1.0
MSD: 2000/11/13-07.10-005	Extracted: 11/13/2000 18:53	Analyzed: 11/14/2000 21:00 Dilution: 1.0

Compound	Conc. [ mg/Kg ]			Exp.Conc. [ mg/Kg ]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD		Recovery	RPD	MS	MSD
Diesel	39.1	38.0	?	41.7	41.5	93.8	91.6	2.4	60-130	25		
<b>Surrogate(s)</b>												
o-Terphenyl	18.2	17.6		20.0	20.0	91.0	88.0		60-130			

1220 Quarry Lane \* Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

To: P.G.& E TES  
Attn: Fred Flint

Test Method: 8015M  
Prep Method: 3510/8015M  
3550/8015M

## Legend & Notes

### Total Extractable Petroleum Hydrocarbons (TEPH)

#### Analysis Flags

rl

Reporting limits raised due to reduced sample size.

#### Analyte Flags

rd

Quantitation for the above analyte is based on the response factor of Diesel

sl

Surrogate recoveries were lower than QC limit due to matrix interference, confirmed by reanalysis.



**Pacific Gas and Electric Company**

**Chain of Custody Record**

**2000-11-0255**

**55777**

From: Pacific Gas & Electric Company  PG&E Facility  Sample Site  
 Address or Location: 3400 CROW CANYON RD  
 City: SAN RAMON, CA (Zip) 94583  
 Contact Name/Phone No.: \_\_\_\_\_

Ship To: Lab Name: CITRO MALAB  
 Address: 2200 QUARRY LANE  
 City: PLEASANTON, CA (Zip) 94566  
 Phone No. (925) 484 1919  
 Contact Name: GARY COOK

Turnaround Time  
 NORMAL (10 days or less)  RUSH 11/15 @ 1200  OTHER, Specify \_\_\_\_\_  
Due Date & Time  
 TELEPHONE  FAX Give Results to: FRED FLINT @ (925) 866 5808  
Name PH/FAX

Project Name: EMERYVILLE UST Project Supervisor (Name/Phone No.): \_\_\_\_\_  
 Sampled by: (Signature) Clement D. Silva (Print Name) CLEMENT D. SILVA

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. SB1 @ 6.0'	11/13	0945	SOIL	1	2"x6"
2. SB1 @ 10.0'	✓	0954	✓	1	✓
3. SB1 @ 16.0'	✓	1000	✓	1	✓
4. SB2 @ 6'	✓	1030	✓	1	✓
5. SB2 @ 10.5'	✓	1040	✓	1	✓
6. SB2 @ 16.0'	✓	1052	✓	1	✓
7. SB3 @ 6.0'	✓	1234	✓	1	✓
8. SB3 @ 11.0'	✓	1240	✓	1	✓
9. SB3 @ 16.0'	✓	1245	✓	1	✓
10. SA1 @ 1300	✓	1300	WATER	2	1L
11. SB2 @ 1300	✓	1300	✓	2	1L
12. SB3 @ 1259	✓	1259	✓	2	1L

Analysis Requested							Remarks
PCB	TPH as Transf. Oil						
X	X						24 hr. TAT per client by phone 11/13/00 RSN          4.20C
X	X						
X	X						
X	X						
X	X						
X	X						
X	X						
X	X						
X	X						
X	X						
X	X						
X	X						

**RUSH**

Relinquished by (Name & Dept.): <u>Clement D. Silva</u>	Date & Time: <u>11/13/00 @ 2:36</u>	Received by (Name & Dept.): <u>MUST</u>	Date & Time: <u>11-13-00 2:40</u>	Ship Via:
Relinquished by (Name & Dept.): _____	Date & Time: <u>11/13/00 3:30</u>	Received by (Name & Dept.): _____	Date & Time:	Bill of Lading/Airbill No.:
Relinquished by (Name & Dept.): _____	Date & Time:	Received by (Name & Dept.): <u>C. Rowley</u>	Date & Time: <u>11/13/00 1535</u>	
SAP Accounting Data:	Billing Contact:	Billing Address:		

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
  2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
  3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
  4. The final PCB results will be the cumulative results added together for each PCB.
  5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)  
 White: Laboratory  
 Canary: Originator  
 Pink: Sampler

Appendix F

**ABOVEGROUND STORAGE TANK  
ANALYTICAL DATA SHEETS FOR PCBs**

**Laboratory Test Report**

Technical and Ecological Services

3400 Crow Canyon Road

San Ramon, CA 94583

TES 24-Hr. Service Line: 8-251-3197 or (925) 866-3197

Report #: 441.81-00.19

Rev. 1

**Pacific Gas and  
Electric Company**

**SUBJECT: PCB ANALYSIS OF SOIL SAMPLES  
EMERYVILLE SOIL PROJECT  
TES CHEMISTRY SERVICES UNIT FILE NOS. 0009-016,017,018,019  
0010-017,019,021**

Twenty-nine soil samples were received for analysis. All samples were prepared and analyzed on the day they were sampled. Samples were prepared by oven drying the soil, then pulverizing, followed by isooctane extraction. Analysis was by gas chromatography by EPA Method 8082. The sample identification and test results are reported below. The quality control data follow, along with associated chain of custody forms.

Aroclor 1260 was the only PCB found.

LAB NO.	SEQ	SITE ID	DATE	Aroclor 1260, ppm	Depth
00-09-016	2	NW-N-1	9/20/2000	2.7	4.5'
00-09-016	3	NW-N-2	9/20/2000	<1	7'
00-09-016	4	NW-E-1	9/20/2000	2.5	7'
00-09-016	5	NW-S-1	9/20/2000	<1	7'
00-09-016	6	NW-B-1	9/20/2000	2.4	9'
00-09-017	1	NE-N-L1	9/20/2000	<1	10'
00-09-017	2	NE-E-L1	9/20/2000	1.7	8'
00-09-017	3	NE-W-L1	9/20/2000	2.1	9'
00-09-017	4	NE-S-L1	9/20/2000	3.2	10'
00-09-017	5	NW-N-L1	9/20/2000	3.3	10'
00-09-017	6	NW-E-L1	9/20/2000	<1	10'
00-09-017	7	NW-W-L1	9/20/2000	17.2	10'
00-09-017	8	NW-S-L1	9/20/2000	2.2	10'
00-09-017	9	NE-S-2	9/20/2000	9.4	5'
00-09-018	1	SW-N-L1	9/21/2000	5.8	7'
00-09-018	2	SW-E-L1	9/21/2000	37	7'
00-09-018	3	SW-S-L1	9/21/2000	44	7'
00-09-018	4	SW-W-L1	9/21/2000	2.6	7'

Date: 01/09/01Tested by: Janet Wong

Janet W. Wong

Approved by: J M Henderson

J M. Henderson

LAB NO.	SEQ	SITE ID	DATE	Aroclor 1260, ppm	Depth
00-09-019	1	SW-E-L2	9/21/2000	5.6	8'
00-09-019	2	SW-S-L2	9/21/2000	1.3	8'
00-10-017	1	10' from wall	10/9/2000	3.6	6"
00-10-017	2	15' from wall	10/9/2000	3.8	6"
00-10-017	3	20' from wall	10/9/2000	12	6"
00-10-019	1	2' deep 20' from wall	10/10/2000	<1	
00-10-021	1	2' deep near wall 4' back	10/10/2000	<1	2'
00-10-021	2	2' deep near wall 20' back	10/10/2000	<1	2'
00-10-021	3	2' deep 20' from wall	10/10/2000	<1	2'
00-10-021	4	6" deep near well	10/10/2000	<1	6"
00-10-021	5	6" deep 20' from well	10/10/2000	<1	6"

Aroclors 1016 through 1268 would have been reported had they appeared at or above the reporting limit of 1 ppm (mg/Kg).

Please contact Lansing Wong at company number 8-251-5473 or Pacific Bell number 925-866-5473 if there are any questions regarding the chemical analysis.

pc: Amadou M. Cisse  
Fred Flint  
Peter M. Haight  
Marek K. Waligora

PCB Analysis  
Emeryville Soil Project  
TES Chemistry Services Unit File Nos. 0009-016, 017, 018, 019  
0010-017, 019,021

Report #: 441.81-00.19  
Rev. 1

Quality Assurance Data

Run Number: Sequence 3\1010main.s\T09016-3  
Method Reporting Limit: 1 ppm (mg/Kg)  
Method Preparation Blank: <1 ppm

	Aroclor	Spike Recovery	SD <sup>1</sup>
Soil Spike	1242	98.8 %	2.0 %
	1260	83.0	5.4 %

<sup>1</sup>SD is the standard deviation.

**Chain of Custody Record**

From: Pacific Gas & Electric Company  PG&E Facility  Sample Site  
 Address or Location: Hollis Street  
 City: Emeryville, CA (Zip) CA  
 Contact Name/Phone No.: Linda Marshall

Ship To: Lab Name: PLI Z TES  
 Address: 3400 Crow Canyon Rd.  
 City: San Ramon, CA (Zip) 94523  
 Phone No. 925-846-5491  
 Contact Name: J Henderson

Turnaround Time  
 NORMAL (10 days or less)  RUSH  OTHER, Specify \_\_\_\_\_  
Due Date & Time  
 TELEPHONE  FAX Give Results to: \_\_\_\_\_  
Name P/FAX

Analysis Requested											
EPA Method PCB											
TES 0009016 (1-6)											
Remarks											
#1 don't analyze											

Project Name: EMV-PCB Soil Project Supervisor (Name/Phone No.): Linda Marshall  
 Sampled by: (Signature) \_\_\_\_\_ (Print Name)

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. <u>NE-1</u>	<u>9/20</u>	<u>0959</u>	<u>Soil w PCB</u>	<u>1</u>	<u>9oz.</u>
2. <u>NW-N-1</u>	<u>9/20</u>	<u>1243</u>	<u>" "</u>	<u>1</u>	<u>"</u>
3. <u>NW-N-2</u>	<u>9/20</u>		<u>" "</u>	<u>1</u>	<u>"</u>
4. <u>NW-E-1</u>	<u>9/20</u>		<u>" "</u>	<u>1</u>	<u>"</u>
5. <u>NW-S-1</u>	<u>9/20</u>		<u>" "</u>	<u>1</u>	<u>"</u>
6. <u>NW-B-1</u>	<u>9/20</u>		<u>" "</u>	<u>1</u>	<u>"</u>
7.					
8.					
9.					
10.					
11.					
12.					

Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:	Ship Via:
Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:	Bill of Lading/Airbill No.:
Relinquished by (Name&Dept.):	Date&Time:	Received by (Name&Dept.):	Date&Time:	
SAP Accounting Data:	Billing Contact:	Billing Address:		

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
  2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
  3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
  4. The final PCB results will be the cumulative results added together for each PCB.
  5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)  
 White: Laboratory  
 Canary: Originator  
 Pink: Sampler



**Chain of Custody Record**

From: Pacific Gas & Electric Company  PG&E Facility  Sample Site  
 Address or Location: EMERVILLE MF  
 City: EMERVILLE, CA (Zip)  
 Contact Name/Phone No.: FLINT / 5808

Ship To: Lab Name: TES  
 Address: \_\_\_\_\_  
 City: SR, CA (Zip)  
 Phone No. 5808  
 Contact Name: FLINT

**Turnaround Time**  
 NORMAL (10 days or less)  RUSH 9/20  OTHER, Specify \_\_\_\_\_  
Due Date & Time  
 TELEPHONE  FAX Give Results to: FLINT / 5808  
Name PW/FAX

Project Name: \_\_\_\_\_ Project Supervisor (Name/Phone No.): \_\_\_\_\_  
 Sampled by: (Signature) \_\_\_\_\_ (Print Name) \_\_\_\_\_

Containers		Remarks
No.	Size	
PCBs		TES 0009017 (1-9)
		NE-S-1, Low

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. NE-U-L1	9/20	7:15	10' BGS 6' FD EAST		
2. NE-E-L1		4:15	98' BGS 10" FL N		
3. NE-W-L1		4:15	9' BGS 6' FL N		
4. NE-S-L1		4:20	10' BGS		
5. NW-N-L1		4:22	10' BGS 4.5' FL W		
6. NW-E-L1		4:22	4-5' BGS 11.5' FL N		
7. NW-W-L1		4:22	10' BGS 9' FL N		
8. NW-S-L1		4:22	10' BGS 11' FL W		
9. NE-S-2	2	4:20	5' BGS		
10.					
11.					
12.					

Relinquished by (Name & Dept.): <u>Paul Flint TES</u>	Date & Time: <u>9/20/00 1730</u>	Received by (Name & Dept.): <u>Palma Balbuena</u>	Date & Time: <u>9/20/00 1730</u>	Ship Via:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	Bill of Lading/Airbill No.:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	

SAP Accounting Data: \_\_\_\_\_ Billing Contact: \_\_\_\_\_ Billing Address: \_\_\_\_\_

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
  2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
  3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
  4. The final PCB results will be the cumulative results added together for each PCB.
  5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)  
 White: Laboratory  
 Canary: Originator  
 Pink: Sampler

**Chain of Custody Record**

From: Pacific Gas & Electric Company  PG&E Facility  Sample Site  
 Address or Location: EMERYVILLE MRP  
 City: EMERYVILLE, CA (Zip)  
 Contact Name/Phone No.: FLINT / 5808

Ship To: Lab Name: TES  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_, CA (Zip)  
 Phone No. \_\_\_\_\_  
 Contact Name: \_\_\_\_\_

**Turnaround Time**  
 NORMAL (10 days or less)  RUSH ASAP  OTHER, Specify \_\_\_\_\_  
Due Date & Time  
 TELEPHONE  FAX Give Results to: FLINT 5808  
Name P/FAX  
 Project Name: \_\_\_\_\_ Project Supervisor (Name/Phone No.): \_\_\_\_\_  
 Sampled by: (Signature) \_\_\_\_\_ (Print Name) \_\_\_\_\_

**Analysis Requested**

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers		Remarks
	Date	Time		No.	Size	
01A 1. SW - N - L1	9/24/00	1000	7' BGS 26' x 6" PFSUL	1		PCBs TES 0009018(1-4)
04A 2. SW - E - L1			7' BGS 23' x 3" PFSUL	1		
03A 3. SW - S - L1			7' BGS 18' FA SW L	1		
04A 4. SW - W - L1			7' BGS 13' x 6" PFSUL	1		
5.						
6.						
7.						
8.						
9.						
10.						
11.						
12.						

Relinquished by (Name & Dept.): <u>TES</u>	Date & Time: <u>9/24/00 1055</u>	Received by (Name & Dept.): <u>TES</u>	Date & Time: <u>9-21-00 1055</u>	Ship Via:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	Bill of Lading/Airbill No.:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	

SAP Accounting Data: \_\_\_\_\_ Billing Contact: \_\_\_\_\_ Billing Address: \_\_\_\_\_

Notes: 1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.  
 2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.  
 3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.  
 4. The final PCB results will be the cumulative results added together for each PCB.  
 5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #5)  
 White: Laboratory  
 Canary: Originator  
 Pink: Sampler

**Chain of Custody Record**

 From: Pacific Gas & Electric Company  PG&E Facility  Sample Site  
 Address or Location: Emeryville Repair Facility 4525 Hollis St.  
 City: Emeryville, CA (Zip) 94608  
 Contact Name/Phone No.: Sue Fandel / 415-972-5719

 Ship To: Lab Name: TES  
 Address: \_\_\_\_\_  
 City: San Ramon, CA (Zip) \_\_\_\_\_  
 Phone No. 925-866-5473  
 Contact Name: Lance Wong

 Turnaround Time  
 NORMAL (10 days or less)  RUSH  OTHER, Specify \_\_\_\_\_  
Due Date & Time  
 TELEPHONE  FAX Give Results to: Fred Flint 925-866-5808  
Name PL/FAX  
 Project Name: Emeryville AST Remediation Project Supervisor (Name/Phone No.): Sue Fandel - 415-972-5719  
 Sampled by: (Signature) Sue Fandel (Print Name) Susan Fandel

Analysis Requested											
PCB						TES 0009019(1-2)					
						Remarks					
						2.0e 4N 1.6e 4N'					

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. SW-E-L2	9/21/00	17:25	Soil	1	8 ounce
2. SW-S-L2	9/21/00	17:25	Soil	1	8 ounce
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Relinquished by (Name & Dept.): <u>Susan Fandel X222-5719</u>	Date & Time: <u>9-21-00 1830</u>	Received by (Name & Dept.): <u>Lance Wong TES</u>	Date & Time: <u>9-21-00 1830</u>	Ship Via:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	Bill of Lading/Airbill No.:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	
SAP Accounting Data:	Billing Contact:	Billing Address:		

- Notes:
- Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
  - File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
  - The first "Relinquished by/Date" is the shipping date unless otherwise noted.
  - The final PCB results will be the cumulative results added together for each PCB.
  - When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

Distribution (See note #3)  
 White: Laboratory  
 Canary: Originator  
 Pink: Sampler



### Chain of Custody Record

From: Pacific Gas & Electric Company  PG&E Facility  Sample Site  
 Address or Location: \_\_\_\_\_  
 City: EMERYVILLE, CA (Zip) \_\_\_\_\_  
 Contact Name/Phone No.: \_\_\_\_\_

Ship To: Lab Name: TES  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_, CA (Zip) \_\_\_\_\_  
 Phone No. \_\_\_\_\_  
 Contact Name: \_\_\_\_\_

**Turnaround Time**  
 NORMAL (10 days or less)  **RUSH**                       OTHER, Specify \_\_\_\_\_  
Due Date & Time  
 TELEPHONE  FAX Give Results to: \_\_\_\_\_  
Name P/FAX

**Analysis Requested**

PCB X X X X X X X X X X X								TES 0010017 Remarks

Project Name: \_\_\_\_\_ Project Supervisor (Name/Phone No.): \_\_\_\_\_  
 Sampled by: (Signature) \_\_\_\_\_ (Print Name) CELENE DA SILVA

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. H1 10' FROM WALL	10/9/00	2pm			
2. H2 16' FROM WALL					
3. H3 20' FROM WALL					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Relinquished by (Name & Dept.): <u>Amadeu G. Sse</u>	Date & Time: <u>10/9/00 2pm</u>	Received by (Name & Dept.): <u>TES</u>	Date & Time: <u>10/09/00 1400</u>	Ship Via: Bill of Lading/Airbill No.:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	

SAP Accounting Data: \_\_\_\_\_ Billing Contact: \_\_\_\_\_ Billing Address: \_\_\_\_\_

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
  2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
  3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
  4. The final PCB results will be the cumulative results added together for each PCB.
  5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

**Distribution (See note #5)**  
 White: Laboratory  
 Canary: Originator  
 Pink: Sampler

**Chain of Custody Record**

From: Pacific Gas & Electric Company  PG&E Facility  Sample Site  
 Address or Location: Horens St  
 City: Emeryville, CA (Zip) \_\_\_\_\_  
 Contact Name/Phone No.: 251 5808

Ship To: Lab Name: TES  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_, CA (Zip) \_\_\_\_\_  
 Phone No. \_\_\_\_\_  
 Contact Name: \_\_\_\_\_

NORMAL (10 days or less)  RUSH ASAP  OTHER, Specify \_\_\_\_\_  
Due Date & Time  
 TELEPHONE  FAX Give Results to: \_\_\_\_\_  
Name D/FAX

Analysis Requested												
PCBs											TES 0010-018 -1	
											Remarks	

Project Name: East/West Ad Project Supervisor (Name/Phone No.): FLAN  
 Sampled by: (Signature) [Signature] (Print Name) FLAN FLAN

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. 2' DEEP 20' PWS	10/10/00	10:00		2	4oz
2. <u>WAC</u>					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					

Relinquished by (Name & Dept.): <u>[Signature]</u>	Date & Time: <u>10/10/00 1040</u>	Received by (Name & Dept.): <u>TES</u>	Date & Time: <u>10/10/00 1040</u>	Ship Via:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	Bill of Lading/Airbill No.:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	

SAP Accounting Data: \_\_\_\_\_ Billing Contact: \_\_\_\_\_ Billing Address: \_\_\_\_\_

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
  2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
  3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
  4. The final PCB results will be the cumulative results added together for each PCB.
  5. When this form is computer-generated, send the completed original to the laboratory and \_\_\_\_\_ copies to the \_\_\_\_\_ or \_\_\_\_\_ and \_\_\_\_\_.

**Distribution (See note #5)**  
 White: Laboratory  
 Canary: Originator  
 Pink: Sampler

### Chain of Custody Record

From: Pacific Gas & Electric Company  PG&E Facility  Sample Site  
 Address or Location: 4525 HOLLIS STR  
 City: EMERYVILLE, CA (Zip) 94608  
 Contact Name/Phone No.: \_\_\_\_\_

Ship To: Lab Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_, CA (Zip) \_\_\_\_\_  
 Phone No. \_\_\_\_\_  
 Contact Name: \_\_\_\_\_

**Turnaround Time**  
 NORMAL (10 days or less)  RUSH Due Date & Time \_\_\_\_\_  OTHER, Specify \_\_\_\_\_  
 TELEPHONE  FAX Give Results to: FRED FLINT / CLEM DASILVA  
Name P/FAX

Analysis Requested					Remarks
PCB					
TFS 0010021 (1-5)					

Project Name: \_\_\_\_\_ Project Supervisor (Name/Phone No.): \_\_\_\_\_  
 Sampled by: (Signature) Clement Dasilva (Print Name) \_\_\_\_\_

Sample No./ Equipment Serial No.	Sampled		Sample Type/Description	Containers	
	Date	Time		No.	Size
1. 2' Deep, Near Well	10/10	3:30	SOIL	1	
2. 4' back					
3. 2' deep, Near Well	10/10	3:30	SOIL	1	
4. 20ft back					
5. 2' deep 20ft	10/10	3:30	SOIL	1	
6. from well					
7. 6" deep near	10/10	3:30	SOIL	1	
8. well					
9. 6" deep, 20ft	10/10	3:30	SOIL	1	
10. from well					
11.					
12.					

