



Texaco Refining  
and Marketing Inc.

January 25, 1993

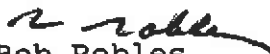
Mr. Rich Hiett  
California Regional Water  
Quality Control Board  
San Francisco Bay Area Region  
2101 Webster Street, Ste. 500  
Oakland, CA 94612

Dear Mr. Hiett:

Enclosed is a copy of our quarterly technical letter report dated December 29, 1992, for the former Texaco and then Exxon service station facility that was located at 500 Grand Avenue in Oakland, California. This report covers the third quarter of 1992.


Please call me at (818) 505-2476 if you have any questions or wish to discuss the report further.

Very truly yours,

  
Bob Robles  
Texaco Refining and Marketing Inc.

RR:rr

Enclosure

cc:   
Alameda County Environmental  
Health Department  
80 Swan Way, Room 200  
Oakland, CA 94621

RRZielinski-Richmond

pr: 

09 2 00 10 20 00



*Working To Restore Nature*

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
Fax: (408) 264-2345

**LETTER REPORT  
QUARTERLY GROUNDWATER MONITORING  
Third Quarter 1992  
at  
Former Texaco Station  
500 Grand Avenue  
Oakland, California**

**62078.01**

3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
Phone: (408) 264-7723  
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December 29, 1992  
1127RROB  
62078.01

Mr. Robert Robles  
Texaco Environmental Services  
10 Universal City Plaza, 7th Floor  
Universal City, California 91608

**Subject:** Results of the Third Quarter 1992 Quarterly Groundwater Monitoring and Sampling Letter Report for the Former Texaco Station located at 500 Grand Avenue in Oakland, California.

Mr. Robles:

At the request of Texaco Environmental Services (TES), RESNA Industries Inc. (RESNA) has prepared this letter which summarizes the results of quarterly groundwater monitoring at the former Texaco Service Station located at 500 Grand Avenue in Oakland, California (Plate 1, Site Vicinity Map) for the third quarter 1992 (July through September 1992). On September 28, 1992, quarterly groundwater monitoring and sampling was conducted to evaluate groundwater elevations, gradient and flow direction, the presence and thickness of any petroleum hydrocarbon sheen or floating product, and the distribution of dissolved hydrocarbons in one of the monitoring wells (MW-8F) at this site. RESNA's groundwater sampling protocol and groundwater monitoring data are included in Appendix A. Results of laboratory analyses with Chain of Custody for the groundwater samples collected are included in Appendix B.

### WORK PERFORMED

#### **GROUNDWATER MONITORING**

Groundwater elevations at the site have decreased an average of about 3.4 feet from the elevations reported on the previous quarter. A groundwater gradient could not be interpreted because only two groundwater elevations were measured, and a minimum of three groundwater elevations are required to determine a gradient. Groundwater elevations

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are shown on Plate 2, Groundwater Elevation Map. Historical and recent monitoring data are summarized in Table 1, Cumulative Groundwater Monitoring Data.

### **GROUNDWATER SAMPLING**

Groundwater samples were submitted to Mobil Chem Laboratories (California Hazardous Materials Testing Laboratory Certification No. 1223) in Martinez, California under Chain of Custody protocol. The samples were analyzed for the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX), and total petroleum hydrocarbons as gasoline (TPHg) using modified Environmental Protection Agency (EPA) Methods 5030/602. The Chain of Custody Record and Laboratory Analysis reports are included in Appendix B.

### **GROUNDWATER ANALYTICAL RESULTS**

The concentration of TPHg in the groundwater sample collected from MW-8F was less than 50 parts per billion (ppb) (below the method detection limit [MDL]). The dissolved benzene concentration was less than 0.5 ppb (below the MDL). Neither floating product nor hydrocarbon sheen was observed in the wells. TPHg and benzene concentrations are shown on Plate 3, TPHg/Benzene Concentrations in Groundwater. Historical and recent analytical data are summarized in Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples. Copies of the laboratory analyses reports and the Chain of Custody manifest are included in Appendix B.

### **PURGE WATER DISPOSAL**

Purge water generated during purging and sampling of the one monitoring well is being temporarily stored onsite in Department of Transportation (DOT) approved 55 gallon drums. Purge water is subsequently pumped into a water trailer and transported to Gibson Environmental in Redwood City, California for disposal.

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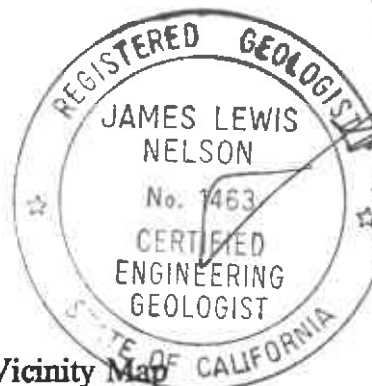
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If you have any questions or comments regarding this report, please call (408) 264-7723 or (800) 926-0815.

