



Texaco Refining  
and Marketing Inc

10 Universal City Plaza  
Universal City CA 91608

ALCO  
HAZMAT

94 JAN -6 PM 2:18

January 3, 1994

**ENV - SERVICE STATIONS**

Quarterly Status Report  
1127 Lincoln Avenue  
Alameda, California

Ms. Juliet Shin  
Alameda County Department of  
Environmental Protection  
80 Swan Way, Room 200  
Oakland, CA 94621

Dear Ms. Shin:

Enclosed is a copy of the Quarterly Groundwater Monitoring Letter Report dated December 8, 1993, for the former Texaco service station at the above site.

A soil vapor extraction system is now operating on the site. Due to equipment associated with this system, wells MW-1, MW-2, and MW-5 are not currently accessible for groundwater sampling. Please contact me at (818) 505-2476 if you have any questions or wish to discuss the report further.

Very truly yours,

Bob Robles  
Environmental Protection Coordinator  
TEXACO ENVIRONMENTAL SERVICES

RR:rr  
w:\rr\1127lin1.reg

cc: Mr. Leo Pagano  
Mr. Richard Hiett, CRWQCB  
RRZielinski

PR: \_\_\_\_\_

ALCO  
HAZMAT

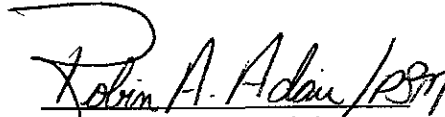
**RESNA**  
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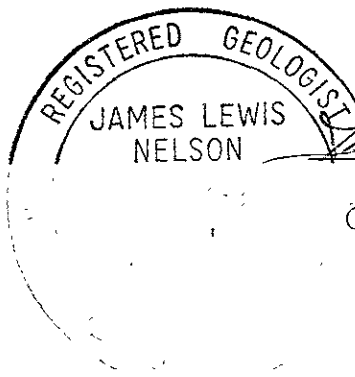
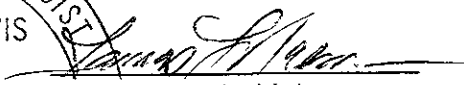
3315 Almaden Expressway, Suite 34  
San Jose, CA 95118  
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LETTER REPORT  
QUARTERLY GROUNDWATER MONITORING  
Fourth Quarter 1993  
at  
Former Texaco Station  
1127 Lincoln Avenue  
Alameda, California

62074.01

  
Robin A. Adair  
Geologic Technician

  
Philip I. Mayberry  
Project Geologist

  
  
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Certified Engineering  
Geologist No. 1463

December 8, 1993

3315 Almaden Expressway, Suite 34  
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December 8, 1993  
62074.01

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

Subject: Letter Report, Groundwater Monitoring, Fourth Quarter 1993, Former  
Texaco Station, 1127 Lincoln Avenue, Alameda, California.

Mr. Robles:

At the request of Texaco Environmental Services (TES), RESNA Industries Inc. (RESNA) has prepared this letter report which summarizes the results of quarterly groundwater monitoring and sampling at the former Texaco Service Station located at 1127 Lincoln Avenue in Alameda, California (Plate 1, Site Vicinity Map) for the fourth quarter 1993 (October through December 1993). Monthly groundwater monitoring was conducted on October 19, and November 15, 1993, and quarterly sampling was performed on November 15, 1993. 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 the 5 monitoring wells (MW-3, MW-4, MW-6, MW-7, and MW-8) associated with this site. Wells MW-1, MW-2, and MW-5 were not sampled because they are presently connected to the vapor extraction system at the site. Wells VW-1 through VW-5 were not monitored at the request of TES. RESNA's groundwater sampling protocol and well purge data sheets are in Appendix A.

## GROUNDWATER MONITORING

Groundwater elevations (November 15, 1993) at the site have decreased an average of 0.27 feet, in wells MW-3, MW-6, MW-7, and MW-8, from the elevations reported last quarter (September 27, 1993). The groundwater gradient map shows the groundwater beneath the site to be flowing towards the north-northwest with a hydraulic gradient of approximately 0.01 (Plate 2, Groundwater Gradient Map). Historical and recent monitoring data are summarized in Table 1, Cumulative Groundwater Monitoring Data.

## **GROUNDWATER SAMPLING**

Groundwater samples were submitted to Mobile 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) method 5030 and TPH LUFT with method 602. Copies of the laboratory analyses reports and the chain of custody documentation manifest for the groundwater samples are in Appendix B.

## **GROUNDWATER ANALYTICAL RESULTS**

Concentrations of TPHg in groundwater samples collected ranged from less than the method detection limit (MDL) of 50 parts per billion (ppb) to 2,000 ppb (MW-8). Dissolved benzene concentrations in groundwater samples collected ranged from less than the MDL of 0.5 ppb to 840 ppb (MW-8). TPHg and benzene concentrations are shown on Plate 3, TPHg/Benzene Concentrations in Groundwater. Neither floating product nor hydrocarbon sheen was observed in the wells. Historical and recent analytical data are summarized in Table 2, Cumulative Results of Laboratory Analyses of Groundwater Samples.

## **PURGE WATER RECYCLING**

On November 16, 1993, approximately 110 gallons of purge water generated during pumping and sampling of the 4 monitoring wells were transported to Gibson Environmental in Redwood City, California for recycling. The Non-Hazardous Waste Data Form is included in Appendix C.

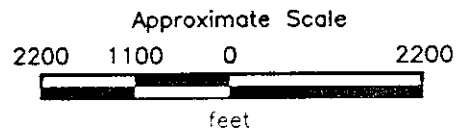
If you have any questions or comments regarding this report, please call (408) 264-7723.