Relinquished by (Name & Dept.): <u>Clement Dasilva</u>	Date & Time: <u>10/10/00 4:40</u>	Received by (Name & Dept.): <u>TFS</u>	Date & Time: <u>10/10/00 1640</u>	Ship Via:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	Bill of Lading/Airbill No.:
Relinquished by (Name & Dept.):	Date & Time:	Received by (Name & Dept.):	Date & Time:	

SAP Accounting Data: \_\_\_\_\_ Billing Contact: \_\_\_\_\_ Billing Address: \_\_\_\_\_

- Notes:
1. Samples are discarded by the laboratory 90 days after results are reported unless other arrangements are made.
  2. File a copy of this Chain of Custody Record, complete with appropriate laboratory signatures, with the test analysis results.
  3. The first "Relinquished by/Date" is the shipping date unless otherwise noted.
  4. The final PCB results will be the cumulative results added together for each PCB.
  5. When this form is computer-generated, send the completed original to the laboratory, and make copies for the originator and sampler.

**Distribution (See note #5)**  
 White: Laboratory  
 Canary: Originator  
 Pink: Sampler

Appendix G  
**HAZARDOUS WASTE MANIFESTS**

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7350

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CAD983852272</b>		Manifest Document No. <b>4488</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator Name and Site Address <b>PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94808</b>				SITE: <b>EMERYVILLE REPAIR FACILITY 4525 HOLLIS STREET EMERYVILLE, CA 94808</b>				A. State Manifest Document Number <b>20144801</b>			
4. Generator's Phone (510) 874-5527 ATTN: JESUS LUNA				6. US EPA ID Number <b>CAD983852272</b>				B. State Generator's ID <b>HYHQ38008798</b>			
5. Transporter 1 Company Name <b>UNIVERSAL ENVIRONMENTAL</b>				7. Transporter 2 Company Name				C. State Transporter's ID [Reserved.]			
9. Designated Facility Name and Site Address <b>CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93239</b>				10. US EPA ID Number <b>CAT000848117</b>				D. Transporter's Phone <b>(707)747-8899</b>			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>				12. Containers No. Type <b>0 0 1 D T</b>		13. Total Quantity <b>Estimate 211000</b>		14. Unit Wt/Vol <b>K</b>		I. Waste Number State <b>011</b> <b>NON RCRA</b>	
b.								State <b>11</b>			
c.								EPA/Other			
d.								State			
								EPA/Other			
J. Additional Descriptions for Materials Listed Above <b>11a) OSD 3/B 9/27/00 PER JIM FERRELL PG&amp;E SC 9/27/00</b>				K. Handling Codes for Wastes Listed Above a. <b>03</b>							
15. Special Handling Instructions and Additional Information <b>Bolt TRANSPORTATION CAR 0000666 21 - TRANSPORTER 1 SAP# 8000594</b>				SAP# 8000594						Charge to <b>10-3-00</b>	
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name <b>LINDA MARSHALL</b>			Signature <i>Linda Marshall</i>			Month Day Year <b>09 27 00</b>					
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>Lisa Daniels</b>			Signature <i>Lisa Daniels</i>			Month Day Year <b>09 27 00</b>					
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name			Signature			Month Day Year					
19. Discrepancy Indication Space											
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. <b>Rec'd 10/22/00 Ho. Received with generator's log</b>											
Printed/Typed Name <b>SAMUEL T. CERVENY</b>			Signature <i>Samuel T. Cerveney</i>			Month Day Year <b>09 27 00</b>					

DO NOT WRITE BELOW THIS LINE.



Information in the shaded areas is not required by Federal law.

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. C A D 9 8 3 8 5 2 2 7 2		Manifest Document No. <i>48-10-1</i>		2. Page 1 of 1	
3. Generator Name and Address PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94608			SITE: EMERYVILLE REPAIR FACILITY 4625 HOLLIS STREET EMERYVILLE CA 94608		
4. Generator's Phone (510) 874-5527			ATTN: JESUS LUNA		
5. Transporter 1 Company Name UNIVERSAL ENVIRONMENTAL			6. US EPA ID Number C A D 9 8 3 8 5 2 2 7 2		
7. Transporter 2 Company Name			8. US EPA ID Number		
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93239			10. US EPA ID Number C A T 0 0 0 6 4 0 1 1 7		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity	
a. NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)		No. Type		Estimate	
		0 0 1 D T		21000	
b.					
c.					
d.					
14. Additional Descriptions for Materials Listed Above <i>(10) OSB 5/3 9/15/00 PER JIM FEARELL @ PGE SC 9/27/00</i>			15. Handling Codes for Wastes Listed Above		
			a. 03		
			b.		
			c.		
			d.		
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.					
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.					
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name LINDA MARSHALL		<i>Linda Marshall</i>		09 27 00	
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		Month Day Year	
Printed/Typed Name RONALD HEATON		<i>Ronald Heaton</i>		09 27 00	
19. Discrepancy Indication Space					
<i>Record 14279K. Resolved with Jim Fenwick/Gens Heaton</i>					
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19		Signature		Month Day Year	
Printed/Typed Name SAMUEL T. CERVENY		<i>Samuel T. Cerveney</i>		09 27 00	

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550  
 GENERATOR  
 TRANSPORTER  
 FACILITY

DO NOT WRITE BELOW THIS LINE.

1-800-521-8800 WITHIN CALIFORNIA CALL 1-800-852-7350  
 GENERATOR  
 TRANSPORTER  
 FACILITY

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CAD983052272</b>		Manifest Document No. <b>4, 289 7</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.		
3. Generator's Name and Mailing Address <b>PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94808</b>				SITE: <b>EMERYVILLE REPAIR FACILITY/ 4525 HOLLIS STREET EMERYVILLE CA 94808</b>				A. State Manifest Document Number <b>20144807</b>		
4. Generator's Phone (510) 874-5527				ATTN: <b>JESUS LUNA</b>				B. State Generator's ID: <b>HYHQ38008798</b>		
5. Transporter 1 Company Name <b>UNIVERSAL ENVIRONMENTAL</b>				6. US EPA ID Number <b>CAD983052272</b>				C. State Transporter's ID (Reserved)		
7. Transporter 2 Company Name				8. US EPA ID Number				D. Transporter's Phone <b>(707)747-6899</b>		
9. Designated Facility Name and Site Address <b>CHEMICAL WASTE MANAGEMENT, INC 3525 OLD SKYLINE ROAD KETTLEMAN CITY CA 93239</b>				10. US EPA ID Number <b>CAT000848117</b>				E. State Transporter's ID (Reserved)		
								F. Transporter's Phone		
								G. State Facility's ID <b>KAT000646117</b>		
								H. Facility's Phone <b>8002222964</b>		
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total	14. Unit	15. Waste Number
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>						No. Type		Quantity	Wt/Vol	State
						0 0 1 D T		Estimate <b>21000</b>	<b>K</b>	<b>611</b>
										EPA/Other <b>NON RCRA</b>
										State
										EPA/Other
										State
										EPA/Other
16. Additional Descriptions for Materials Listed Above <b>32415 DEBRIS CONTAMINATED WITH 50-499 PPM PCB 611 ERG</b>						K. Handling Codes for Wastes Listed Above				
17a) <b>QSD \$/B 9/15/00 PER JIM FERRELL DGE SC 9/27/00</b>						a. <b>03</b>		b.		
18. Special Handling Instructions and Additional Information <b>Sub Hauler BOLT EPA # CAR 000066621 Transporter 1 10-3-00 SAP# Wear personal protective clothing 24 hr emergency # 1-800-521-1030 Lee Soares. Cty. to SAP # 8000599</b>						c.				
19. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.						d.				
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.										
Printed/Typed Name <b>LINDA MARSHALL</b>			Signature <i>Linda Marshall</i>			Month <b>09</b>		Day <b>27</b>		Year <b>00</b>
17. Transporter 1 Acknowledgement of Receipt of Materials			Printed/Typed Name <b>M... ..</b>			Signature <i>M...</i>			Month <b>7</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials			Printed/Typed Name			Signature			Month <b>7</b>	
19. Discrepancy Indication Space			Signature			Month <b>09</b>			Day <b>27</b>	
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.			Printed/Typed Name <b>SAMUEL T. CAULEY</b>			Signature <i>Samuel T. Cauley</i>			Month <b>09</b>	
									Day <b>27</b>	
									Year <b>00</b>	

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. C A D 9 8 3 8 5 2 2 7 2		Manifest Document No. <b>480</b>		2. Page 1		Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94808				SITE: EMERYVILLE REPAIR FACILITY 4525 HOLLIS STREET EMERYVILLE CA 94808		A. State Manifest Document Number <b>20144808</b>							
4. Generator's Phone (510 ) 974-5527				ATTN: JESUS LUNA		B. State Generator's ID H Y H Q 3 8 0 0 8 7 3 8							
5. Transporter 1 Company Name UNIVERSAL ENVIRONMENTAL				6. US EPA ID Number C A D 9 8 3 8 5 2 2 7 2		C. State Transporter's ID (Reserved)							
7. Transporter 2 Company Name				8. US EPA ID Number		D. Transporter's Phone (707) 747-8899							
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93239				10. US EPA ID Number C A T 0 0 0 8 A E R 1 7		E. State Facility's ID C A T 1 0 0 1 6 4 6 1 1 1 7							
						F. Facility's Phone 8002222984							
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. NON RCRA HAZARDOUS WASTE, SOLID. (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)						12. Containers No. Type		13. Total Quantity Estimate		14. Unit Wt/Vol		15. Waste Number	
						0 0 1 D T		21000		K		State NON RCRA	
												State	
												EPA/Other	
												State	
16. Additional Descriptions for Materials Listed Above 11A. BQ4 113 DEBRIS CONTAMINATED WITH 50-499 PPM PCB 811 ERG - 111: State code 611 also applies 10-3-00 11b) OSD/SB 9/15/00 PER JIM FERRELL @ PG&E SC						K. Handling Codes for Wastes Listed Above a. 03							
15. Special Handling Instructions and Additional Information Subhailer Bolt EPA# CAR00006662 Transporter 1 10-3-00 TE Sag# Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares. Chg. to SAP# 8000594													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.													
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name LINDA MARSHALL				Signature <i>Linda Marshall</i>				Month Day Year 09 27 00					
17. Transporter 1 Acknowledgement of Receipt of Materials				Printed/Typed Name Ryan Fittner				Signature <i>Ryan Fittner</i>		Month Day Year 09 27 00			
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name				Signature		Month Day Year			
19. Discrepancy Indication Space													
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. 13) Doc # 10496 K. Rosendahl Jim Ferrell and the...													
Printed/Typed Name STANLEY T. CRAWFORD				Signature <i>Stanley Crawford</i>				Month Day Year 09 27 00					

DO NOT WRITE BELOW THIS LINE.