Sincerely,  
RESNA Industries Inc.

*Jeanne Buckthal*

Jeanne Buckthal  
Geologic Technician



*James L. Nelson*  
James L. Nelson  
Certified Engineering  
Geologist No. 1463

Enclosures:	Plate 1, Plate 2, Plate 3,	Site Vicinity Map Groundwater Elevation Map TPHg/Benzene Concentrations in Groundwater
	Table 1, Table 2,	Cumulative Groundwater Monitoring Data Cumulative Results of Laboratory Analyses of Groundwater Samples
	Appendix A, Appendix B,	Groundwater Sampling Protocol and Well Purge Data Sheets Laboratory Analysis Reports and Chain of Custody Documentation



Base: The Thomas Guide  
Alameda County  
Oakland, California.  
1991

LEGEND

○ = Site Location



Approximate Scale

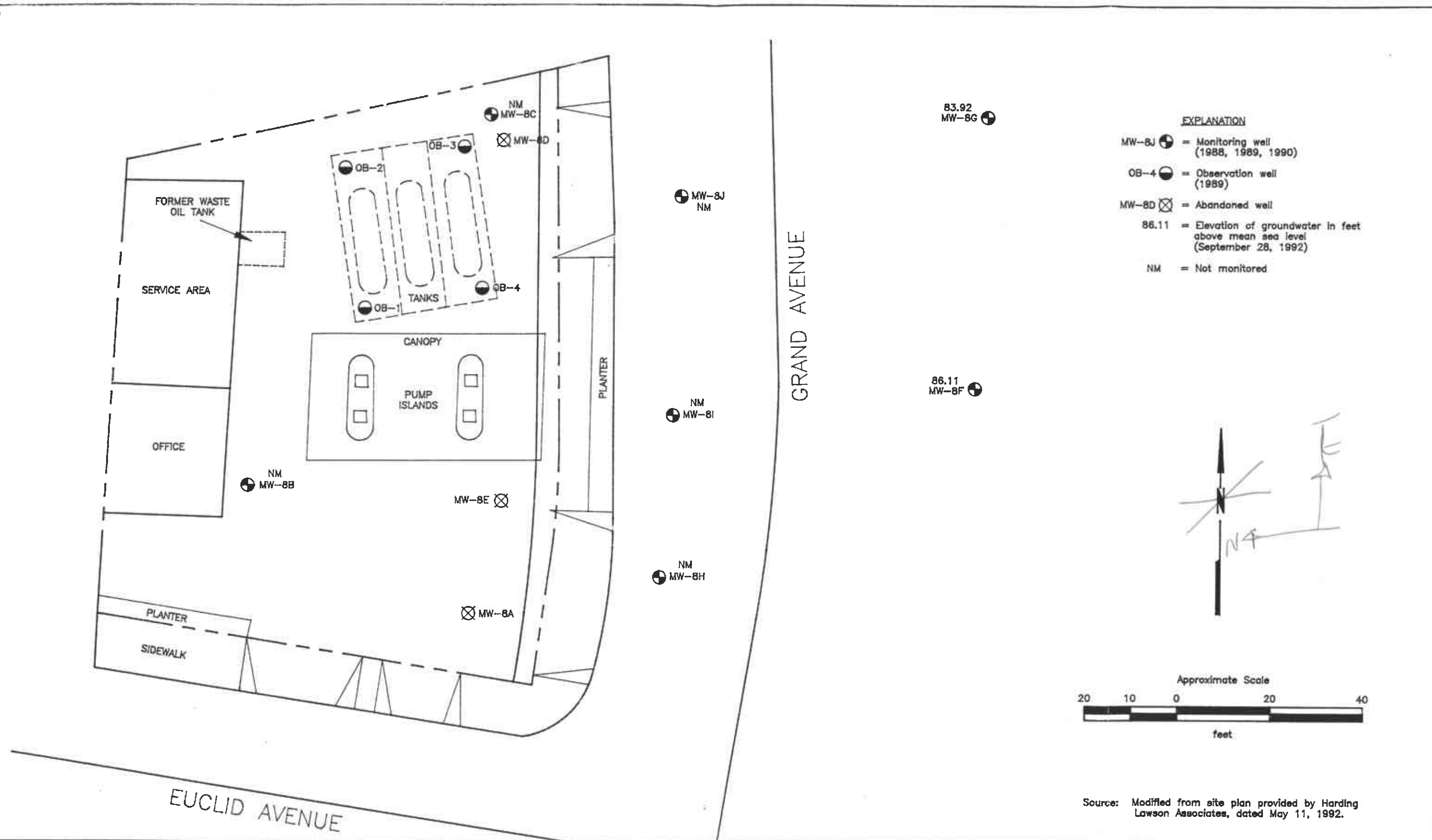


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**SITE VICINITY MAP**  
**Former Texaco Station**  
**500 Grand Avenue**  
**Oakland, California**