### **Attachments:**

- Plate 1: Site Vicinity Map
- Plate 2: Groundwater Gradient Map
- Plate 3: TPHg/Benzene Concentrations in Groundwater
  
- Table 1: Cumulative Groundwater Monitoring Data
- Table 2: Cumulative Results of Laboratory Analyses of Groundwater Samples
  
- Appendix A: Groundwater Sampling Protocol and Well Purge Data Sheets
- Appendix B: Laboratory Analysis Reports and Chain of Custody Documentation
- Appendix C: Non-Hazardous Waste Data Form



Source: The Thomas Bros. Guide  
 Alameda and Contra Costa Counties  
 Alameda, California  
 Photorevised 1988

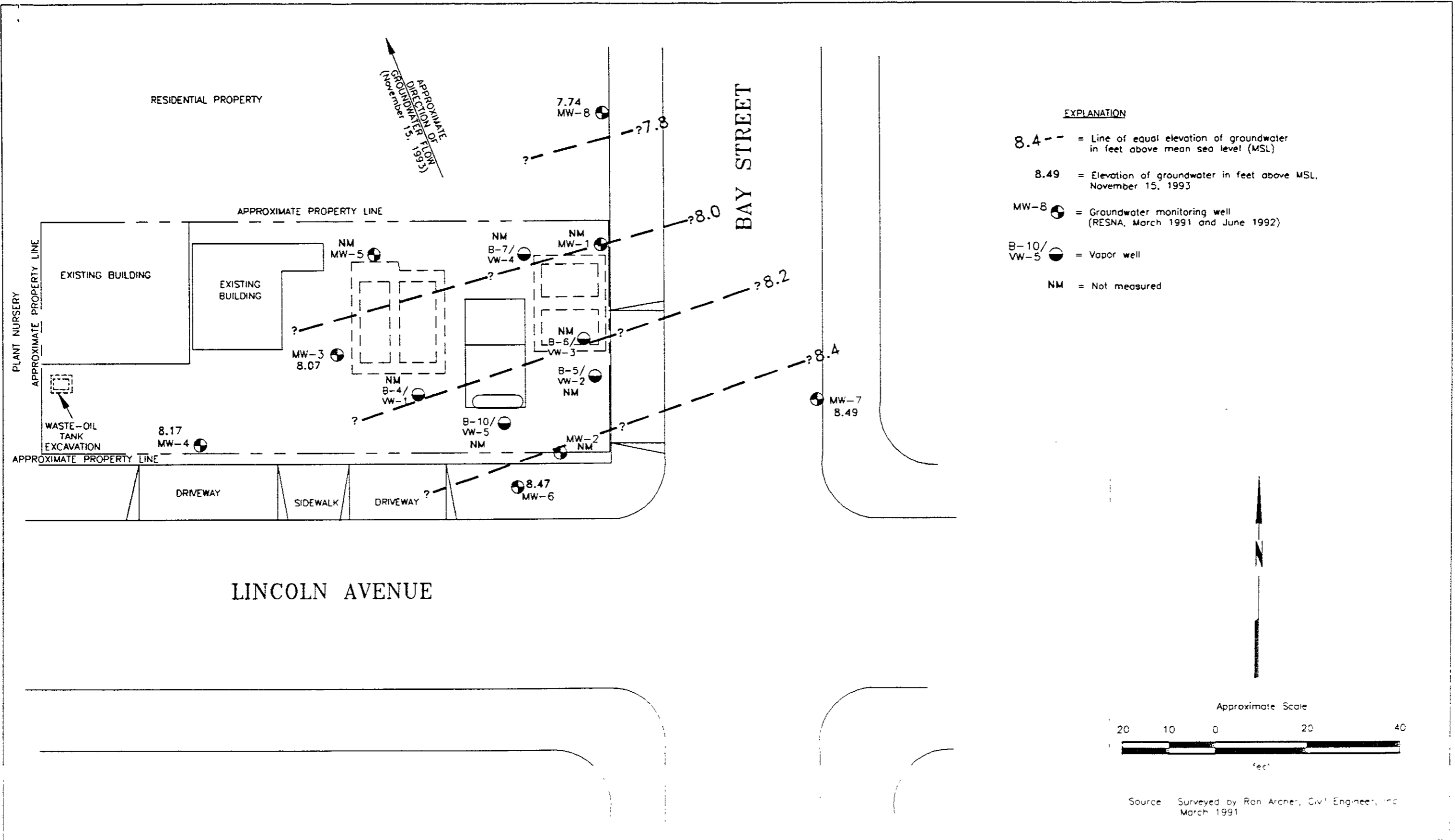


**RESNA**  
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PROJECT 62074.01

SITE VICINITY MAP  
 Former Texaco Station  
 1127 Lincoln Avenue  
 Alameda, California