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **CADPBR4AP41B4** Manifest Document No. **2809** 2. Page 1 of 1  
 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC**  
**4525 HOLLIS STREET**  
**EMERYVILLE CA 94608**  
 4. Generator's Phone (510) **874-5527** ATTN: **JESUS LUNA**  
 SITE: **EMERYVILLE REPAIR FACILITY**  
**4625 HOLLIS STREET**  
**EMERYVILLE CA 94608**

A. State Manifest Document Number  
**20144809**

B. State Generator's ID:  
**HYHQ3B0008798**

5. Transporter 1 Company Name  
**UNIVERSAL ENVIRONMENTAL**  
 6. US EPA ID Number  
**CADBB3052272**

C. State Transporter's ID (Reserved.)

D. Transporter's Phone  
**(707)747-8000**

7. Transporter 2 Company Name  
 8. US EPA ID Number

E. State Transporter's ID (Reserved.)

F. Transporter's Phone

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
**35251 OLD SKYLINE ROAD**  
**KETTLEMAN CITY CA 93239**  
 10. US EPA ID Number  
**CAT000048117**

G. State Facility's ID  
**CA70606461117**

H. Facility's Phone  
**8002222084**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>	<b>001</b>	<b>DOT</b>	<b>Estimate 21000</b>	<b>K</b>	<b>State 811</b> <b>NON RCRA</b>
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above  
**NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB) 011 ERD**  
**- 111**

K. Handling Codes for Wastes Listed Above  
 a. **03**  
 b.  
 c.  
 d.

15. Special Handling Instructions and Additional Information  
**Subhandler - Bolt EPA# → CAR00088666Z1 Transporter 1**  
**SAP# Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares**  
**Chg. to SAP 8000594**  
**10-3-00 TR**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: **LINDA MARSHALL** Signature: *Linda Marshall* Month: **09** Day: **27** Year: **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: *Owen Collins* Signature: *Owen Collins* Month: **09** Day: **27** Year: **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: Signature: Month: Day: Year:

19. Discrepancy Indication Space  
**Rec'd 17,028K Received with Jim Ferrell/Gen 9/10/00**

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in item 19.  
 Printed/Typed Name: **SAMUEL T. CERVENY** Signature: *Samuel T. Cerveney* Month: **09** Day: **27** Year: **00**

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **CAD882R10001B4** Manifest Document No. **4851** 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

A. State Manifest Document Number  
**20144810**

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC** SITE: **EMERYVILLE REPAIR FACILITY**  
**4525 HOLLIS STREET** **4525 HOLLIS STREET**  
**EMERYVILLE CA 94808** **EMERYVILLE CA 94808**  
 4. Generator's Phone (510) **874-5527** ATTN: **JESUS LUNA**

B. State Generator's ID:  
**HYHQ38008798**

5. Transporter 1 Company Name  
**UNIVERSAL ENVIRONMENTAL** 6. US EPA ID Number  
**CAD983852272**

C. State Transporter's ID (Reserved)  
 D. Transporter's Phone  
**(707)747-8899**

7. Transporter 2 Company Name 8. US EPA ID Number

E. State Transporter's ID (Reserved)  
 F. Transporter's Phone

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC** 10. US EPA ID Number  
**35251 OLD SKYLINE ROAD**  
**KETTLEMAN CITY CA 93239** **CAT000348117**

G. State Facility's ID  
**CA7000646117**  
 H. Facility's Phone  
**8002222984**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Val	1. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>	0	0	<b>Estimate 21000</b>	<b>K</b>	State <b>611</b> EPA/Other <b>NON RCRA</b>
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above  
**11A. 611 DEBRIS CONTAMINATED WITH 50-499 PPM PCB 611 ERG - 171**  
**(11a) 050 5/3 9/15/00 PER JIM FERRELL @ PG&E SC 9/27/00**

K. Handling Codes for Wastes Listed Above  
 a. **03**  
 b.  
 c.  
 d.

15. Special Handling Instructions and Additional Information  
**NAULER SUB CFA# CAD982417900 - CABILLO TRANSPORTER 1 10-3-00**  
**Sag# Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares**  
**Chg to 8000594**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: **LINDA MARSHALL** Signature: *Linda Marshall* Month: **09** Day: **27** Year: **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: **Wayne Sneddon** Signature: *Wayne Sneddon* Month: **09** Day: **27** Year: **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: Signature: Month: Day: Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name: **SPINFL T. CER...** Signature: *[Signature]* Month: **09** Day: **27** Year: **00**

**DO NOT WRITE BELOW THIS LINE.**

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

FACILITY

99 9836039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. CA 0082412900 Manifest Document No. 48111 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC**  
 4525 HOLLIS STREET  
 EMERYVILLE CA 94608  
 4. Generator's Phone (510) 874-5527  
 SITE: **EMERYVILLE REPAIR FACILITY**  
 4525 HOLLIS STREET  
 EMERYVILLE CA 94608  
 ATTN: **JESUS LUNA**

A. State Manifest Document Number  
**20144811**

B. State Generator's ID  
**HYHQ38008798**

5. Transporter 1 Company Name  
**UNIVERSAL ENVIRONMENTAL**  
 6. US EPA ID Number  
**CA 0082412900**

C. State Transporter's ID (Reserved)

7. Transporter 2 Company Name  
**CABALLERO TRUCKING**  
 8. US EPA ID Number  
**CA 0082412900**

D. Transporter's Phone  
**(707) 747-8800**  
 E. State Transporter's ID (Reserved)  
**(408) 729-0196**

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
 35251 OLD SKYLINE ROAD  
 KETTLEMAN CITY CA 93238  
 10. US EPA ID Number  
**CAT000848117**

F. Transporter's Phone

G. State Facility's ID  
**CAT000646117**

H. Facility's Phone  
**8002222884**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Vol I. Waste Number

a. **NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-489 PPM PCB)**

0 0 1 D T Estimate 21000 Yr K  
 State 611  
 EPA/Other NON RCRA

b.

State EPA/Other

c.

State EPA/Other

d.

State EPA/Other

J. Additional Descriptions for Materials Listed Above  
 (b) OSO 5/3 9/15/00 PER TIM FERRELL @ PGE  
 Hauler Sub - Caballero EPA ID # CA0082412900  
 Supp. Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares.  
 Chg. to 8000594

K. Handling Codes for Wastes Listed Above  
 a. 03  
 b.  
 c.  
 d.

15. Special Handling Instructions and Additional Information  
 Hauler Sub - Caballero EPA ID # CA0082412900  
 Supp. Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares.  
 Chg. to 8000594

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **LINDA MARSHALL** Signature *Linda Marshall* Month **09** Day **27** Year **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **ADRIAN BOSTON** Signature *Adrian Boston* Month **09** Day **27** Year **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name Signature Month Day Year

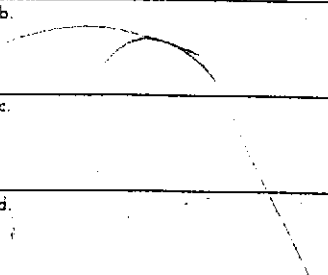
19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name **SAMUEL T. CERVENY** Signature *Samuel T. Cerveney* Month **09** Day **27** Year **00**

DO-NOT WRITE BELOW THIS LINE.

GENERATOR  
 TRANSPORTER  
 FACILITY  
 1-800-488-8800 WITHIN CALIFORNIA CALL 1-800-852-7350

JUL4401Z  
 IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CTDP8240041B4</b>		Manifest Document No. <b>4812</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.											
3. Generator's Name and Mailing Address <b>PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94808</b>				SITE: <b>EMERYVILLE REPAIR FACILITY 4525 HOLLIS STREET EMERYVILLE CA 94808</b>				A. State Manifest Document Number <b>20144812</b>											
4. Generator's Phone (510) <b>874-5527</b> ATTN: <b>JESUS LUNA</b>				6. US EPA ID Number <b>CAR000036830</b>		B. State Generator's ID <b>HYHQ38008798</b>													
5. Transporter 1 Company Name <b>UNIVERSAL ENVIRONMENTAL</b>				7. US EPA ID Number <b>CAD083852272</b>		C. State Transporter's ID [Reserved.]													
7. Transporter 2 Company Name <b>SHAFF'S</b>				8. US EPA ID Number		D. Transporter's Phone <b>(707)747-0000</b>													
9. Designated Facility Name and Site Address <b>CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93230</b>				10. US EPA ID Number <b>CAT000848117</b>		E. State Transporter's ID [Reserved.] <b>391-4549</b>													
						F. Transporter's Phone													
						G. State Facility's ID <b>CAT0006461117</b>													
						H. Facility's Phone <b>8002222964</b>													
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity		14. Unit		15. Waste Number							
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>  b.   c.  d.						No.		Type		Estimate		K		State <b>611</b>					
						0		1		D		T		21000		NON RCRA		EPA/Other	
																State			
																EPA/Other			
																State			
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.						K. Handling Codes for Wastes Listed Above													
11A. BQ113 DEBRIS CONTAMINATED WITH 50-499 PPM PCB 811 ERG -111: 11a) OSO 51B 9/15/09 PER JIM FERRELL @ P/GE SC 9/2/00						a. <b>C3</b>		b.		c.		d.							
15. Special Handling Instructions and Additional Information <b>Handled by - CAR000036830 SHAFF'S Saftey Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares. City 8000594</b>																			
17. Transporter 1 Acknowledgement of Receipt of Materials						18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name <b>LINDA MARSHALL</b>			Signature <i>Linda Marshall</i>			Month <b>07</b>			Day <b>27</b>			Year <b>2009</b>							
Printed/Typed Name <i>Tamara Allenbaugh</i>			Signature <i>Tamara Allenbaugh</i>			Month <b>07</b>			Day <b>27</b>			Year <b>2009</b>							
Printed/Typed Name			Signature			Month			Day			Year							
19. Discrepancy Indication Space																			
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.																			
Printed/Typed Name <b>SAMUEL T. CERVENY</b>			Signature <i>Samuel T. Cerveney</i>			Month <b>09</b>			Day <b>27</b>			Year <b>2009</b>							

DO NOT WRITE BELOW THIS LINE.