**PLATE**  
**1**

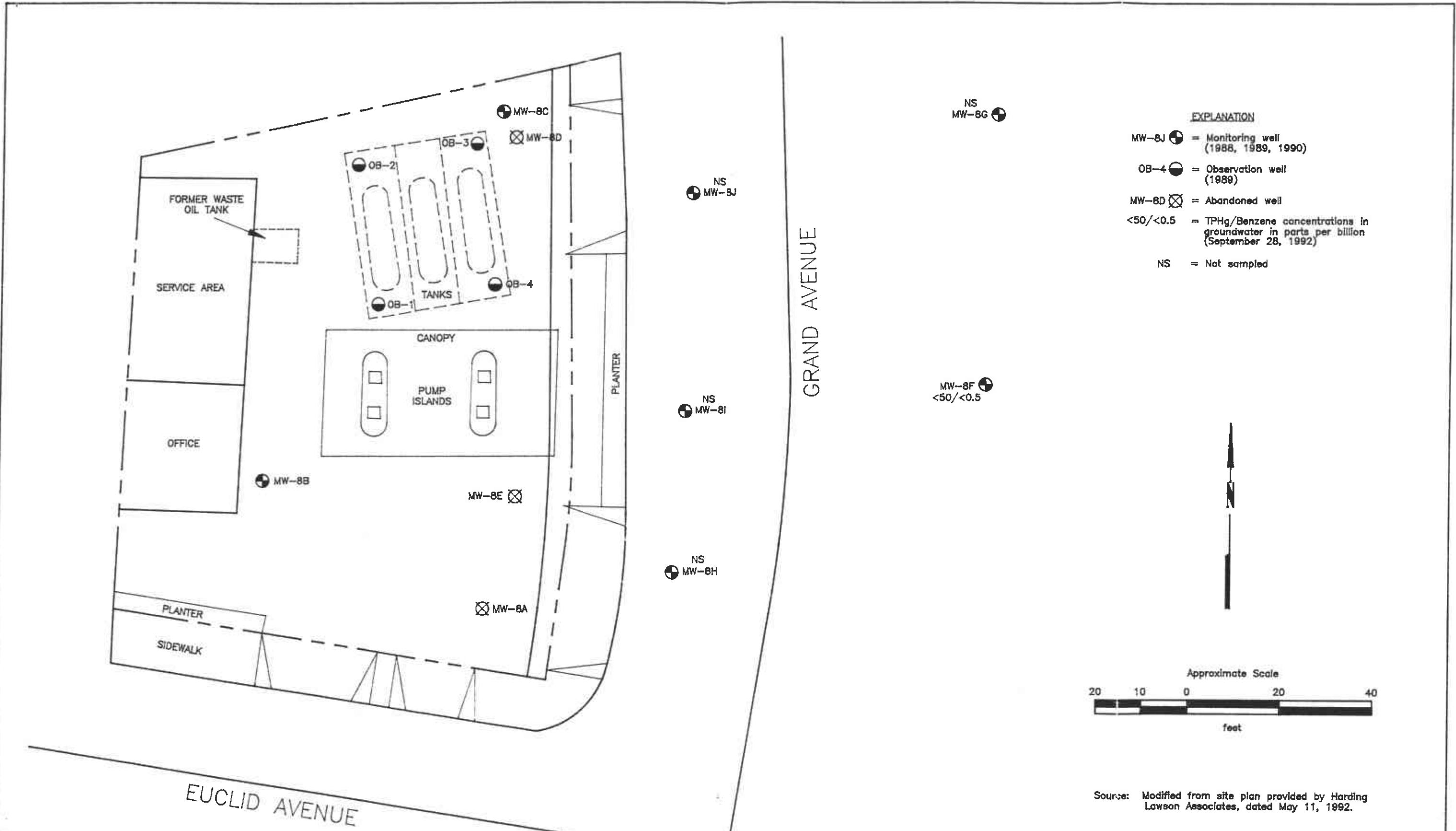


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**GROUNDWATER ELEVATION MAP**  
Former Texaco Station  
500 Grand Avenue  
Oakland, California