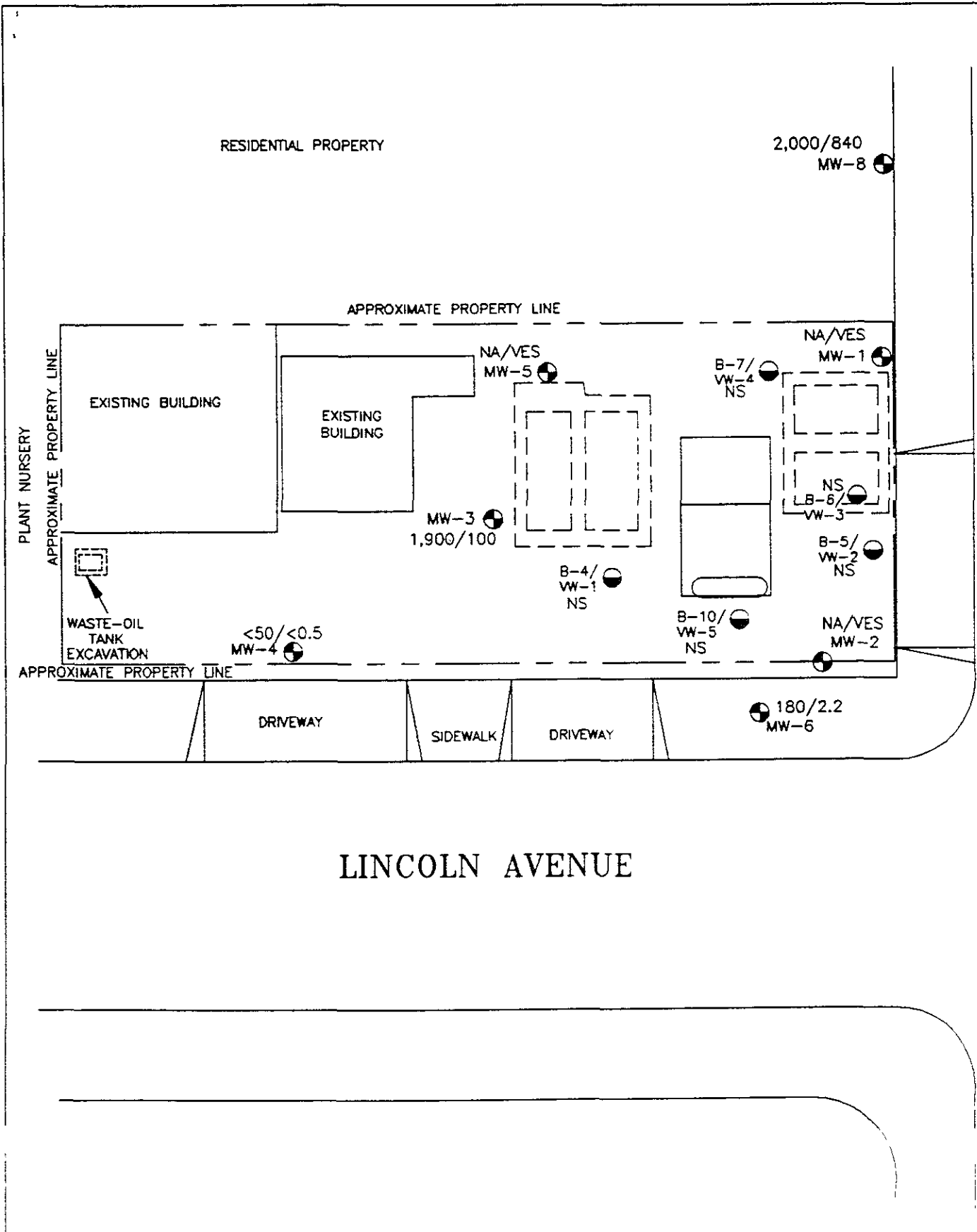
PLATE  
 1



PROJECT 62074.01

GROUNDWATER GRADIENT MAP  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California

PLATE

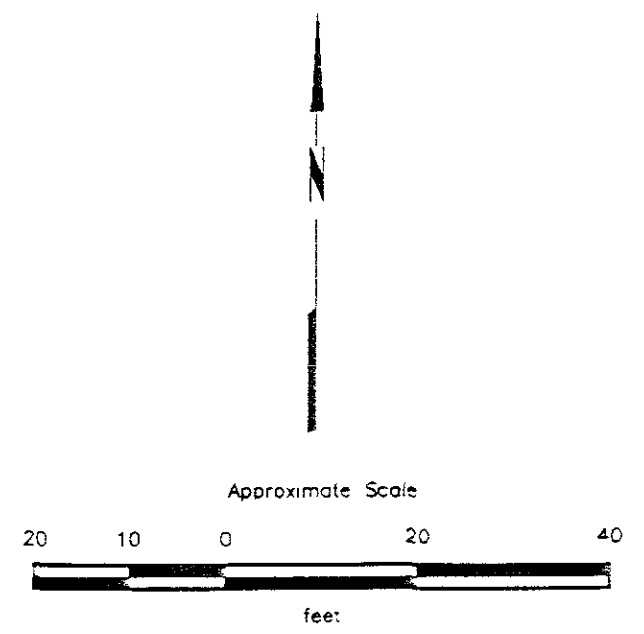


BAY STREET

LINCOLN AVENUE

EXPLANATION

- 2,000/840 = Concentration of TPHg/Benzene in groundwater in parts per billion, November 15, 1993
- MW-8 = Groundwater monitoring well (RESNA, March 1991 and June 1992)
- B-10/VW-5 = Vapor well
- NS = Not sampled
- NA = Not accessible
- VES = Connected to vapor extraction system



Source: Surveyed by Ron Archer, Civil Engineer, Inc. March 1991



TPHg/BENZENE CONCENTRATIONS IN GROUNDWATER  
 Former Bay Street Texaco Station  
 1127 Lincoln Avenue  
 Alameda, California

PLATE

3

PROJECT 62074.01

Fourth Quarter 1993 Quarterly Report  
1127 Lincoln Avenue, Alameda, California

December 8, 1993  
62074.01

TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 1 of 6)

<u>Well</u>	Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product/ Sheen
<u>MW-1</u>	03/22/91	16.49	7.23	9.26	NONE
	04/04/91		6.68	9.81	NONE
	08/13/91		8.59	7.90	NONE
	11/14/91		9.38	7.11	NONE
	02/19/92		6.34	10.15	NONE
	06/25/92		7.60	8.89	NONE
	09/16/92		8.95	7.54	NONE
	11/17/92		9.10	7.39	NONE
	01/26/93		5.63	10.86	NONE
	02/04/93		6.02	10.47	NONE
	03/09/93		5.92	10.57	NONE
	05/06/93		6.76	9.73	NONE
	06/15/93		6.81	9.68	NONE
	07/26/93		Inaccessible - VES		
	08/31/93		Inaccessible - VES		
	09/27/93		Inaccessible - VES		
	10/19/93		Inaccessible - VES		
11/15/93		Inaccessible - VES			
<u>MW-2</u>	03/22/91	17.14	7.60	9.54	NONE
	04/04/91		7.07	10.07	NONE
	08/13/91		8.85	8.29	NONE
	11/14/91		9.60	7.54	NONE
	02/19/92		6.96	10.18	NONE
	06/25/92		7.95	9.19	NONE
	09/16/92		9.16	7.98	NONE
	11/17/92		9.40	7.74	NONE
	01/26/93		6.29	10.85	NONE
	02/04/93		6.60	10.54	NONE
	03/09/93		6.36	10.78	NONE
	05/06/93		6.37	10.77	NONE
	06/15/93		7.04	10.10	NONE
	07/26/93		Inaccessible - VES		
	08/31/93		Inaccessible - VES		
	09/27/93		Inaccessible - VES		
	10/19/93		Inaccessible - VES		
11/15/93		Inaccessible - VES			



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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 2 of 6)