9A33718

See instructions on back of page 6.

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. CA P 0 8 2 4 0 0 4 1 8 4		Manifest Document No. 4-8-15 3		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94608				SITE: EMERYVILLE REPAIR FACILITY 4525 HOLLIS STREET EMERYVILLE CA 94608			
4. Generator's Phone (510) 874-5527				ATTN: JESUS LUNA			
5. Transporter 1 Company Name UNIVERSAL ENVIRONMENTAL				6. US EPA ID Number C A D 0 8 3 8 5 2 2 7 2			
7. Transporter 2 Company Name				8. US EPA ID Number			
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93239				10. US EPA ID Number C A T 0 0 0 8 4 0 1 1 7			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)		12. Containers		13. Total Quantity		14. Unit Wt/Vol	
a. NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)		0 0 1 D T		Estimate 21,000		K X Sm	
b.						I. Waste Number State 611 EPA/Other NON RCRA	
c.						State EPA/Other	
d.						State EPA/Other	
1. Additional Descriptions for Materials Listed Above 11a) OSO S/B 9/15/00 PER TIM FERRELL 769E SC 9/27/00				K. Handling Codes for Wastes Listed Above a. 03 b. c. d.			
15. Special Handling Instructions and Additional Information Shafts (hauling sub) EPA# CAR 000036830 Transporter 1 10-3-00 TR Saf# Wear personal protective clothing 24 hr emergency # 1-800-321-1030 Lee Soaras Chg to SAP/8000594							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.							
Printed/Typed Name LINDA MARSHALLE		Signature Linda Marshall		Month 09		Day 27	
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name Harold Holman		Signature Harold Holman		Month 09		Day 27	
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name		Signature		Month		Day	
19. Discrepancy Indication Space 13) Sec'd 18361 K, packed with 1/2 ton of steel 3/10/00							
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19 Printed/Typed Name SAMUEL T. CERVENY		Signature [Signature]		Month 09		Day 27	

1-800-424-8800 WITHIN CALIFORNIA CALL 1-800-552-7350  
 GENERATOR  
 TRANSPORTER  
 FACILITY  
 IN THE OREGON STATE CALL NATIONAL RESURGE CENTER 1-800-424-8800

DO NOT WRITE BELOW THIS LINE.



IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

20144814

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. C A P P B 2 4 P P K 1 B 4		Manifest Document No. <b>4814</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94608				SITE: EMERYVILLE REPAIR FACILITY 4525 HOLLIS STREET EMERYVILLE CA 94608		A. State Manifest Document Number <b>20144814</b>							
4. Generator's Phone (510) 874-5527				ATTN: JESUS LUNA		B. State Generator's ID <b>HYHQ38008798</b>							
5. Transporter 1 Company Name UNIVERSAL ENVIRONMENTAL				6. US EPA ID Number C A P P B 3 8 5 2 2 7 2		C. State Transporter's ID (Reserved)							
7. Transporter 2 Company Name				8. US EPA ID Number		D. Transporter's Phone <b>(707)747-8888</b>							
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93239				10. US EPA ID Number C A T P 0 0 8 4 8 1 1 7		E. State Transporter's ID (Reserved)							
						F. Transporter's Phone							
						G. State Facility's ID <b>KIATC000646117</b>							
						H. Facility's Phone <b>8002222864</b>							
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)						12. Containers		13. Total Quantity		14. Unit Wt/Vol		1. Waste Number	
a. NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)  b.  c.  d.						No.		Type		Estimate		State <b>011</b>	
						0 0 1		D T		<b>21000</b>		EPA/Other <b>NON RCRA</b>	
												State	
												EPA/Other	
												State	
J. Additional Descriptions for Materials Listed Above 11A: B04 113: DEBRIS CONTAMINATED WITH 50-499 PPM PCB 811 ERG - 171; <i>Out of service dates 8/9-15-00 per at PG&amp;E JB Jim Farrell</i>						K. Handling Codes for Wastes Listed Above a. <b>03</b> b. d.							
15. Special Handling Instructions and Additional Information Shatts (hauling sub) EPA # CAR 000036830 - TRANSPORTER 1 4/10/3100 SAP # Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares SAP # 8000594 (chg to).													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name <b>LINDA MARSHALL</b>				Signature <i>Linda Marshall</i>				Month Day Year <b>09 27 00</b>					
17. Transporter 1 Acknowledgement of Receipt of Materials													
Printed/Typed Name <i>John Maguire</i>				Signature <i>John Maguire</i>				Month Day Year <b>09 27 00</b>					
18. Transporter 2 Acknowledgement of Receipt of Materials													
Printed/Typed Name				Signature				Month Day Year					
19. Discrepancy Indication Space													
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.													
Printed/Typed Name <b>SARVEL T CERVENY</b>				Signature <i>Sarvel T Cerveney</i>				Month Day Year <b>09 27 00</b>					

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7350.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CADPBRAPDPA1B4</b>		Manifest Document No. <b>4815</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.				
3. Generator's Name and Mailing Address <b>PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94808</b>				SITE: <b>EMERYVILLE REPAIR FACILITY 4525 HOLLIS STREET EMERYVILLE CA 94808</b>		A. State Manifest Document Number <b>20144815</b>						
4. Generator's Phone (510) <b>874-5527</b>				ATTN: <b>JESUS LUNA</b>		B. State Generator's ID <b>HYHQ30008708</b>						
5. Transporter 1 Company Name <b>UNIVERSAL ENVIRONMENTAL</b>				6. US EPA ID Number <b>CAD983852272</b>		C. State Transporter's ID [Reserved.]						
7. Transporter 2 Company Name				8. US EPA ID Number		D. Transporter's Phone <b>(707)747-8800</b>						
9. Designated Facility Name and Site Address <b>CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93239</b>				10. US EPA ID Number <b>CAT000848117</b>		E. State Transporter's ID [Reserved.]						
						F. Transporter's Phone						
						G. State Facility's ID <b>KA7000646117</b>						
						H. Facility's Phone <b>8002222864</b>						
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>					12. Containers		13. Total Quantity		14. Unir Wt/Vol		I. Waste Number	
					No.		Type		Estimate		K	
					0 0 1 0 T		21000		X2		EPA/Other <b>NON RCRA</b>	
b.											State	
c.											EPA/Other	
d.											State	
											EPA/Other	
J. Additional Descriptions for Materials Listed Above <b>11A, BQ 114 DEBRIS CONTAMINATED WITH 50-499 PPM PCB 811 ERG -ATTN: (110) 050 S/B 9/13/00 PER JIM FERRELL @ PGE SC 9/27/00</b>					K. Handling Codes for Wastes Listed Above a. <b>C3</b>							
15. Special Handling Instructions and Additional Information <b>Shotts (hauling sub) EPA ID# CAR000036830 Transporter 1 10-3-00 re Sag# Wear personal protective clothing 24 hr emergency # 1-800-321-1030 Lee Scaras. Chg. to 8000594</b>												
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled; and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.												
Printed/Typed Name <b>LINDA MARSHALL</b>				Signature <i>Linda Marshall</i>				Month Day Year <b>09 27 00</b>				
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <i>Jesus Luna</i>				Signature <i>Jesus Luna</i>				Month Day Year <b>09 27 00</b>				
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature				Month Day Year				
19. Discrepancy Indication Space												
Rec'd 17,545 K, received with 10 bags of PCB 9/27/00												
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name <b>SAMUEL T CERVENY</b>				Signature <i>Samuel T Cerveney</i>				Month Day Year <b>09 27 00</b>				

DO NOT WRITE BELOW THIS LINE.



**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. *MS754*  
 Manifest Document No. *8519*  
 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC**  
 4525 HOLLIS STREET  
 EMERYVILLE CA 94608  
 4. Generator's Phone ((510) 874-5527 ATTN: JESUS LUNA  
 SITE: EMERYVILLE REPAIR FACILITY  
 4525 HOLLIS STREET  
 EMERYVILLE CA 94608

A. State Manifest Document Number  
**99785190**

B. State Generator's ID  
**HYHQ38008798**

5. Transporter 1 Company Name  
**UNIVERSAL ENVIRONMENTAL**  
 6. US EPA ID Number  
**PAP083052272**

C. State Transporter's ID (Reserved.)  
 D. Transporter's Phone  
**(707) 747-8800**

7. Transporter 2 Company Name  
 8. US EPA ID Number

E. State Transporter's ID (Reserved.)  
 F. Transporter's Phone

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
 35251 OLD SKYLINE ROAD  
 KETTLEMAN CITY CA 95239  
 10. US EPA ID Number  
**PAT080540117**

G. State Facility's ID  
**CA7000646117**

H. Facility's Phone  
**8002222084**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>	0	0	Estimate <b>21000</b>	<b>K</b>	State <b>611</b> EPA/Other <b>NON RCRA</b>
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above  
**HAZARDOUS DEBRIS CONTAMINATED WITH 50-499 PPM PCB 611 ERG - 121**  
*NO OSD S/B 9/15/00 PER JIM FERRALL @ PGE 9/27/00*

K. Handling Codes for Wastes Listed Above  
 a. **03**  
 b.  
 c.  
 d.

15. Special Handling Instructions and Additional Information  
*Car 0000 368/30 S/B FFS - TRANSPORTER 1 10-3-00 TL*  
**SAFETY: Wear personal protective clothing. 24 hr emergency # 1-800-321-1000 Lee Soares. Certificate checked.**  
**Charge to # 8000594**

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: **LINDA MARSHALL** Signature: *Linda Marshall* Month: **09** Day: **27** Year: **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: **Robert Frank** Signature: *Robert Frank* Month: Day: Year:

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: Signature: Month: Day: Year:

19. Discrepancy Indication Space  
*(b) Rec'd 12/5/97 K. Received and in good condition for transport per use of*

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name: **SAMUEL T. CERVENY** Signature: *Samuel T. Cerveney* Month: **09** Day: **27** Year: **00**

**DO NOT WRITE BELOW THIS LINE.**

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **C A P B B R A D P A 1 B** Manifest Document No. **8569** 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC**  
**4625 HOLLIS STREET**  
**EMERYVILLE CA 94608**  
 4. Generator's Phone ((510) 974-5527 ATTN: **JESUS LUNA**

A. State Manifest Document Number **99785191**

B. State Generator's ID **HYHQ38008798**

5. Transporter 1 Company Name  
**UNIVERSAL ENVIRONMENTAL**  
 6. US EPA ID Number  
**C A D B B 3 B 5 2 2 7 2**

C. State Transporter's ID (Reserved)

D. Transporter's Phone **(707)747-8600**

7. Transporter 2 Company Name  
 8. US EPA ID Number

E. State Transporter's ID (Reserved)

F. Transporter's Phone

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
**35251 OLD SKYLINE ROAD**  
**KETTLEMAN CITY CA 93230**  
 10. US EPA ID Number  
**C A T E P B B 4 B 1 1 7**

G. State Facility's ID **CA10000146117**

H. Facility's Phone **8002222884**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Val 15. Waste Number

a. **NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)**

**0 0 1 0 T** Estimate **K** State **CA 261**

b.