**PLATE**  
**2**



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**TPHg/BENZENE CONCENTRATIONS IN GROUNDWATER**  
Former Texaco Station  
500 Grand Avenue  
Oakland, California

**PLATE**  
**3**



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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Texaco Station  
500 Grand Avenue  
Oakland, California  
(Page 1 of 4)

<u>Well</u>	Date	Wellhead Elevation*	Depth to Water	Groundwater Elevation*	Floating Product
<u>MW-8A</u>					
HLA	03/29/91	99.72	2.32	97.40	NA
	04/23/91		2.31	97.41	NA
	06/10/91		2.82	96.90	NA
	06/28/91		2.53	97.19	NA
	07/23/91		2.35	97.37	NA
	08/22/91		2.68	97.04	NA
	10/03/91		2.46	97.26	NA
	10/24/91		2.53	97.19	NA
	11/26/91		3.03	96.69	NA
	12/30/91		2.28	97.44	NA
	01/23/92		2.57	97.15	NA
	02/28/92		2.48	97.24	NA
	03/26/92		2.13	97.59	NA
	04/30/92		2.10	97.62	NA
	08/03/92		Well Abandoned		
<u>MW-8B</u>					
HLA	03/29/91	101.11	0.26	100.85	NA
	04/23/91		0.31	100.80	NA
	06/10/91		0.42	100.69	NA
	06/28/91		0.41	100.70	NA
	07/23/91		0.52	100.59	NA
	08/22/91		0.62	100.49	NA
	10/03/91		0.52	100.59	NA
	10/24/91		0.62	100.49	NA
	11/26/91		0.73	100.38	NA
	12/30/91		0.30	100.81	NA
	01/23/92		0.54	100.57	NA
	02/28/92		0.29	100.82	NA
	03/26/92		0.07	101.04	NA
	04/30/92		0.60	100.51	NA
RESNA	09/28/92		Not Monitored		
<u>MW-8C</u>					
HLA	03/29/91	98.41	6.47	91.94	NA
	04/23/91		6.67	91.74	NA
	06/10/91		8.08	90.33	NA
	06/28/91		7.36	91.05	NA
	07/23/91		7.37	91.04	NA
	08/22/91		8.79	89.62	NA
	10/03/91		7.93	90.48	NA
	10/24/91		7.68	90.73	NA

See notes on page 4 of 4.

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Texaco Station  
500 Grand Avenue  
Oakland, California  
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<u>Well</u>	Date	Wellhead Elevation*	Depth to Water	Groundwater Elevation*	Floating Product
<u>MW-8C</u> Con't					
	11/26/91		7.59	90.82	NA
	12/30/91		7.15	91.26	NA
	01/23/92		6.88	91.53	NA
	02/28/92		6.69	91.72	NA
	03/26/92		6.69	91.72	NA
	04/30/92		5.90	91.51	NA
RESNA	09/28/92		Not Monitored		
<u>MW-8E</u> HLA		99.38			
	03/29/91		3.28	96.10	NA
	04/23/91		3.02	96.36	NA
	06/10/91		3.08	96.30	NA
	06/28/91		3.25	96.13	NA
	07/23/91		3.24	96.14	NA
	08/22/91		3.78	95.90	NA
	10/03/91		3.32	96.06	NA
	10/24/91		3.45	95.93	NA
	11/26/91		3.34	96.04	NA
	12/30/91		3.53	95.85	NA
	01/23/92		3.57	95.81	NA
	02/28/92		3.35	96.03	NA
	03/26/92		3.01	96.37	NA
	04/30/92		3.76	95.62	NA
	08/03/92		Well Abandoned		
<u>MW-8F</u> HLA		97.94			
	03/29/91		8.59	89.35	NA
	04/23/91		8.85	89.09	NA
	06/10/91		9.58	88.36	NA
	06/28/91		9.48	88.46	NA
	07/23/91		9.79	88.15	NA
	08/22/91		11.44	86.50	NA
	10/03/91		11.58	86.36	NA
	10/24/91		11.75	86.19	NA
	11/26/91		11.63	86.31	NA
	12/30/91		10.51	87.43	NA
	01/23/92		10.24	87.70	NA
	02/28/92		9.93	88.01	NA
	03/26/92		8.78	89.16	NA
	04/30/92		9.36	88.58	NA
RESNA	09/28/92		11.83	86.11	None

See notes on page 4 of 4.