Well	Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product/ Sheen
<u>MW-3</u>	03/22/91	16.91	7.43	9.48	NONE
	04/04/91		6.80	10.11	NONE
	08/13/91		8.88	8.03	NONE
	11/14/91		9.68	7.23	NONE
	02/19/92		6.69	10.22	NONE
	06/25/92		7.78	9.13	NONE
	09/16/92		9.24	7.67	NONE
	11/17/92		9.50	7.41	NONE
	01/26/93		5.82	11.09	NONE
	02/04/93		6.01	10.90	NONE
	03/09/93		5.88	11.03	NONE
	05/06/93		6.38	10.53	NONE
	06/15/93	Inaccessible			
	07/26/93		7.22	9.69	NONE
	08/31/93		7.87	9.04	NONE
	09/27/93		8.58	8.33	NONE
	10/19/93		9.13	7.78	NONE
11/15/93		8.84	8.07	NONE	
<u>MW-4</u>	06/25/92	17.18	7.92	9.26	NONE
	09/16/92		9.40	7.78	NONE
	11/17/92		9.63	7.55	NONE
	01/26/93		5.91	11.27	NONE
	02/04/93		6.14	11.04	NONE
	03/09/93		5.81	11.37	NONE
	05/06/93		6.49	10.69	NONE
	06/15/93		6.34	10.84	NONE
	07/26/93		7.29	9.89	NONE
	08/31/93		8.02	9.16	NONE
	09/27/93	Inaccessible - Car On Well			
	10/19/93		9.14	8.04	
	11/15/93		9.01	8.17	NONE
	<u>MW-5</u>	06/25/92	16.37	7.35	9.02
09/16/92			8.55	7.52	NONE
11/17/92			9.93	7.34	NONE
01/26/93		Not Monitored			
02/04/93		Inaccessible			

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 3 of 6)

<u>Well</u>	Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product/ Sheen
<u>MW-5 cont</u>	03/09/93		5.45	10.92	NONE
	05/06/93		6.00	10.37	NONE
	06/15/93		7.81	8.56	NONE
	07/26/93	Inaccessible - VES			
	08/31/93	Inaccessible - VES			
	09/27/93	Inaccessible - VES			
	10/19/93	Inaccessible - VES			
	11/15/93	Inaccessible - VES			
<u>MW-6</u>	06/25/92	17.12	7.86	9.26	NONE
	09/16/92		9.12	8.00	NONE
	11/17/92		9.40	7.72	NONE
	01/26/93		6.63	10.49	NONE
	02/04/93		6.48	10.64	NONE
	03/09/93		6.68	10.44	NONE
	05/06/93		6.93	10.19	NONE
	06/15/93		7.00	10.12	NONE
	07/26/93		7.25	9.87	NONE
	08/31/93		7.83	9.29	NONE
	09/27/93		8.38	8.74	NONE
	10/19/93		8.76	8.36	NONE
	11/15/93		8.65	8.47	NONE
<u>MW-7</u>	06/25/92	16.71	7.61	9.10	NONE
	09/16/92		8.78	7.93	NONE
	11/17/92	Inaccessible			
	01/26/93		6.53	10.18	NONE
	02/04/93		6.40	10.31	NONE
	03/09/93		6.52	10.19	NONE
	05/06/93	Inaccessible			
	06/15/93		6.69	10.02	NONE
	07/26/93	Inaccessible			
	08/31/93	Inaccessible			
	09/27/93		7.97	8.74	NONE
	10/19/93		8.24	8.47	NONE
	11/15/93		8.22	8.49	NONE
<u>MW-8</u>	06/25/92	15.91	7.20	8.71	NONE

See notes on page 6 of 6

Fourth Quarter 1993 Quarterly Report  
1127 Lincoln Avenue, Alameda, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 4 of 6)

<u>Well</u>	Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product/ Sheen
<u>MW-8 cont.</u>	09/16/92		8.60	7.31	NONE
	11/17/92		8.85	7.06	NONE
	01/26/93		5.30	10.61	NONE
	02/04/93		5.62	10.29	NONE
	03/09/93		5.56	10.35	NONE
	05/06/93		5.99	9.92	NONE
	06/15/93		6.32	9.59	NONE
	07/26/93		6.75	9.16	NONE
	08/31/93		7.35	8.56	NONE
	09/27/93		7.86	8.05	NONE
	10/19/93		8.27	7.64	NONE
11/15/93		8.17	7.74	NONE	
<u>VW-1</u>	03/22/91	16.83	DRY	DRY	NONE
	04/04/91		6.89	9.92	NONE
	08/13/91		DRY	DRY	NONE
	11/14/91		DRY	DRY	NONE
	02/19/92		DRY	DRY	NONE
	06/25/92		7.36	9.47	NONE
	09/16/92		NOT MONITORED		
	11/17/92		NOT MONITORED		
	01/26/93		NOT MONITORED		
	02/04/93		NOT MONITORED		
	03/09/93		NOT MONITORED		
	05/06/93		NOT MONITORED		
	06/15/93		NOT MONITORED		
	07/26/93		NOT MONITORED		
	08/31/93		NOT MONITORED		
	09/27/93		NOT MONITORED		
10/19/93		NOT MONITORED			
11/15/93		NOT MONITORED			
<u>VW-2</u>	03/22/91	17.00	7.59	9.41	NONE
	04/04/91		7.64	9.96	NONE
	08/13/91		DRY	DRY	NONE
	11/14/91		DRY	DRY	NONE
	02/19/92		6.94	10.06	NONE
	06/25/92		8.13	8.90	NONE
	09/16/92		NOT MONITORED		

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 5 of 6)

Well	Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product/ Sheen
<u>VW-2 cont.</u>	11/17/92		NOT MONITORED		
	01/26/93		NOT MONITORED		
	02/04/93		NOT MONITORED		
	03/09/93		NOT MONITORED		
	05/06/93		NOT MONITORED		
	06/15/93		NOT MONITORED		
	07/26/93		NOT MONITORED		
	08/31/93		NOT MONITORED		
	09/27/93		NOT MONITORED		
	10/19/93		NOT MONITORED		
11/15/93		NOT MONITORED			
<u>VW-3</u>	03/22/91	16.94	7.71	9.23	NONE
	04/04/91		6.92	10.02	NONE
	08/13/91		8.45	8.49	NONE
	11/14/91		DRY	DRY	NONE
	02/19/92		7.40	9.54	NONE
	06/25/92		7.16	9.78	NONE
	09/16/92		NOT MONITORED		
	11/17/92		NOT MONITORED		
	01/26/93		NOT MONITORED		
	02/04/93		NOT MONITORED		
	03/09/93		NOT MONITORED		
	05/06/93		NOT MONITORED		
	06/15/93		NOT MONITORED		
	07/26/93		NOT MONITORED		
	08/31/93		NOT MONITORED		
	09/27/93		NOT MONITORED		
	10/19/93		NOT MONITORED		
11/15/93		NOT MONITORED			
<u>VW-4</u>	03/22/91	16.81	7.66	9.15	SHEEN
	04/04/91		INACCESSIBLE		
	08/13/91		8.40	8.41	NONE
	11/14/91		DRY	DRY	NONE
	02/19/92		5.76	11.05	NONE
	06/25/92		7.23	9.58	NONE
	09/16/92		NOT MONITORED		
	11/17/92		NOT MONITORED		
	01/26/93		NOT MONITORED		