**Z 1 0 0 0** EPA/Other **NON RCRA**

c.

EPA/Other

d.

EPA/Other

J. Additional Descriptions for Materials Listed Above  
**1. A. B. C. 113 DEBRIS CONTAMINATED WITH 50-499 PPM PCB 811 ERG**  
**- 171 out of service date 9-15-00 per Jim FERRELL**

K. Handling Codes for Wastes Listed Above

a. **03** b. c. d.

15. Special Handling Instructions and Additional Information  
**MARK DOSS EPA # CA2000053736 (Subhauler) Transporter 1**  
**Safe Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Saaras. 10-3-00 re**  
**Charge to 8000594 (I) state code 411 also applies 10-3-00 re**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **LINDA MARSHALL** Signature **Linda Marshall** Month **09** Day **27** Year **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **LANCE MINETTI** Signature **Lance Minetti** Month **09** Day **27** Year **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space  
**Added 18279 kg. received with the transport from PG&E**

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name **S Barber** Signature **S Barber** Month **09** Day **27** Year **00**

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

JUSTIN / JDDUMP

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7350

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. C A D 9 B 3 0 8 2 2 7 2		Manifest Document No. <u>8513-52</u>		2. Page 1 of 7		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94608				SITE: EMERYVILLE REPAIR FACILITY 4525 HOLLIS STREET EMERYVILLE CA 94608				A. State Manifest Document Number 99785197			
4. Generator's Phone (510) 974-5527 ATTN: JESUS LLINA				6. US EPA ID Number C A D 9 B 3 0 8 2 2 7 2		B. State Generator's ID H Y H Q 3 8 0 0 8 7 8 8					
5. Transporter 1 Company Name UNIVERSAL ENVIRONMENTAL				8. US EPA ID Number		C. State Transporter's ID (Reserved)		D. Transporter's Phone (707) 747-8800			
7. Transporter 2 Company Name				10. US EPA ID Number		E. State Transporter's ID (Reserved)		F. Transporter's Phone			
9. Designated Facility Name and Site Address CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93238				11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)		12. Containers No. Type 0 0 1 0 T		13. Total Quantity Estimate 21000			
						14. Unit K		1. Waste Number State 611 EPA/Other NON RCRA			
								EPA/Other			
								State			
								EPA/Other			
								State			
								EPA/Other			
J. Additional Descriptions for Materials Listed Above 11A: BQ4113 DEBRIS CONTAMINATED WITH 50-499 PPM PCB 611 ERG - 171				K. Handling Codes for Wastes Listed Above a. 03						d.	
Special Handling Instructions and Additional Information Mike Coufarms EPA# CA000046017 Transporter 1 10-3-00 Safe. Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares. Chg. to SAP# 8000594				Escal of service date 9-15-00 per Jim Ferrell at PG+E 9-29-00							
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.											
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name LINDA MARSHALL			Signature <i>Linda Marshall</i>			Month Day Year 09 27 00					
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name DINO D. BENEDETTI			Signature <i>D. Benedetto</i>			Month Day Year 09 27 00					
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name			Signature			Month Day Year					
19. Discrepancy Indication Space											
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.											
Printed/Typed Name G Barber			Signature <i>G Barber</i>			Month Day Year 09 27 00					

DO NOT WRITE BELOW THIS LINE.



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 Department of Toxic Substances Control  
 Sacramento, California

Information in the shaded areas is not required by Federal law.

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. CAD002400418 Manifest Document No. FR 85192 2. Page 1 of 1

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC**  
 4525 HOLLIS STREET  
 EMERYVILLE CA 94808  
 4. Generator's Phone (510) 874-5527 ATTN: JESUS LUNA

5. Transporter 1 Company Name  
**UNIVERSAL ENVIRONMENTAL**  
 6. US EPA ID Number CAD002400418

7. Transporter 2 Company Name  
 8. US EPA ID Number

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC.**  
 35251 OLD SKYLINE ROAD  
 KETTLEMAN CITY CA 93238  
 10. US EPA ID Number CAT0000045587

A. State Manifest Document Number **99785192**  
 B. State Generator's ID **HYH036008708**  
 C. State Transporter's ID [Reserved]  
 D. Transporter's Phone **(707)747-8890**  
 E. State Transporter's ID [Reserved]  
 F. Transporter's Phone  
 G. State Facility's ID **CR1000696117**  
 H. Facility's Phone **8602222084**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>	0	0	Estimate 21000	K	State <b>CA 261</b> EPA/Other <b>NON RCRA</b>
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

J. Additional Descriptions for Materials Listed Above  
 1. **ALUM 113 DEBRIS CONTAMINATED WITH 60-499 PPM PCB 811 ERG - 171**

K. Handling Codes for Wastes Listed Above  
 a. **03** b. c. d.

15. Special Handling Instructions and Additional Information  
**Sub-Header Job Trans. EPA # CA 432212 Out of Spec Date 9/15/00**  
**Staff: Wear personal protective clothing. 24 hr emergency # 1-800-321-1030 Lee Soares**  
**Charge to 8000594 (T) State code 611 also applies 10-300**

16. **GENERATOR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name LINDA MARSHALL Signature Linda Marshall Month 09 Day 28 Year 00

17. Transporter 1 Acknowledgement of Receipt of Materials

Printed/Typed Name Heather M. A. Timmins Signature Heather M. A. Timmins Month 09 Day 28 Year 00

18. Transporter 2 Acknowledgement of Receipt of Materials

Printed/Typed Name Signature Month Day Year

19. Discrepancy Indication Space

Rec'd 18,615 K. Received with 100 lbs of debris

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.

Printed/Typed Name G Barber Signature G Barber Month 09 Day 29 Year 00

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

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**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **CAD802400418** Manifest Document No. **84912** 2. Page 1 of 1  
 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC** SITE: **EMERYVILLE REPAIR FACILITY**  
**4525 HOLLIS STREET** **4525 HOLLIS STREET**  
**EMERYVILLE CA 94608** **EMERYVILLE CA 94608**

4. Generator's Phone **(510) 450-5727** ATTN: **JESUS LUNA**

5. Transporter 1 Company Name **UNIVERSAL ENVIRONMENTAL** 6. US EPA ID Number **CAD800060000780**

7. Transporter 2 Company Name **BYARS (PACKING)** 8. US EPA ID Number **KAD982346207**

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
**35251 OLD SKYLINE ROAD**  
**KETTLEMAN CITY CA 93239**

10. US EPA ID Number **CAT000646117**

A. State Manifest Document Number **99784912**  
 B. State Generator's ID **HYHQ360008780**  
 C. State Transporter's ID [Reserved.]  
 D. Transporter's Phone **(707)747-8889**  
 E. State Transporter's ID [Reserved.]  
 F. Transporter's Phone **925-684-3519**  
 G. State Facility's ID **CAT000646117**  
 H. Facility's Phone **8002222964**

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550  
 GENERATOR  
 TRANSPORTER  
 FACILITY

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-400 PPM PCB)</b>	<b>001</b>	<b>DT</b>	<b>Estimate 21000</b>	<b>K</b>	State <b>201</b> EPA/Other <b>NON RCRA</b> State EPA/Other State EPA/Other
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

11. Additional Descriptions for Materials Listed Above  
**11A: BQ4113 DEBRIS CONTAMINATED WITH 50-400 PPM PCB 811 ERO - 171;**  
**OUT OF SERVICE DATE: 10-9-00**

K. Handling Codes for Wastes Listed Above  
 a. **03**  
 b.  
 c.  
 d.

15. Special Handling Instructions and Additional Information  
**11A: WEAR PERSONAL PROTECTIVE CLOTHING. 24HR EMERGENCY RESPONSE NO. 1-800-321-1030 (ALL WASTE)**  
**CHARGE TO SAP # 8000594**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **Richard Low** Signature **Richard Low** Month **10** Day **10** Year **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **MICHAEL MURPHY** Signature **Michael Murphy** Month **10** Day **10** Year **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **JAMES BYARS** Signature **James Byars** Month **10** Day **11** Year **00**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19

Printed/Typed Name **M. Newey** Signature **M. Newey** Month **10** Day **11** Year **00**

DO NOT WRITE BELOW THIS LINE.

10/12

USE OR CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>CAD982400418</b>		Manifest Document No. <b>84913</b>		2. Page 1 1 of 1		Information in the shaded areas is not required by Federal law.			
3. Generator's Name and Mailing Address <b>PACIFIC GAS AND ELECTRIC 4825 HOLLIS STREET EMERYVILLE CA 94608</b>				SITE: <b>EMERYVILLE REPAIR FACILITY 4825 HOLLIS STREET EMERYVILLE CA 94608</b>				A. State Manifest Document Number <b>99784913</b>			
4. Generator's Phone <b>510 450-5727 ATTN: JESUS LUNA</b>				6. US EPA ID Number <b>CAD983652272</b>				B. State Generator's ID <b>HYHQ36006798</b>			
5. Transporter 1 Company Name <b>UNIVERSAL ENVIRONMENTAL</b>				7. Transporter 2 Company Name				C. State Transporter's ID (Reserved.)			
9. Designated Facility Name and Site Address <b>CHEMICAL WASTE MANAGEMENT, INC 36251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93239</b>				10. US EPA ID Number <b>CAT000846117</b>				D. Transporter's Phone <b>(707)747-8289</b>			
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers No. Type		13. Total Quantity		14. Unit Wt/Val		1. Waste Number	
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED WITH 50-499 PPM PCB)</b>				0 0 1 D T		Estimate 21000		K		State 261	
b.										EPA/Other NON RCRA	
c.										State	
d.										EPA/Other	
J. Additional Descriptions for Materials Listed Above <b>DEBRIS CONTAMINATED WITH 50-499 PPM PCB 811 ERG</b>				K. Handling Codes for Wastes Listed Above a. <b>03</b>							
15. Special Handling Instructions and Additional Information <b>11A: WEAR PERSONAL PROTECTIVE CLOTHING. 24HR EMERGENCY RESPONSE NO. 1-800-321-1030 (ALL WASTE)</b> <b>CHARGE TO SAP # 8000594</b> <b>OUT OF SERVICE DATE: 10-9-00</b>											
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.											
Printed/Typed Name <b>RICHARD LOW</b>				Signature <i>Richard Low</i>				Month Day Year <b>10/10/00</b>			
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>MIKE MUZIO</b>				Signature <i>Mike Muzio</i>				Month Day Year <b>10/10/00</b>			
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name				Signature				Month Day Year			
19. Discrepancy Indication Space											
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. <b>with 100% of material with the appropriate tags</b>											
Printed/Typed Name <b>S Barber</b>				Signature <i>S Barber</i>				Month Day Year <b>10/10/00</b>			

DO NOT WRITE BELOW THIS LINE.