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Texaco Station  
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<u>Well</u>	Date	Wellhead Elevation*	Depth to Water	Groundwater Elevation*	Floating Product
<u>MW-8G</u>					
HLA	03/29/91	97.24	Well Inaccessible		
	04/23/91		9.44	87.80	NA
	06/10/91		10.29	86.95	NA
	06/28/91		10.3	86.94	NA
	07/23/91		10.74	86.50	NA
	08/22/91		12.56	84.68	NA
	10/03/91		13.09	84.15	NA
	10/24/91		13.42	83.82	NA
	11/26/91		13.02	84.22	NA
	12/30/91		11.94	85.30	NA
	01/23/92		11.30	85.94	NA
	02/28/92		10.83	86.41	NA
	03/26/92		9.20	88.04	NA
	04/30/92		9.00	88.24	NA
RESNA	09/28/92		13.32	83.92	None
<u>MW-8H</u>					
HLA	03/29/91	98.90	3.70	95.20	NA
	04/23/91		6.03	92.87	NA
	06/10/91		3.68	95.22	NA
	06/28/91		3.83	95.07	NA
	07/23/91		3.85	95.05	NA
	08/22/91		3.80	95.10	NA
	10/03/91		3.79	95.11	NA
	10/24/91		4.02	94.88	NA
	11/26/91		3.88	95.02	NA
	12/30/91		3.84	95.06	NA
	01/23/92		3.74	95.16	NA
	02/28/92		4.44	94.46	NA
	03/26/92		4.21	94.69	NA
	04/30/92		3.46	95.44	NA
RESNA	09/28/92		Well Inaccessible		
<u>MW-8I</u>					
HLA	03/29/91	98.27	6.15	92.12	NA
	04/23/91		6.29	91.98	NA
	06/10/91		6.11	92.16	NA
	06/28/91		6.30	91.97	NA
	07/23/91		6.41	91.86	NA
	08/22/91		6.44	91.83	NA
	10/03/91		6.47	91.80	NA

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
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500 Grand Avenue  
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<u>Well</u>	<u>Date</u>	<u>Wellhead Elevation*</u>	<u>Depth to Water</u>	<u>Groundwater Elevation*</u>	<u>Floating Product</u>
<u>MW-8I</u> Con't	10/24/91		6.57	91.70	NA
	11/26/91		6.58	91.69	NA
	12/30/91		6.41	91.86	NA
	01/23/92		6.33	91.94	NA
	02/28/92		6.55	91.72	NA
	03/26/92		6.45	91.82	NA
	04/30/92		6.48	91.79	NA
RESNA	09/28/92		Well Inaccessible		
<u>MW-8J</u>					
HLA	03/29/91	97.69	5.71	91.98	NA
	04/23/91		3.81	93.88	NA
	06/10/91		6.17	91.52	NA
	06/28/91		6.31	91.38	NA
	07/23/91		6.67	91.02	NA
	08/22/91		6.75	90.94	NA
	10/03/91		6.77	90.92	NA
	10/24/91		6.88	90.81	NA
	11/26/91		6.59	91.10	NA
	12/30/91		6.41	91.28	NA
	01/23/92		6.31	91.38	NA
	02/28/92		6.28	91.41	NA
	03/26/92		6.20	91.49	NA
	04/30/92		6.48	91.21	NA
RESNA	09/28/92		Well inaccessible		

Depth to water measured in feet below top of casing.  
\* : relative to arbitrary datum of 100 feet.  
NA : Information Not Available  
HLA : Harding Lawson Associates

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TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Texaco Station  
500 Grand Avenue  
Oakland, California  
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Well	Date	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHg	TPHd	TPH Other <sup>1</sup>
<u>MW-8A</u>								
HLA	06/14/88	<0.5	1.5	<2	6.6	NA	NA	NA
	10/25/88	<0.5	<1	<2	<1	NA	NA	NA
	09/28/89	<0.5	<0.5	<0.5	<3	<50	NA	NA
	11/29/89	<0.5	1.0	<0.5	<0.5	<50	1,200	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	NA	2,800
	04/26/90	<0.5	<0.5	<0.5	<0.5	<2,500	<50	890
	07/26/90	6.0	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	<50	130 <sup>2</sup>
	04/23/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	07/23/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	<0.5	<0.5	<0.5	<0.5	<50	700 <sup>4</sup>	NA
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	08/03/92	Well Abandoned						
<u>MW-8B</u>								
HLA	06/14/88	<0.5	<1	<2	<1	NA	NA	NA
	10/21/88	<0.5	<1	<2	3.1	NA	NA	NA
	09/28/89	<0.5	<0.5	<0.5	<3	<50	NA	NA
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	380
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	NA	350
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	110
	07/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	<50	180 <sup>2</sup>
	04/23/91	8.4	2.5	<0.5	5.1	<50	<50	<500
	07/23/91	<0.5	1.1	<0.5	2.0	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	<0.5	<0.5	<0.5	<0.5	<50	550 <sup>4</sup>	NA
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
RESNA	09/28/92	Not Sampled						
<u>MW-8C</u>								
HLA	06/14/88	5.3	3.5	2.6	13.0	NA	NA	NA
	10/21/88	<0.5	<1	<2	<1	NA	NA	NA
	09/28/89	<0.5	<0.5	<0.5	<3.0	<50	NA	NA
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	190
	01/24/90	0.9	<0.5	<0.5	<0.5	<100	NA	480
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	160