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1127 Lincoln Avenue, Alameda, California

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TABLE 1  
CUMULATIVE GROUNDWATER MONITORING DATA  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 6 of 6)

Well	Date	Elevation of Wellhead	Depth to-Water	Elevation of Groundwater	Floating Product/ Sheen
<u>VW-4 cont.</u>	02/04/93		NOT MONITORED		
	03/09/93		NOT MONITORED		
	05/06/93		NOT MONITORED		
	06/15/93		NOT MONITORED		
	07/26/93		NOT MONITORED		
	08/31/93		NOT MONITORED		
	09/27/93		NOT MONITORED		
	10/19/93		NOT MONITORED		
	11/15/93		NOT MONITORED		
<u>VW-5</u>	03/22/91	17.20	7.67	9.53	SHEEN
	04/04/91		INACCESSIBLE		
	08/13/91		DRY	DRY	NONE
	11/14/91		DRY	DRY	NONE
	02/19/92		7.04	10.16	NONE
	06/25/92		8.09	9.11	NONE
	09/16/92		NOT MONITORED		
	11/17/92		NOT MONITORED		
	01/26/93		NOT MONITORED		
	02/04/93		NOT MONITORED		
	03/09/93		NOT MONITORED		
	05/06/93		NOT MONITORED		
	06/15/93		NOT MONITORED		
	07/26/93		NOT MONITORED		
	08/31/93		NOT MONITORED		
	09/27/93		NOT MONITORED		
10/19/93		NOT MONITORED			
	11/15/93		NOT MONITORED		

All measurements in feet.  
Elevations above mean sea level.  
Depth to water measured in feet below top of casing.  
VES : Vapor Extraction System

Fourth Quarter 1993 Quarterly Report  
1127 Lincoln Avenue, Alameda, California

December 8, 1993  
62074.01

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 1 of 3)

Well Number Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHd*	VOCs & Semi-VOCs	Dissolved Oxygen	Ethylene Glycol
<u>MW-1</u>									
03/22/91	4,500	1,300	670	180	770	1,100	ND	NA	NA
08/13/91	850	260	51	13	48	NA	NA	NA	NA
11/14/91	<30	<0.30	<0.30	<0.30	<0.30	NA	NA	NA	NA
02/19/92	440	14	14	2.1	9.9	NA	NA	4.0	<10
06/25/92	4,000	680	110	73	140	NA	NA	NA	NA
09/16/92	3,400	880	28	41	53	NA	NA	NA	NA
11/17/92	730	250	22	12	27	NA	NA	NA	NA
02/04/93	120	22	3.1	3.3	10	NA	NA	NA	NA
05/06/93	710	320	3.1	4.2	20	NA	NA	NA	NA
09/28/93			Not Accessible - Connected to Vapor Extraction System						
11/15/93			Not Accessible - Connected to Vapor Extraction System						
<u>MW-2</u>									
03/22/91	1,100	100	20	63	220	140	ND	NA	NA
08/13/91	1,100	270	4.7	16	49	NA	NA	NA	NA
11/14/91	870	56	8.9	21	46	NA	NA	NA	NA
02/19/92	2,100	57	5.6	9.1	75	NA	NA	3.2	NA
06/25/92	4,700	590	24	290	160	NA	NA	NA	NA
09/16/92	5,700	740	8	370	77	NA	NA	NA	NA
11/17/92	840	94	<0.5	93	14	NA	NA	NA	NA
02/04/93	430	45	0.5	20	30	NA	NA	NA	NA
05/06/93	2,000	460	2.4	160	66	NA	NA	NA	NA
09/28/93			Not Accessible - Connected to Vapor Extraction System						
11/15/93			Not Accessible - Connected to Vapor Extraction System						
<u>MW-3</u>									
03/22/91	2,500	390	27	240	780	770	ND	NA	NA
08/13/91	1,300	180	3.8	79	200	NA	NA	NA	NA
11/14/91	870	89	9	30	82	NA	NA	NA	NA
02/19/92	990	<0.5	<0.5	2.0	72	NA	NA	3.4	NA
06/25/92	4,900	350	11	330	570	NA	NA	NA	NA
09/17/92	7,300	690	10	450	780	NA	NA	NA	NA
11/17/92	1,200	160	2.1	83	100	NA	NA	NA	NA
02/04/93	2,900	180	13	210	350	NA	NA	NA	NA
05/06/93	2,700	270	6.2	300	720	NA	NA	NA	NA
09/28/93	1,800	92	1.7	99	240	NA	NA	NA	NA
11/15/93	1,900	100	2.4	85	250	NA	NA	NA	NA

Fourth Quarter 1993 Quarterly Report  
1127 Lincoln Avenue, Alameda, California

December 8, 1993  
62074.01

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 2 of 3)