Follow: TSD/ SENDS THIS COPY TO GENERATOR WITHIN 30 D.  
 \*Generator must be notified within 30 days of the date of the manifest's completion.

10/25

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **CAD082400418** Manifest Document No. **849-17** 2. Page 1 of 1  
 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC** SITE: **EMERYVILLE REPAIR FACILITY**  
**4525 HOLLIS STREET** **4525 HOLLIS STREET**  
**EMERYVILLE CA 94608** **EMERYVILLE CA 94608**  
 4. Generator's Phone (810) **450-5727** ATTN: **JESUS LUNA**

A. State Manifest Document Number **99784917**

B. State Generator's ID **HYHQ38008798**

5. Transporter 1 Company Name **UNIVERSAL ENVIRONMENTAL** 6. US EPA ID Number **CAD083632272**

C. State Transporter's ID (Reserved)

7. Transporter 2 Company Name **BIARS TRUCKING** 8. US EPA ID Number **CAD982346207**

D. Transporter's Phone **(707)747-6699**

E. State Transporter's ID (Reserved)

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
**35251 OLD SKYLINE ROAD**  
**KETTLEMAN CITY CA 93238** 10. US EPA ID Number **CAT000646117**

F. Transporter's Phone **925-684-3519**

G. State Facility's ID **CA1000646117**

H. Facility's Phone **8002222964**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Val	1. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED W/ &lt;50 PPM PCB)</b>	001	GM	Estimate 15000	K	State: <b>261</b> EPA/Other: <b>NON RCRA</b>
b.					State:
c.					EPA/Other:
d.					State:
					EPA/Other:

J. Additional Descriptions for Materials Listed Above  
**11A: K65586 DEBRIS CONTAMINATED W/ <50 PPM PCB ERG 171**  
**OUT OF SERVICE DATE: 10/10/00**

K. Handling Codes for Wastes Listed Above  
 a. **03** b. c. d.

15. Special Handling Instructions and Additional information  
**11A: WEAR PERSONAL PROTECTIVE CLOTHING. 24HR EMERGENCY RESPONSE 1-800-321-1030 (ALLWASTE)**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **JIM ADDIESO** Signature *[Signature]* Month **10** Day **12** Year **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name *[Signature]* Signature *[Signature]* Month **10** Day **12** Year **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **JAMES BIARS** Signature *[Signature]* Month **10** Day **13** Year **00**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name **S Barber** Signature *[Signature]* Month **10** Day **13** Year **00**

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. <b>CAD882400418</b>	Manifest Document No. <b>84918</b>	2. Page 1 of 1	Information in the shaded areas is not required by Federal law.
3. Generator's Name and Mailing Address <b>PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94808</b>		A. State Manifest Document Number <b>99784918</b>	
4. Generator's Phone (510) 460-5727 ATTN: JESUS LLINA		B. State Generator's ID# <b>HYHQ36008789</b>	
5. Transporter 1 Company Name <b>UNIVERSAL ENVIRONMENTAL</b>		C. State Transporter's ID (Reserved)	
6. US EPA ID Number <b>CAD883652272</b>		D. Transporter's Phone <b>(707)747-6888</b>	
7. Transporter 2 Company Name <b>BYARS Trucking</b>		E. State Transporter's ID (Reserved)	
8. US EPA ID Number <b>CA0982346207</b>		F. Transporter Phone <b>9256843719</b>	
9. Designated Facility Name and Site Address <b>CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY/CA 93239</b>		G. State Facility's ID <b>CA1000646117</b>	
10. US EPA ID Number <b>CAT000848117</b>		H. Facility's Phone <b>8002222864</b>	

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	15. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED W/ &lt;50 PPM PCB)</b>	<b>001</b>	<b>CIM</b>	<b>Estimate 08240</b>	<b>K</b>	State: <b>281</b> EPA/Other: <b>NON RCRA</b>
b.					State: EPA/Other:
c.					State: EPA/Other:
d.					State: EPA/Other:

J. Additional Descriptions for Materials Listed Above  
**11A: 85888 DEBRIS CONTAMINATED W/ <50 PPM PCB ERG - 111  
 OUT OF SERVICE DATE: 18/10/00**

K. Handling Codes for Wastes Listed Above  
 a. **03** b. c. d.

15. Special Handling Instructions and Additional Information  
**11A: WEAR PERSONAL PROTECTIVE CLOTHING. 24HR EMERGENCY RESPONSE 1-800-321-1030 (ALLWASTE)**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: **JIM ADDIEGO** Signature: *[Signature]* Month: **10** Day: **13** Year: **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: *[Signature]* Signature: *[Signature]* Month: **10** Day: **13** Year: **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name: **AL BYARS** Signature: *[Signature]* Month: **10** Day: **16** Year: **00**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19  
 Printed/Typed Name: **G Barber** Signature: *[Signature]* Month: **10** Day: **16** Year: **00**

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

10/25

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **CAD0002400018** Manifest Document No. **84920** 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC**  
**4525 HOLLIS STREET**  
**EMERYVILLE CA 94608**  
 4. Generator's Phone **510 450-5727** ATTN: **JESUS LUNA**

A. State Manifest Document Number **99784920**

B. State Generator's ID: **HYH036008708**

5. Transporter 1 Company Name **UNIVERSAL ENVIRONMENTAL**  
 6. US EPA ID Number **CAD0003652272**

C. State Transporter's ID (Reserved)

D. Transporter's Phone **(707)747-8888**

Transporter 2 Company Name **BYARS TRUCKING**  
 8. US EPA ID Number **CAD985346207**

E. State Transporter's ID (Reserved)

F. Transporter's Phone **925-684-3519**

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
**35251 OLD SKYLINE ROAD**  
**KETTLEMAN CITY CA 93238**  
 10. US EPA ID Number **CAT000646117**

G. State Facility's ID **CA1000646117**

H. Facility's Phone **8002722984**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	1. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED W/ &lt;50 PPM PCB)</b>	<b>001</b>	<b>CM</b>	<b>Estimate 110709</b>	<b>K</b>	State <b>281</b> EPA/Other <b>NON RCRA</b>
b.					State EPA/Other
c.					State EPA/Other
d.					State EPA/Other

6. Additional Descriptions for Materials Listed Above  
**11A: K85588 DEBRIS CONTAMINATED W/ <50 PPM PCB ERG - 171**  
**OUT-OF-SERVICE DATE: 10/10/00**

K. Handling Codes for Wastes Listed Above  
 a. **03**  
 b.  
 c.  
 d.

15. Special Handling Instructions and Additional Information  
**11A: WEAR PERSONAL PROTECTIVE CLOTHING. 24HR EMERGENCY RESPONSE 1-800-321-1030 (ALLWASTE)**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **JIM ADDIEGO** Signature *[Signature]* Month **10** Day **13** Year **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name *[Signature]* Signature *[Signature]* Month **10** Day **13** Year **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **JAMES BYARS** Signature *[Signature]* Month **10** Day **16** Year **00**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19  
 Printed/Typed Name **G Barber** Signature *[Signature]* Month **10** Day **16** Year **00**

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550

GENERATOR

TRANSPORTER

FACILITY

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **CAD982346007** Manifest Document No. **84916** 2. Page 1 of 1

Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC**  
**4525 HOLLIS STREET**  
**EMERYVILLE CA 94608**  
 4. Generator's Phone (510) 460-5727 ATTN: **JESUS LUNA**

A. State Manifest Document Number **99784916**

B. State Generator's ID **HYHQ36008788**

5. Transporter 1 Company Name  
**UNIVERSAL ENVIRONMENTAL**  
 6. US EPA ID Number **CAD982346007**

C. State Transporter's ID [Reserved.]

D. Transporter's Phone **(707)747-6598**

7. Transporter 2 Company Name  
**BYARS TRUCKING**  
 8. US EPA ID Number **CAD982346007**

E. State Transporter's ID [Reserved.]

F. Transporter's Phone **925-684-3919**

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
**38251 OLD SKYLINE ROAD**  
**KETTLEMAN CITY CA 93239**  
 10. US EPA ID Number **CAT002646117**

G. State Facility's ID **CAT002646117**

H. Facility's Phone **5002222864**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)

12. Containers No. Type 13. Total Quantity 14. Unit Wt/Val 15. Waste Number

a. **NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED W/ <50 PPM PCB)**

001 G M Estimate 17237 K State **201**

EPA/Other **NON RCRA**

State

EPA/Other

State

EPA/Other

State

EPA/Other

J. Additional Descriptions for Materials Listed Above

**11A: K65588 DEBRIS CONTAMINATED W/ <50 PPM PCB ERG - 171**  
**OUT OF SERVICE DATE: 10/18/00**

K. Handling Codes for Wastes Listed Above

a. **U5** b. c. d.

15. Special Handling Instructions and Additional Information

**11A: WEAR PERSONAL PROTECTIVE CLOTHING. 24HR EMERGENCY RESPONSE 1-800-321-1030 (ALLWASTE)**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.

If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **JIM ADDIEGO** Signature *[Signature]* Month **10** Day **12** Year **2000**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **Don Keelney** Signature *[Signature]* Month **10** Day **12** Year **2000**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **JAMES BYARS** Signature *[Signature]* Month **10** Day **17** Year **2000**

19. Discrepancy Indication Space

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19  
 Printed/Typed Name **G Barber** Signature *[Signature]* Month **10** Day **17** Year **2000**

DO NOT WRITE BELOW THIS LINE.

Yellow TSD Form 354 (Rev. 12/99) ISDF SENDS THIS COPY TO GENERATOR WITHIN 15 DAYS OF RECEIVING THE MANIFEST.