See notes on page 4 of 4.

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TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Texaco Station  
500 Grand Avenue  
Oakland, California  
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Well	Date	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHg	TPHd	TPH Other <sup>1</sup>
<u>MW-8C Con't</u>								
	07/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	76	110 <sup>2</sup>
	04/23/91	12	25	3.7	19	800	<50	<500
	07/23/91	<0.5	0.6	<0.5	<0.5	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	1.2	<0.5	<0.5	<0.5	<50	840 <sup>4</sup>	NA
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	150	<500
RESNA	09/28/92					Not Sampled		
<u>MW-8E</u>								
HLA	10/25/88	1,400	510	2.9	420	NA	NA	NA
	09/28/89	5,600	3,100	<500	<3000	22,000	NA	NA
	11/29/89	4,900	2,600	<250	1,490	15,000	6,800	<50
	01/24/90	10,100	3,340	540	1,790	36,000	NA	4,900
	04/26/90	11,000	5,700	840	2,900	48,000	1,400	<50
	07/26/90	15,000	6,200	520	4,700	56,000	<50	<50
	(10/18/90)	1,500	1,300	170	1,800	15,000	620	<50
	01/08/91	14,000	5,400	860	1,700	51,000	17,000	520 <sup>2</sup>
	04/23/91	19,000	6,100	750	4,100	50,000	4,800	<500
	07/23/91	16,000	5,400	1,100	4,000	47,000	3,500 <sup>3</sup>	<500
	10/24/91	19,000	6,100	1,100	4,900	40,000	9,400	<500
	01/23/92	3,800	2,800	610	4,800	38,000	9,800 <sup>3</sup>	NA
	04/23/92	20,000	3,700	500	3,900	41,000	9,600	<500
	08/03/92					Well Abandoned		
<u>MW-8F</u>								
HLA	04/14/89	<0.5	<1	<2	<1	NA	NA	NA
	09/28/89	<0.5	<0.5	<0.5	<3.0	<50	NA	NA
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	NA	<300
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	110
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	360	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	380	620 <sup>2</sup>
	04/23/91	5.9	3.1	<0.5	2.7	<50	1,400	3,200
	07/23/91	<0.5	0.8	<0.5	<0.5	<50	60	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	4.0	1.3	<0.5	1.9	<50	1,300 <sup>4</sup>	NA
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
RESNA	09/28/92	<0.5	<0.5	<0.5	<0.5	<50	NA	NA

See notes on page 4 of 4.

Third Quarter 1992 Quarterly Report  
500 Grand Avenue, Oakland, California.

December 29, 1992  
62078.01

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Texaco Station  
500 Grand Avenue  
Oakland, California  
(Page 3 of 4)