Well Number Date	TPHg	Benzene	Toluene	Ethyl- benzene	Total Xylenes	TPHd*	VOCs & Semi-VOCs	Dissolved Oxygen	Ethylene Glycol
<u>MW-4</u>									
06/25/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA
09/17/92	98	0.6	<0.5	1.2	7.7	NA	NA	NA	NA
11/17/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA
02/04/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA
05/06/93	<50	1.6	<0.5	1.0	2.1	NA	NA	NA	NA
09/28/93	Not Accessible - Auto on Well								
11/15/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA
<u>MW-5</u>									
06/25/92	18,000	310	1,200	750	2,400	NA	NA	NA	NA
09/17/92	24,000	700	2,200	900	2,400	NA	NA	NA	NA
11/17/92	14,000	1,000	1,500	730	1,900	NA	NA	NA	NA
02/04/93	NOT SAMPLED								
05/06/93	6,200	460	980	300	1,200	NA	NA	NA	NA
09/28/93	Not Accessible - Connected to Vapor Extraction System								
11/15/93	Not Accessible - Connected to Vapor Extraction System								
<u>MW-6</u>									
06/25/92	990	10	240	55	310	NA	NA	NA	NA
09/17/92	1,200	26	4.7	6.5	140	NA	NA	NA	NA
11/17/92	670	10	3.5	28	94	NA	NA	NA	NA
02/04/93	2,300	19	5.4	27	220	NA	NA	NA	NA
05/06/93	540	44	0.9	7.0	6.7	NA	NA	NA	NA
09/28/93	180	2.7	0.73	6.3	13	NA	NA	NA	NA
11/15/93	180	2.2	0.91	5.4	16	NA	NA	NA	NA
<u>MW-7</u>									
06/25/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA
09/16/92	<50	1.3	<0.5	<0.5	0.9	NA	NA	NA	NA
11/17/92	Not Sampled								
02/04/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA
05/06/93	Not Sampled								
09/28/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA
11/15/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA
<u>MW-8</u>									
06/25/92	1,000	1,100	29	150	1,00	NA	NA	NA	NA
09/16/92	14,000	3,500	47	25	85	NA	NA	NA	NA

Fourth Quarter 1993 Quarterly Report  
1127 Lincoln Avenue, Alameda, California

December 8, 1993  
62074.01

TABLE 2  
CUMULATIVE RESULTS OF LABORATORY ANALYSES  
OF GROUNDWATER SAMPLES  
Former Bay Street Texaco Station  
1127 Lincoln Avenue  
Alameda, California  
(Page 3 of 3)

<u>MW-8 cont.</u>									
11/17/92	4,700	1,700	12	8.0	22	NA	NA	NA	NA
02/04/93	540	150	3.7	5.2	10	NA	NA	NA	NA
05/06/93	22,000	9,400	46	390	520	NA	NA	NA	NA
09/28/93	8,000	1,700	22	30	75	NA	NA	NA	NA
11/15/93	2,000	840	8.8	15	42	NA	NA	NA	NA
MCLs	---	1.0	—	680	1,750	---	---	---	---
DWAL	---	—	100	—	—	---	---	---	---

Results in parts per billion (ppb)

TPHg	:	Total petroleum hydrocarbons as gasoline (analyzed by EPA Method 5030).
TPHd	:	Total petroleum hydrocarbons as diesel (analyzed by EPA Method 3510).
BTEX	:	Measured by EPA Method 602/(624).
	:	B: benzene, T: toluene, E: ethylbenzene, X: total xylene isomers.
---	:	Not Applicable
MCLs	:	Adopted Maximum Contaminant Levels in Drinking Water, DHS (October 1990)
DWAL	:	Recommended Drinking Water Action Levels, DHS (October 1990)
ND	:	Below laboratory detection limit.
NA	:	Not Analyzed
*	:	Anamatrix states: "The concentrations reported as diesel for samples W-9-MW1, W-9-MW2, and W-9-MW3 are primarily due to the presence of a lighter petroleum product, possibly gasoline."
VOCs	:	Volatile organic compounds (analyzed by EPA Method 624/8240).
Semi-VOCs	:	Semi-volatile organic compounds (analyzed by EPA Method 8270).
Dissolved Oxygen	:	Measured in parts per million (ppm).
Ethylene Glycol	:	Measured in ppm.



**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, or Solonist Water Level Indicator; these instruments are 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 or Teflon® 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. All Teflon® bailers are triple washed with Alconox® and triple rinsed with distilled water prior to use.

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 or Teflon® 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--1127 Lincoln Avenue

Job No. 62074.01

Date: 11/15/93

Page 1 of 1

Well No. MW-3

Time Started 12:55pm

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
12:55	Start purging MW-3			
12:55	0	65.0	7.03	1090
1:00	7.0	66.1	6.99	1180
1:05	14.0	66.9	7.12	1100
1:30	21.0	64.5	7.15	1110
1:35	28.0	66.1	7.17	1040
1:35	Stop purging MW-3			

Notes:

NM = Not Measured  
 Well Diameter (inches) : 4  
 Depth to Bottom (feet) : 19.71  
 Depth to Water - initial (feet) : 8.84  
 Depth to Water - final (feet) : 10.32  
 % recovery : 80%  
 Time Sampled : 1:45  
 Gallons per Well Casing Volume : 7.10  
 Gallons Purged : 28.0  
 Well Casing Volume Purged : 3.90  
 Approximate Pumping Rate (gpm) : 1

WELL PURGE DATA SHEET

Project Name: Texaco--1127 Lincoln Avenue Job No. 62074.01

Date: 11/15/93 Page 1 of 1

Well No. MW-4 Time Started 12:25pm

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
12:25	Start purging MW-4			
12:25	0	66.1	7.12	830
12:30	7.5	67.5	7.08	850
12:40	15.0	63.2	6.99	810
12:45	22.5	65.3	7.01	820
12:50	30.0	66.4	7.09	820
12:50	Stop purging MW-4			

Notes:

NM = Not Measured  
 Well Diameter (inches) : 2  
 Depth to Bottom (feet) : 20.28  
 Depth to Water - initial (feet) : 9.01  
 Depth to Water - final (feet) : 9.26  
 % recovery : 98%  
 Time Sampled : 1:20  
 Gallons per Well Casing Volume : 7.40  
 Gallons Purged : 30.0  
 Well Casing Volume Purged : 4.05  
 Approximate Pumping Rate (gpm) : 1

WELL PURGE DATA SHEET

Project Name: Texaco--1127 Lincoln Avenue

Job No. 62074.01

Date: 11/15/93

Page 1 of 1

Well No. MW-6

Time Started 11:30am

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
11:30	Start purging MW-6			
11:35	0	66.3	7.03	1040
11:40	2.0	67.3	7.10	1050
11:45	3.5	68.1	7.13	1070
11:55	5.5	65.7	7.23	1080
12:00	7.5	66.8	7.22	1070
12:00	Stop purging MW-6			
Notes:				
<p style="text-align: center;">NM = Not Measured</p> <p style="text-align: center;">Well Diameter (inches) : 2</p> <p style="text-align: center;">Depth to Bottom (feet) : 19.89</p> <p style="text-align: center;">Depth to Water - initial (feet) : 8.65</p> <p style="text-align: center;">Depth to Water - final (feet) : 8.75</p> <p style="text-align: center;">% recovery : 99%</p> <p style="text-align: center;">Time Sampled : 12:15</p> <p style="text-align: center;">Gallons per Well Casing Volume : 1.80</p> <p style="text-align: center;">Gallons Purged : 7.5</p> <p style="text-align: center;">Well Casing Volume Purged : 4.20</p> <p style="text-align: center;">Approximate Pumping Rate (gpm) : <math>\frac{1}{2}</math></p>				