EMERGENCY OR SHIPPER, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. California US EPA ID No. <b>CAD0024004108849119</b>		Manifest Document No. <b>191</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.					
3. Generator's Name and Mailing Address <b>PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94608</b>				SITE: <b>EMERYVILLE REPAIR FACILITY 4525 HOLLIS STREET EMERYVILLE CA 94608</b>				A. State Manifest Document Number <b>39784919</b>					
4. Generator's Phone (510) <b>450-8727</b>				ATTN: <b>JESUS LUNA</b>				B. State Generator's ID <b>HYHQ36008798</b>					
5. Transporter 1 Company Name <b>UNIVERSAL ENVIRONMENTAL</b>				6. US EPA ID Number <b>CAD0053652272</b>				C. State Transporter's ID (Reserved)					
Transporter 2 Company Name <b>BYARS ROCKING</b>				8. US EPA ID Number <b>CA0980346207</b>				D. Transporter's Phone <b>(707)747-6688</b>					
9. Designated Facility Name and Site Address <b>CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93238</b>				10. US EPA ID Number <b>CA1000646117</b>				E. State Transporter's ID (Reserved)					
								F. Transporter's Phone <b>925-684-3519</b>					
								G. State Facility's ID <b>CA1000646117</b>					
								H. Facility's Phone <b>8002222984</b>					
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number) <b>a. NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED W/ &lt;50 PPM PCB)</b>						12. Containers		13. Total Quantity		14. Unit Wt/Vol		15. Waste Number	
						No. Type		Quantity		Wt/Vol		State EPA/Other	
						001 C M		Estimate 11436		K		State 261 EPA/Other NON RCRA	
b.												State EPA/Other	
c.												State EPA/Other	
d.												State EPA/Other	
11A: <b>K8536 DEBRIS CONTAMINATED W/ &lt;50 PPM PCB ERG - 171, OUT OF SERVICE DATE: 10/10/00</b>						K. Handling Codes for Wastes Listed Above							
						a. <b>U3</b>		b.		c.		d.	
15. Special Handling Instructions and Additional Information <b>11A: WEAR PERSONAL PROTECTIVE CLOTHING. 24HR EMERGENCY RESPONSE 1-800-321-1030 (ALLWASTE)</b>													
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.													
Printed/Typed Name <b>JIM ADDIEGO</b>		Signature <i>[Signature]</i>		Month <b>10</b>		Day <b>13</b>		Year <b>00</b>					
17. Transporter 1 Acknowledgement of Receipt of Materials Printed/Typed Name <b>Don K...</b>		Signature <i>[Signature]</i>		Month <b>10</b>		Day <b>13</b>		Year <b>00</b>					
18. Transporter 2 Acknowledgement of Receipt of Materials Printed/Typed Name <b>AL BYARS</b>		Signature <i>[Signature]</i>		Month <b>10</b>		Day <b>17</b>		Year <b>00</b>					
19. Discrepancy Indication Space													
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19. Printed/Typed Name <b>G Barber</b>		Signature <i>[Signature]</i>		Month <b>10</b>		Day <b>17</b>		Year <b>00</b>					

DO NOT WRITE BELOW THIS LINE.

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator's US EPA ID No. **CAD982400418** Manifest Document No. **84922** 2. Page 1 of 1  
 Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address  
**PACIFIC GAS AND ELECTRIC** SITE: **EMERYVILLE REPAIR FACILITY**  
**4525 HOLLIS STREET** **4525 HOLLIS STREET**  
**EMERYVILLE CA 94608** **EMERYVILLE CA 94608**  
 4. Generator's Phone (510) **460-5727** ATTN: **JESUS LLINA**

A. State Manifest Document Number **99784922**

B. State Generator's ID **HYHQ36008788**

5. Transporter 1 Company Name **UNIVERSAL ENVIRONMENTAL** 4. US EPA ID Number **CAD983552272**

C. State Transporter's ID [Reserved]

D. Transporter's Phone **(707)747-6589**

7. Transporter 2 Company Name \_\_\_\_\_ 8. US EPA ID Number \_\_\_\_\_

E. State Transporter's ID [Reserved]

9. Designated Facility Name and Site Address  
**CHEMICAL WASTE MANAGEMENT, INC**  
**3525 1 OLD SKYLINE ROAD**  
**KETTLEMAN CITY CA 95239** 10. US EPA ID Number **CAT000646117**

F. Transporter's Phone \_\_\_\_\_

G. State Facility's ID **CA17000646117**

H. Facility's Phone **8002222854**

11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)	12. Containers		13. Total Quantity	14. Unit Wt/Vol	1. Waste Number
	No.	Type			
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED W/ &lt;50 PPM PCB)</b>	<b>001</b>	<b>CIM</b>	<b>Estimate 06490</b>	<b>K</b>	State <b>281</b> EPA/Other <b>NON RCRA</b>
b. _____	_____	_____	_____	_____	State _____ EPA/Other _____
c. _____	_____	_____	_____	_____	State _____ EPA/Other _____
d. _____	_____	_____	_____	_____	State _____ EPA/Other _____

J. Additional Descriptions for Materials Listed Above  
**1 LAK85566 DEBRIS CONTAMINATED W/ <50 PPM PCB ERG - 171**  
**OUT OF SERVICE DATE: 10/10/00**

K. Handling Codes for Wastes Listed Above  
 a. **Q3** b. \_\_\_\_\_  
 c. \_\_\_\_\_ d. \_\_\_\_\_

15. Special Handling Instructions and Additional Information  
**11A: WEAR PERSONAL PROTECTIVE CLOTHING; 24HR EMERGENCY RESPONSE 1-800-321-1030 (ALLWASTE)**

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  
 If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name **JIM ADDIEGO** Signature \_\_\_\_\_ Month **10** Day **17** Year **00**

17. Transporter 1 Acknowledgement of Receipt of Materials  
 Printed/Typed Name **FRANK BROWN** Signature \_\_\_\_\_ Month **10** Day **17** Year **00**

18. Transporter 2 Acknowledgement of Receipt of Materials  
 Printed/Typed Name \_\_\_\_\_ Signature \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Year \_\_\_\_\_

19. Discrepancy Indication Space  
**13) 2nd 3704 K. Received with Jim Addiego of PG&E**

20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.  
 Printed/Typed Name **S Barber** Signature \_\_\_\_\_ Month **10** Day **17** Year **00**

DO NOT WRITE BELOW THIS LINE.

IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802; WITHIN CALIFORNIA, CALL 1-800-852-7550  
 GENERATOR  
 TRANSPORTER  
 FACILITY



IN CASE OF EMERGENCY OR SPILL, CALL THE NATIONAL RESPONSE CENTER 1-800-424-8802. WITHIN CALIFORNIA, CALL 1-800-852-7550

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator's US EPA ID No. <b>C A D 8 8 2 4 0 0 4 1 8</b>		Manifest Document No. <b>8 4 9 2 3</b>		2. Page 1 of 1		Information in the shaded areas is not required by Federal law.	
3. Generator's Name and Mailing Address <b>PACIFIC GAS AND ELECTRIC 4525 HOLLIS STREET EMERYVILLE CA 94808</b>				SITE: <b>EMERYVILLE REPAIR FACILITY 4625 HOLLIS STREET EMERYVILLE CA 94608</b>				A. State Manifest Document Number <b>99784923</b>	
4. Generator's Phone (510) <b>450-6727</b> ATTN: <b>JESUS LUNA</b>				6. US EPA ID Number <b>C A D 8 8 3 6 5 2 2 7 2</b>				B. State Generator's ID <b>H Y H Q 3 6 0 0 8 7 9 8</b>	
5. Transporter 1 Company Name <b>UNIVERSAL ENVIRONMENTAL</b>				8. US EPA ID Number <b>C A T 0 0 0 6 4 6 1 1 7</b>				C. State Transporter's ID (Reserved.)	
7. Transporter 2 Company Name				10. US EPA ID Number				D. Transporter's Phone <b>(707)747-5898</b>	
9. Designated Facility Name and Site Address <b>CHEMICAL WASTE MANAGEMENT, INC 35251 OLD SKYLINE ROAD KETTLEMAN CITY CA 93238</b>				10. US EPA ID Number				E. State Transporter's ID (Reserved.)	
11. US DOT Description (including Proper Shipping Name, Hazard Class, and ID Number)				12. Containers		13. Total Quantity		14. Unit Wt/Vol	
a. <b>NON RCRA HAZARDOUS WASTE, SOLID, (DEBRIS CONTAMINATED W/ &lt;50 PPM PCB)</b> b. c. d.				No.		Type		I. Waste Number	
						Estimate		State <b>281</b>	
				001		C M 11218		EPA/Other <b>NON RCRA</b>	
								State	
								EPA/Other	
J. Additional Descriptions for Materials Listed Above <b>1 BAG 55# DEBRIS CONTAMINATED W/ &lt;50 PPM PCB ERG - 171 OUT OF SERVICE DATE: 10/10/00</b>				K. Handling Codes for Wastes Listed Above					
15. Special Handling Instructions and Additional Information  <b>11A: WEAR PERSONAL PROTECTIVE CLOTHING; 24HR EMERGENCY RESPONSE 1-800-321-1030 (ALLWASTE)</b>				a. <b>03</b>		b.		c.	
16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packed, marked, and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations.  If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.				Printed/Typed Name <b>JIM ADDIEGO</b>		Signature <i>Jim Addiego</i>		Month Day Year <b>10 17 00</b>	
17. Transporter 1 Acknowledgement of Receipt of Materials				Printed/Typed Name <i>Don Keeling</i>		Signature <i>Don Keeling</i>		Month Day Year <b>10 17 00</b>	
18. Transporter 2 Acknowledgement of Receipt of Materials				Printed/Typed Name		Signature		Month Day Year	
19. Discrepancy Indication Space				Printed/Typed Name <b>SAMUEL T. CERUENI</b>		Signature <i>Samuel T. Cerueni</i>		Month Day Year <b>10 19 00</b>	
20. Facility Owner or Operator Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19				Printed/Typed Name		Signature		Month Day Year	

DO NOT WRITE BELOW THIS LINE.

Know the location of this copy of the manifest and the generator's name and address. Retain this copy for at least 3 years.

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB2 @16.0	Lab Sample ID: 2000-11-0255-006
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 10:52	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	ND	2.0	mg/Kg	1.00	11/15/2000 12:16	
<i>Surrogate(s)</i> o-Terphenyl	81.2	60-130	%	1.00	11/15/2000 12:16	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-11-0255

To: P.G.& E TES

Attn.: Fred Flint

Test Method: 8015M

Prep Method: 3510/8015M  
3550/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: SB3 @ 6.0'	Lab Sample ID: 2000-11-0255-007
Project: Emeryville UST	Received: 11/13/2000 15:35
Sampled: 11/13/2000 12:34	Extracted: 11/13/2000 18:53
Matrix: Soil	QC-Batch: 2000/11/13-07.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Mineral Oil	59	2.0	mg/Kg	1.00	11/15/2000 10:44	rd
<b>Surrogate(s)</b> o-Terphenyl	65.2	60-130	%	1.00	11/15/2000 10:44	

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