Well	Date	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHg	TPHd	TPH Other <sup>1</sup>
<b>MW-8G</b>								
HLA	04/14/89	<0.5	<1	<2	<1	NA	NA	NA
	09/28/89	<0.5	<0.5	<0.5	<3.0	<50	NA	NA
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	NA	650
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	120
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	460	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	220	260 <sup>2</sup>
	04/23/91	0.9	0.9	<0.5	<0.5	<50	1,100	<500
	07/23/91	0.5	1.5	<0.5	3.0	<50	<50	<500
	10/24/91	0.6	<0.5	<0.5	<0.5	<50	NA	NA
	01/24/92	<0.5	<0.5	<0.5	<0.5	<50	980 <sup>4</sup>	NA
	04/30/92	1.7	<0.5	<0.5	<0.5	<50	<50	<500
RESNA	09/28/92	Insufficient Water for Sampling						
<b>MW-8H</b>								
HLA	01/24/90	14.8	14.8	10.8	38.8	460	NA	<300
	04/26/90	67	19	43	64	830	<50	820
	(07/26/90)	45	1.3	12	8.2	190	<50	<50
	10/18/90	17	2.5	14	8.5	300	<50	<50
	01/08/91	12	2.2	6.4	4.0	320	180	89 <sup>2</sup>
	04/23/91	1.5	<0.5	<0.5	<0.5	<50	730	<500
	07/23/91	21	1.8	9.7	2.6	270	<50	<500
	10/24/91	7.6	1.0	3.5	2.4	120	70	<500
	01/23/92	7.2	1.2	4.7	3.2	110	<60 <sup>4</sup>	NA
	04/30/92	11	1.5	5.6	3.6	190	90	<500
RESNA	09/28/92	Not Sampled						
<b>MW-8I</b>								
HLA	01/24/90	116	2.9	13	30.5	580	NA	440
	04/26/90	2,400	100	230	350	4,400	<50	1,400
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	92	4.1	37	21	530	<50	<50
	01/08/91	500	4.3	36	26	1,300	710	210 <sup>2</sup>
	04/23/91	1,600	17	100	86	1,500	1,100	900
	07/23/91	1,600	30	140	63	1,700	260	<500
	10/25/91	470	6.0	76	13	760	230	<500
	01/23/92	420	7.2	27	20	820	210 <sup>3</sup>	NA
	04/30/92	1,800	19	180	25	2,200	430	<500
RESNA	09/28/92	Not Sampled						

See notes on page 4 of 4.

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TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Texaco Station  
500 Grand Avenue  
Oakland, California  
(Page 4 of 4)

Well	Date	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHg	TPHd	TPH Other <sup>1</sup>
<u>MW-8J</u>								
HLA	01/24/90	2.7	<0.5	1	2.6	<100	NA	<300
	04/26/90	28	7.7	19	24	160	<50	320
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	8.3	<0.5	2.6	1.5	<50	<50	<50
	01/08/91	0.41	<0.3	<0.3	0.52	71	<50	69 <sup>2</sup>
	04/23/91	16	2.2	9.3	4.6	300	550	<500
	07/23/91	4.6	<0.5	3.1	<0.5	<50	<50	<500
	10/24/91	0.8	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	0.8	<0.5	<0.5	<0.5	<50	<50	NA
	04/30/92	2.3	<0.5	<0.5	<0.5	<50	<50	<500
RESNA	09/28/92				Not Sampled			
<u>OB-3</u>								
HLA	11/06/89	420	8	6	64	4,000	NA	NA
	04/26/90	160	19	5	8.6	1,000	3,200	<50
	(07/26/90)	<0.5	<0.5	<0.5	0.9	68	1,200	<50
	10/18/90	260	69	35	490	3,200	2,100	<50
RESNA	09/28/92				Not Sampled			
<u>OB-4</u>								
HLA	11/06/89	500	11	10	24	4,000	NA	NA
	04/26/90	360	10	10	18	460	3,900	<50
	(07/26/90)	23	3.7	1.6	5.9	200	1,600	<50
	10/18/90	600	540	83	840	4,300	330	<50
RESNA	09/28/92				Not Sampled			
MCLs		1.0	—	680	1,750	—	—	—
DWAL		—	100	—	—	—	—	—

Results in parts per billion (ppb).

- TPHg : Total petroleum hydrocarbons analyzed as gasoline.
- TPHd : Total petroleum hydrocarbons analyzed as diesel.
- <sup>1</sup> : "Heavy" petroleum hydrocarbons such as waste oil, mineral spirits, jet fuel, or fuel oil.
- <sup>2</sup> : TPH as motor oil analyses; analyst did not feel that motor oil was indicated on the chromatogram.
- <sup>3</sup> : Petroleum hydrocarbons quantified as diesel appear to be light hydrocarbons.
- <sup>4</sup> : Petroleum hydrocarbons quantified as diesel appear to be heavier hydrocarbons than diesel.
- < : Less than the detection limit for the specified method of analysis.
- NA : Not analyzed/Sample not collected
- (07/26/90) : BTEX and TPHg not analyzed within 14-day holding time.
- : Not Applicable
- MCLs : Adopted Maximum Contaminant Levels in Drinking Water, DHS (October 1990)
- DWAL : Recommended Drinking Water Action Levels, DHS (October 1990)



**APPENDIX A**

**GROUNDWATER SAMPLING PROTOCOL  
AND WELL PURGE DATA SHEETS**

### GROUNDWATER SAMPLING PROTOCOL

The static water level and floating product level, if present, in each well that contained water was measured with an ORS Interphase Probe Model No. 1068018; this instrument is accurate to the nearest 0.01 foot. These groundwater depths were subtracted from wellhead elevations, including corrections for product thickness, when necessary, for gradient evaluation by multiplying product thickness (PT) by a correction factor 0.8 and subtracting from the DTW (Adjusted DTW = DTW - [PT x 0.8]).