WELL PURGE DATA SHEET

Project Name: Texaco--1127 Lincoln Avenue Job No. 62074.01

Date: 11/15/93 Page 1 of 1

Well No. MW-7 Time Started 10:35am

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
10:35	Start purging MW-7			
10:35	0	67.2	6.94	990
10:45	2	67.6	6.92	950
10:50	4	67.2	7.06	970
10:55	6	64.0	7.17	950
11:00	8	66.4	7.18	980
11:00	Stop purging MW-7			

Notes:

NM = Not Measured  
 Well Diameter (inches) : 4  
 Depth to Bottom (feet) : 20.00  
 Depth to Water - initial (feet) : 8.22  
 Depth to Water - final (feet) : 8.47  
 % recovery : 98  
 Time Sampled : 11:15  
 Gallons per Well Casing Volume : 1.90  
 Gallons Purged : 8  
 Well Casing Volume Purged : 4.20  
 Approximate Pumping Rate (gpm) : 1/2

WELL PURGE DATA SHEET

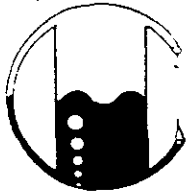
Project Name: Texaco--1127 Lincoln Avenue Job No. 62074.01  
 Date: 11/15/93 Page 1 of 1  
 Well No. MW-8 Time Started 2:05pm

TIME (hr)	GALLONS (cum.)	TEMP. (F)	pH	CONDUCT. (micromho)
2:05	Start purging MW-8			
2:05	0	64.1	7.00	1370
2:10	7.5	65.3	6.82	1390
2:15	15.0	63.3	6.91	1290
2:20	22.5	64.7	7.03	1230
2:25	30.0	65.0	7.03	1240
2:25	Stop purging MW-8			
Notes:				
NM = Not Measured Well Diameter (inches) : 4 Depth to Bottom (feet) : 19.80 Depth to Water - initial (feet) : 8.17 Depth to Water - final (feet) : 9.04 % recovery : 93 Time Sampled : 2:40 Gallons per Well Casing Volume : 7.60 Gallons Purged : 30.0 Well Casing Volume Purged : 3.90 Approximate Pumping Rate (gpm) : 1				

**APPENDIX B**

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





# MOBILE CHEM LABS INC.

5011 Blum Road, Suite 1 • Martinez, CA 94553  
Phone (510) 372-3700 • Fax (510) 372-6955

62074.01\1342\013133

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

Date Sampled: 11-15-93  
Date Received: 11-16-93  
Date Analyzed: 11-18-93

Sample Number  
-----  
113205

Sample Description  
-----  
Project # 62074.01  
Texaco - Alameda  
1127 Lincoln Ave.  
MW-3 WATER

## ANALYSIS

-----

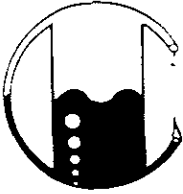
	Detection Limit ----- ppb	Sample Results ----- ppb
Total Petroleum Hydrocarbons as Gasoline	50	1,900
Benzene	0.5	100
Toluene	0.5	2.4
Xylenes	0.5	280
Ethylbenzene	0.5	85

QA/QC: Duplicate Deviation is 0.8%

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.

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62074.01\1342\013133

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

Date Sampled: 11-15-93  
Date Received: 11-16-93  
Date Analyzed: 11-18-93

Sample Number  
-----  
113204

Sample Description  
-----  
Project # 62074.01  
Texaco - Alameda  
1127 Lincoln Ave.  
MW-4                      WATER

## ANALYSIS

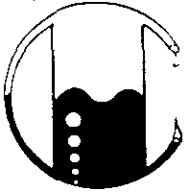
-----

	Detection Limit ----- ppb	Sample Results ----- 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

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.

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

Date Sampled: 11-15-93  
Date Received: 11-16-93  
Date Analyzed: 11-18-93

Sample Number  
-----  
113203

Sample Description  
-----  
Project # 62074.01  
Texaco - Alameda  
1127 Lincoln Ave.  
MW-6                   WATER

## ANALYSIS

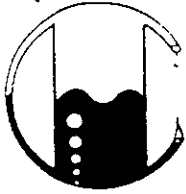
-----

	Detection Limit ----- ppb	Sample Results ----- ppb
Total Petroleum Hydrocarbons as Gasoline	50	180
Benzene	0.5	2.2
Toluene	0.5	0.91
Xylenes	0.5	16
Ethylbenzene	0.5	5.4

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

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Ronald G. Evans  
Lab Director



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

Date Sampled: 11-15-93  
Date Received: 11-16-93  
Date Analyzed: 11-18-93

Sample Number

113201

Sample Description

Project # 62074.01  
Texaco - Alameda  
1127 Lincoln Ave.  
MW-6 Rinsate WATER

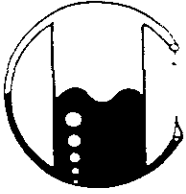
ANALYSIS

	<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

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

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Ronald G. Evans  
Lab Director



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62074.01\1342\013133

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

Date Sampled: 11-15-93  
Date Received: 11-16-93  
Date Analyzed: 11-18-93

Sample Number  
-----  
113202

Sample Description  
-----  
Project # 62074.01  
Texaco - Alameda  
1127 Lincoln Ave.  
MW-7                   WATER

## ANALYSIS

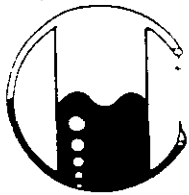
-----

	Detection Limit ----- ppb	Sample Results ----- 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

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

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Ronald G. Evans  
Lab Director



# MOBILE CHEM LABS INC.

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62074.01\1342\013133

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

Date Sampled: 11-15-93  
Date Received: 11-16-93  
Date Analyzed: 11-18-93

Sample Number

-----  
113206

Sample Description


-----  
Project # 62074.01  
Texaco - Alameda  
1127 Lincoln Ave.  
MW-8                      WATER

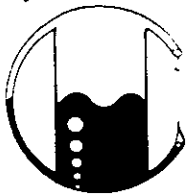
ANALYSIS

	Detection Limit	Sample Results
	----- ppb	----- ppb
Total Petroleum Hydrocarbons as Gasoline	50	2,000
Benzene	0.5	840
Toluene	0.5	8.8
Xylenes	0.5	42
Ethylbenzene	0.5	15

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.

5011 Blum Road, Suite 1 • Martinez, CA 94553  
Phone (510) 372-3700 • Fax (510) 372-6955

62074.01\1342\013133

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

Date Sampled: 11-15-93  
Date Received: 11-16-93  
Date Analyzed: 11-18-93

Sample Number  
-----

113200

Sample Description  
-----

Project # 62074.01  
Texaco - Alameda  
1127 Lincoln Ave.  
Site Blank WATER

ANALYSIS  
-----

	Detection Limit ----- ppb	Sample Results ----- 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

Note: Analysis was performed using EPA methods 5030 and TPH  
LUFT with method 602 used for BTX distinction.  
(ppb) = ( $\mu\text{g/L}$ )

MOBILE CHEM LABS

Ronald G. Evans  
Lab Director



# CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

PROJECT NO 62614.01		PROJECT NAME/SITE Texaco 1127 Lincoln Ave, Alameda					ANALYSIS REQUESTED										P.O. #:																							
SAMPLERS <i>Mary Rysdale</i> (SIGN)		(PRINT) MARY RYSDALE					NO. CONTAINERS 2	SAMPLE TYPE H2	<table border="1"> <tr> <td>BTEX (802/8020)</td> <td>TPH9 (8015)</td> <td>TPHd (8015)</td> <td>TOG 418.1/5520</td> <td>601/8010</td> <td>624/8240</td> <td>625/8270</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										BTEX (802/8020)	TPH9 (8015)	TPHd (8015)	TOG 418.1/5520	601/8010	624/8240	625/8270															REMARKS
BTEX (802/8020)	TPH9 (8015)	TPHd (8015)	TOG 418.1/5520	601/8010	624/8240	625/8270																																		
SAMPLE IDENTIFICATION	DATE	TIME	COMP	GRAB	PRES. USED	ICED																																		
<del>AWT</del>	11/15/93				HCL	Y																																		
Site blank		1115								X	X																													
MW-6 Kinsate		1115								X	X																													
MW-7		1115								X	X																													
MW-6		1215								X	X																													
MW-4		1320								X	X																													
MW-3		1345								X	X																													
MW-8		1440								X	X																													
RELINQUISHED BY <i>Mary Rysdale</i>		DATE 11/15/93	TIME 1605	RECEIVED BY:		LABORATORY: Mobile Chem		PLEASE SEND RESULTS TO: RESNA San Jose																																
RELINQUISHED BY		DATE	TIME	RECEIVED BY:		REQUESTED TURNAROUND TIME: 2 weeks																																		
RELINQUISHED BY		DATE	TIME	RECEIVED BY:		RECEIPT CONDITION: On ICE No head space		PROJECT MANAGER: Phil Mayberry																																
RELINQUISHED BY		DATE 11/16/93	TIME 1115	RECEIVED BY LABORATORY: Dale Levine																																				



**APPENDIX C**  
**NON-HAZARDOUS WASTE DATA FORM**

# Gibson Environmental

01

## Non-Hazardous Waste Data Form

TO BE COMPLETED BY THE GENERATOR

Name TEXACO EPA ID No.  Phone

Mailing Address 108 Cutting Blvd Richmond, Ca.

Generating Site TX - 62076.01 3771 Newy, Fremont Ca. TX - 62074 1127 Lincoln

Waste:  Liquid (315)  Soil (110) Alameda

Estimated Volume 425 BBLS/GALS TONS/YDS

Waste Description:

Components of the Waste	PPM	%	Components of the Waste	PPM	%
<u>well bore water</u>			<u>possible H<sub>2</sub>O</u>		

Special Handling Instructions  Gloves  Goggles  Other

Generator certifies that the waste as described is 100% non-hazardous.

Rafael A. Adams Signature of Authorized Agent 11-16-93 Date

Name Loanna Ford EPA ID No.

Address 315 Almondan Copy Suite 34 Phone 1-800-926-0815

San Jose, Ca. Truck Unit ID 249

Pick Up Date 11-15-93

Order No.

Rafael A. Adams Signature 11-16-93 Date

Facility

- CAD980883177  
Gibson Environmental  
End of Commercial Dr.  
Bakersfield, CA 93308  
(805) 327-0413
- CAD981458466  
Gibson Environmental  
401 Canal Avenue  
Wilmington, CA 90748  
(310) 549-9117
- CAD043260702  
Gibson Environmental  
475 Seaport Blvd  
Redwood City, CA 94063  
(415) 368-5511

Disposal Method: Recycle Release # 10629 Actual Tons/Gals 425

M/for GOR 4453 Signature 11/16/93 Date

A Subsidiary of V.L.S., Inc.

3300 Truxtun Avenue, Suite 200 • Bakersfield, CA 93301 • 805/327-0413 • 800/582-3935 • Fax 805/861-0229

White-Gibson Copy • Pink-Gibson Returns to Generator • Green-Transporter • Blue-Generator Retains Copy

**Gibson Environmental**

475 SEAPORT BOULEVARD  
 REDWOOD CITY, CA 94063  
 (415) 741-3100

WEIGHT TAG NUMBER

DATE

MANIFEST

INVOICE

CARRIER #	CARRIER	RELEASE	COMMODITY	TO	PI	CHAV.	NET GALLONS	
210	KCSHA							
ARRIVED TO UNLOAD		START TO UNLOAD		FINISH UNLOADING		SOLIDS %		
0910 AM				0930 AM				
LOADED FROM				UNLOADED TO				
T/T				30719				
LOADER'S SIGNATURE				DRIVER'S SIGNATURE				WASHOUT GALLONS
<i>[Signature]</i>				<i>[Signature]</i>				
REMARKS							DEDUCT B S & W %	
							15	
							NET BARRELS	
							RECEIPT TICKET	
							R 4453	