Water samples collected for subjective evaluation were collected by gently lowering approximately half the length of a new disposable bailer past the air-water interface (if possible) and collecting a sample from near the surface of the water in the well. The samples were checked for measurable floating hydrocarbon product.

Before water samples were collected from the groundwater monitoring wells, the wells were purged until stabilization of the temperature, pH, and conductivity were obtained. Approximately four well casing volumes were purged before those characteristics stabilized. The quantity of water purged from each well was calculated as follows:

1 well casing volume =  $\pi r^2 h (7.48)$  where:

- r = radius of the well casing in feet.
- h = column of water in the well in feet  
(depth to bottom - depth to water).
- 7.48 = conversion constant from cubic feet to  
gallons

Gallons of water purged/gallons in 1 well casing volume = well casing volumes removed.

After purging, each well was allowed to recharge to at least 80% of the initial water level. Water samples were collected with a new disposable bailer, and carefully poured into 40-milliliter (ml) glass vials, which were filled so as to produce a positive meniscus. Each vial was preserved with hydrochloric acid, sealed with a cap containing a Teflon® septum, and subsequently examined for air bubbles to avoid headspace which would allow volatilization to occur. The samples were promptly transported in iced storage in a thermally-insulated ice chest, accompanied by a Chain of Custody Record, to a California-certified laboratory.

**WELL PURGE DATA SHEET**

Project Name: Texaco -- Grand Avenue

Job No. 62078.01

Date: September 28, 1992

Page 1 of 1

Well No. MW-8F

Time Started 9:25

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
9:25	Start purging MW-8F			
9:25	0	64.8	7.61	3420
9:27	1.7	65.1	7.54	3400
9:29	2.5	65.4	7.50	3380
	2.5	Well Dry		
9:45	4.5	64.9	7.58	3400
9:45	Well Dry -- Stop purging MW-8F			
Notes:				
Well Diameter (inches) : 4"				
Depth to Bottom (feet) : 14.44				
Depth to Water - initial (feet) : 11.83				
Depth to Water - final (feet) : 12.34				
% recovery : 80.4%				
Time Sampled : 10:15				
Gallons per Well Casing Volume : 1.70				
Gallons Purged : 6.8				
Well Casing Volume Purged : 4.0				
Approximate Pumping Rate (gpm) : 0.34				

**APPENDIX B**

**LABORATORY ANALYSIS REPORTS  
AND  
CHAIN OF CUSTODY DOCUMENTATION**



# MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553  
Phone (415) 372-3700 • Fax (415) 372-6955

RECEIVED

DEC 8 - 1992

RESNA  
SAN JOSE  
62078.01\1718\012161

RESNA Industries  
3315 Alamen Expressway, #34  
San Jose, CA 95118  
Attn: Phillip Mayberry  
Project Manager

Date Sampled: 09-28-92  
Date Received: 09-29-92  
Date Analyzed: 10-08-92

Sample Number

092592

Sample Description

Project # 62078.01  
Texaco - Oakland  
500 Grand Avenue  
BB1 WATER

ANALYSIS

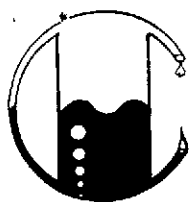
	<u>Detection Limit</u>	<u>Sample Results</u>
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH  
LUFT with method 602 used for BTX distinction.  
(ppb) = (µg/L)

MOBILE CHEM LABS

Ronald G. Evans  
Lab Director



# MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553  
Phone (415) 372-3700 • Fax (415) 372-6955

62078.01\1718\012161

RESNA Industries  
3315 Alamen Expressway, #34  
San Jose, CA 95118  
Attn: Phillip Mayberry  
Project Manager

Date Sampled: 09-28-92  
Date Received: 09-29-92  
Date Analyzed: 10-08-92

Sample Number

092593

Sample Description

Project # 62078.01  
Texaco - Oakland  
500 Grand Avenue  
MW-8F WATER

ANALYSIS

	<u>Detection Limit</u>	<u>Sample Results</u>
	ppb	ppb
Total Petroleum Hydrocarbons as Gasoline	50	<50
Benzene	0.5	<0.5
Toluene	0.5	<0.5
Xylenes	0.5	<0.5
Ethylbenzene	0.5	<0.5

QA/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH  
LUFT with method 602 used for BTX distinction.  
(ppb) = (µg/L)

MOBILE CHEM LABS

Ronald G. Evans  
Lab Director